



Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

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

TO: Interested Parties / Applicant  
DATE: March 15, 2005  
RE: Harrison Steel Castings Company / 045-19746-00002  
FROM: Paul Dubenetzky  
Chief, Permits Branch  
Office of Air Quality

### Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures  
FNPER.dot 1/10/05



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

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March 15, 2005

Mr. Pete Bodine  
Harrison Steel Castings Company  
900 Mound Street  
P. O. Box 60  
Attica, IN 47918

Re: 045-19746  
Second Significant Source Modification to  
Part 70 Permit No.: 045-6002-00002

Dear Mr. Bodine:

Harrison Steel Castings Company was issued a Part 70 permit on November 30, 2001, for the operation of steel and ductile iron castings plant. An application to modify the source was received by the Office of Air Quality (OAQ) on July 19, 2004. Pursuant to the provisions of 326 IAC 2-7-10.5, a significant source modification to this permit is hereby approved as described in the attached Technical Support Document.

The modification is as follows:

- (a) construction of one (1) blast machine, identified as LN7-3 wheel blast, with a maximum capacity of 25 tons of steel per hour with emissions controlled by baghouse, identified as DC-8.
- (b) construction of one (1) pangborn rotoblast machine, identified as LN2-T, with a maximum capacity of 6 tons of steel per hour with emissions controlled by baghouse, identified as DC-22.

*(Note: The blast machine and baghouse, identified as LN7-3 and DC-8, respectively, replaced the existing blast machine, identified as LN6-TT, and baghouse, identified as DC-24.)*

The following construction conditions shall apply:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

This significant source modification authorizes construction of the two (2) blast machines, identified as LN7-3 wheel blast and LN2-T rotoblast. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

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 Gaurav Shil, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or at 973-575-2555, extension 3259, or dial 1-800-451-6027, and ask for extension 3-6878.

Sincerely,

Original signed by  
Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

Attachments  
GS / EVP

cc: File - Fountain County  
U.S. EPA, Region V  
Fountain County Health Department  
Air Compliance Section Inspector – Dick Sekula  
Compliance Data Section - Karen Ampil  
Administrative and Development  
Technical Support and Modeling - Michele Boner



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## PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Harrison Steel Castings Company  
900 North Mound Street  
Attica, Indiana 47918**

(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.

Operation Permit No.: T045-6002-00002	
Issued by: Original signed by Janet G. McCabe Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: November 30, 2001  Expiration Date: November 30, 2006

First Significant Source Modification No.: 045-12788-00002	Issuance Date: June 13, 2001
First Minor Permit Modification No.: 045-15172-00002	Issuance Date: April 23, 2002

Second Significant Source Modification No.:045-19746-00002	Pages Affected: 9, 30, 31, 46 to 51
Issued by: Original signed by  Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: March 15, 2005

- maximum capacity of 10 tons of steel per hour with emissions controlled by a baghouse, identified as DC11.
- (f) One (1) room blast machine, identified as LN2-N, constructed in 1981 with a maximum capacity of 13 tons of steel per hour with emissions controlled by a baghouse, identified as DC23.
  - (g) One (1) tumble blast machine, identified as LN1-TMBL, constructed in 1945 with a maximum capacity of 4.5 tons of steel per hour with emissions controlled by a baghouse, identified as DC10.
  - (h) One (1) blast machine, identified as LN7-3 wheel blast, constructed in 2004 with a maximum capacity of 25 tons of steel per hour with emissions controlled by a baghouse, identified as DC8.
  - (i) One (1) monorail blast machine, identified as #18 Monorail, constructed in 1980 with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC21.
  - (j) One (1) room blast machine, identified as LN2-S Rm, constructed in 1979 with a maximum capacity of 7 tons of steel per hour with emissions controlled by a baghouse, identified as DC33.
  - (k) One (1) chill room tumble blast machine, identified as Chill TmbL, constructed July 1, 1977, with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC6.
  - (l) One (1) chill room cabinet blast machine, identified as Chill Cbnt, constructed in 1978 with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC6.
  - (m) One (1) pangborn rotoblast machine, identified as LN2-T, to be constructed by 2005 with a maximum capacity of 6 tons of steel per hour with emissions controlled by baghouse, identified as DC-22.
- (6) One (1) sand handling system, identified as North Sand Handling System, constructed in 1988 and modified in 1994 with a maximum capacity of 8 tons of sand per hour with emissions controlled by a baghouse, identified as DC41.
  - (7) One (1) sand handling, identified as South Sand Handling System, constructed in 1967 and modified in 1988 with a maximum capacity of 200 tons of sand per hour with emissions controlled by four (4) baghouses, identified as DC20, DC35, DC36, and DC39.
  - (8) Core and mold making operations consisting of the following:
    - (a) One (1) Isocure core making machine equipped with a mixer, identified as Isocure, constructed in 1995 with a maximum capacity of 4.5 tons of sand per hour equipped with a scrubber to control TEA emissions, and with a one (1) ton new sand storage hopper and a seven (7) ton new sand storage hopper.
    - (b) One (1) Airset core making machine equipped with a mixer, identified as Pep Core, constructed in 1989 with a maximum capacity of 9 tons of sand per hour with emissions uncontrolled.

- (b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and
- (c) A verification to IDEM, OAQ, that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68.

All documents submitted pursuant to this condition shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.18 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

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- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:
  - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
  - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
  - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
  - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
  - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down. The notification shall also include the status of the applicable compliance monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.
  - (4) Failure to take reasonable response steps shall be considered a deviation from the permit.

- (c) The Permittee is not required to take any further response steps for any of the following reasons:
- (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.
  - (3) An automatic measurement was taken when the process was not operating.
  - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.19 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]  
[326 IAC 2-7-6]

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

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.5

## FACILITY OPERATION CONDITIONS

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

The shot blasting operations consisting of the following:

- (a) Two (2) twin table blast machines, identified as L3/4 - NTT and L3/4 - STT, both constructed in 1961 each with a maximum capacity of 25 tons of steel per hour with emissions from L3/4 - NTT controlled by baghouse DC16 and emissions from L3/4 - STT controlled by baghouse DC18.
- (b) One (1) Nelle Belle shotblast machine, identified as Nelle, constructed in 1955 with a maximum capacity of 60 tons of steel per hour with emissions controlled by a baghouse, identified as DC7.
- (c) One (1) Wheelabrator Frye shotblast machine, identified as #16 Monorail, constructed in 1976 with a maximum capacity of 25.7 tons of metal per hour with emissions controlled by a baghouse, identified as DC17.
- (d) Two (2) room blast machines, identified as LN3-Rm and LN5-S Rm, constructed in 1962 and 1967, respectively, with a maximum capacity of 8 tons of steel per hour each with emissions from LN3-RM controlled by baghouse DC30 and emissions from LN5-S Rm controlled by baghouse DC28.
- (e) One (1) room blast machine, identified as LN5-N, constructed in 1960 with a maximum capacity of 10 tons of steel per hour with emissions controlled by a baghouse, identified as DC11.
- (f) One (1) room blast machine, identified as LN2-N, constructed in 1981 with a maximum capacity of 13 tons of steel per hour with emissions controlled by a baghouse, identified as DC23.
- (g) One (1) tumble blast machine, identified as LN1-TMBL, constructed in 1945 with a maximum capacity of 4.5 tons of steel per hour with emissions controlled by a baghouse, identified as DC10.
- (h) One (1) blast machine, identified as LN7-3 wheel blast, constructed in 2004 with a maximum capacity of 25 tons of steel per hour with emissions controlled by a baghouse, identified as DC8.
- (i) One (1) monorail blast machine, identified as #18 Monorail, constructed in 1980 with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC21.
- (j) One (1) room blast machine, identified as LN2-S Rm, constructed in 1979 with a maximum capacity of 7 tons of steel per hour with emissions controlled by a baghouse, identified as DC33.
- (k) One (1) chill room tumble blast machine, identified as Chill Tmbl, constructed July 1, 1977, with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC6.
- (l) One (1) chill room cabinet blast machine, identified as Chill Cbnt, constructed in 1978 with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC6.
- (m) One (1) pangborn rotoblast machine identified as LN2-T, to be constructed by 2005 with a maximum capacity of 6 tons of steel per hour with emissions controlled by baghouse, identified as DC-22.

(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.5.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the following conditions shall apply:

- (a) The allowable PM emission rate from each of the baghouses DC16 and DC18 controlling the shotblast machines identified as the twin table shotblast machines L3/4-NTT and L3/4-

STT, shall not exceed 35.4 pounds per hour each when operating at a process weight rate of 25 tons of metal castings per hour each.

- (b) The allowable PM emission rate from the baghouse DC7 controlling the shotblast machine identified as the Nelle Belle shotblast machine (Nelle) shall not exceed 46.3 pounds per hour when operating at a process weight rate of 60 tons of metal castings per hour.
- (c) The allowable PM emission rate from the baghouse DC17 controlling the shotblast machine identified as the Wheelabrator Frye shotblast machine (#16 Monorail) shall not exceed 36.1 pounds per hour when operating at a process weight rate of 25.7 tons of metal castings per hour.
- (d) The allowable PM emission rate from each of the baghouses DC30 and DC28 controlling the shotblast machines identified as the room blast shotblast machines LN3-Rm and LN5-S Rm, shall not exceed 16.5 pounds per hour when operating at a process weight rate of 8 tons of metal castings per hour each.
- (e) The allowable PM emission rate from the baghouse DC11 controlling the shotblast machine identified as the room blast shotblast machine LN5-N shall not exceed 19.2 pounds per hour when operating at a process weight rate of 10 tons of metal castings per hour.
- (f) The allowable PM emission rate from the baghouse DC23 controlling the shotblast machine identified as the room blast shotblast machine LN2-N shall not exceed 22.9 pounds per hour when operating at a process weight rate of 13 tons of metal castings per hour.
- (g) The allowable PM emission rate from the baghouse DC10 controlling the shotblast machine identified as the tumble blast shotblast machine LN1-TMBL shall not exceed 11.2 pounds per hour when operating at a process weight rate of 4.5 tons of metal castings per hour.
- (h) The allowable PM emission rate from the baghouse DC8 controlling the shotblast machine identified as the LN7-3 wheel blast shall not exceed 35.4 pounds per hour when operating at a process weight rate of 25 tons of metal castings per hour.
- (i) The allowable PM emission rate from the baghouse DC21 controlling the shotblast machine identified as the #18 monorail shotblast machine shall not exceed 20.9 pounds per hour when operating at a process weight rate of 11.4 tons of metal castings per hour.
- (j) The allowable PM emission rate from the baghouse DC33 controlling the shotblast machine identified as the room blast shotblast machine LN2-S Rm shall not exceed 15.1 pounds per hour when operating at a process weight rate of 7 tons of metal castings per hour.
- (k) The allowable PM emission rate from the baghouse DC6 controlling the shotblast machines identified as the chill room tumble blast shotblast machine (Chill Tmbl) and the chill room cabinet blast shotblast machine (Chill Cbnt) shall not exceed 33.3 pounds per hour when operating at a combined process weight rate of 22.8 tons of metal castings per hour.
- (l) The allowable PM emission rate from the baghouse DC22 controlling the shotblast machine identified as LN2-T rotoblast shall not exceed 13.62 pounds per hour when operating at a process weight rate of 6 tons of metal castings per hour.

The pounds per hour limitations for (a), and (c) through (l) above 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:

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

The pounds per hour limitation for (b) above was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate greater than 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

#### D.5.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD not applicable, the following conditions shall apply:

- (a) The PM emissions from the baghouse DC23 controlling the LN2-N shot blast machine shall not exceed 5.48 pounds per hour.
- (b) The PM emissions from the baghouse DC21 controlling the #18 Monorail shot blast machine shall not exceed 5.48 pounds per hour.
- (c) The PM emissions from the baghouse DC33 controlling the LN2-S Rm shot blast machine shall not exceed 5.48 pounds per hour.
- (d) The PM emissions from the baghouse DC6 controlling the Chill room tumble blast shot blast machine (Chill Tmbl) and the Chill room cabinet blast shotblast machine (Chill Cbnt) shall not exceed 5.48 pounds per hour.
- (e) The PM emissions from the baghouse DC8 controlling the LN7-3 shot blast machine shall not exceed 5.68 pounds per hour.
- (f) The PM emissions from the baghouse DC22 controlling the LN2-T shot blast machine shall not exceed 5.68 pounds per hour.
- (g) The PM<sub>10</sub> emissions from the baghouse DC8 controlling the LN7-3 shot blast machine shall not exceed 3.4 pounds per hour.
- (h) The PM<sub>10</sub> emissions from the baghouse DC22 controlling the LN2-T shot blast machine shall not exceed 3.4 pounds per hour.

Therefore, the requirements of 326 IAC 2-2 (PSD) shall not apply.

#### D.5.3 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 each of the control devices listed in this section

### **Compliance Determination Requirements**

#### D.5.4 Particulate Matter

In order to comply with the requirements of Conditions D.5.1 and D.5.2, the following conditions

shall apply:

- (a) The baghouse, DC16, for PM and PM10 control shall be in operation at all times when the L3/4-NTT shot blast machine is in operation.
- (b) The baghouse, DC18, for PM and PM10 control shall be in operation at all times when the L3/4-STT shot blast machine is in operation.
- (c) The baghouse, DC7, for PM and PM10 control shall be in operation at all times when the Nelle Belle shot blast machine is in operation.
- (d) The baghouse, DC17, for PM and PM10 control shall be in operation at all time when the Wheelabrator Frye shot blast machine is in operation.
- (e) The baghouse, DC30, for PM and PM10 control shall be in operation at all times when the LN3-Rm shot blast machine is in operation.
- (f) The baghouse, DC28, for PM and PM10 control shall be in operation at all times when the LN5-SRm shot blast machine is in operation.
- (g) The baghouse, DC11, for PM and PM10 control shall be in operation at all times when the LN5-N shot blast machine is in operation.
- (h) The baghouse, DC23, for PM and PM10 control shall be in operation at all times when the LN2-N shot blast machine is in operation.
- (i) The baghouse, DC10, for PM and PM10 control shall be in operation at all times when the LN1-TMBL shot blast machine is in operation.
- (j) The baghouse, DC8, for PM and PM10 control shall be in operation at all times when the LN7-3 shot blast machine is in operation.
- (k) The baghouse, DC21, for PM and PM10 control shall be in operation at all times when the #18 Monorail shot blast machine is in operation.
- (l) The baghouse, DC33, for PM and PM10 control shall be in operation at all times when the LN2-S Rm shot blast machine is in operation.
- (m) The baghouse, DC6, shall be in operation at all times when the Chill Tmbl and Chill Cbnt shot blast machines are in operation.
- (n) The baghouse, DC22, for PM and PM10 control shall be in operation at all times when the LN2-T shot blast machine is in operation.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)][40 CFR 64]**

**D.5.5 Visible Emissions Notations**

- (a) Visible emission notations of each of the shot blasting machines stack exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting start-up or shut down times.
- (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) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

#### D.5.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across each of the baghouses used in conjunction with the shot blasting machines, at least once per shift when the shot blasting machines are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across baghouses DC11 and DC30 shall be maintained within the range of 0.2 - 6.0 inches of water or a range established during the latest stack test. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across each of the other baghouses listed in this section shall be maintained within the range of 2.0 - 8.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C -Pressure Gauge and Other 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.5.7 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the shot blasting machines when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### D.5.8 Broken or Failed Bag Detection

In the event that bag failure has been observed.

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 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.

- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if the bag failure is determined by other means, such as gas temperatures, flow rates, air filtration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have 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).

Compliance with the above compliance monitoring requirements shall assure compliance with 40 CFR 64 requirements for Shot Blast Machine, identified as LN7-3, and controlled by baghouse, identified as DC-8.

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

#### **D.5.9 Record Keeping Requirements**

- (a) In order to document compliance with Condition D.5.5, the Permittee shall maintain records of visible emission notations of the shot blasting machines stack exhaust(s) once per shift.
- (b) In order to document compliance with condition D.5.6, the Permittee shall maintain records of the total static pressure drop across each baghouse once per shift.
- (c) In order to document compliance with Condition D.5.7, the Permittee shall maintain records of the results of the inspections required under Condition D.5.7 and the dates the vents are redirected.
- (d) 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

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

#### Source Background and Description

<b>Source Name:</b>	<b>Harrison Steel Castings Company</b>
<b>Source Location:</b>	<b>900 South Mound Street, Attica, IN 47918</b>
<b>County:</b>	<b>Fountain</b>
<b>SIC Code:</b>	<b>3321 and 3325</b>
<b>Operation Permit No.:</b>	<b>T045-6002-00002</b>
<b>Operation Permit Issuance Date:</b>	<b>November 30, 2001</b>
<b>Significant Source Modification No.:</b>	<b>045-19746-00002</b>
<b>Significant Permit Modification No.:</b>	<b>045-20240-00002</b>
<b>Permit Reviewer:</b>	<b>Gaurav Shil/EVP</b>

On December 29, 2004, the Office of Air Quality (OAQ) had a notice published in the Fountain County Neighbor, Attica, Indiana, stating that Harrison Steel Castings had applied for a significant source and significant permit modification to Part 70 permit T045-6002-00002 to replace a twin table blast machine and the associated baghouse with a new blast machine and a baghouse and construction of a new blast unit controlled by a fabric filter dust collector at the existing stationary steel and ductile iron castings plant. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On January 25, 2005, OAQ received comments from Harrison Steel Castings on the proposed source and permit modifications. The summary of the comments and corresponding responses is shown below. Changes made to the permit as a result of the comments are shown in bold and deleted permit language is shown with a line through it. Any permit changes affecting the permit's Table of Contents are also revised without replication herein.

#### **Comment 1:**

Condition C.18, Compliance Response Plan-Preparation, Implementation, Records and Reports. The proposed permit revises this condition, although there is no explanation provided in the Technical Support Document as to why this condition requires modification at this time. This condition replaces the previous condition entitled: "Compliance Monitoring Plan-Failure to take Response Steps". We object to the following modifications made to this condition:

- Section (b) expands on the provisions related to taking steps that are not in the CRP. This includes the addition of a reporting requirement where the shutdown of the control device or the emission unit would take more than 10 days. If one elects to shutdown the emission unit we do not believe it should be necessary to notify IDEM, as the emission unit is not operational. In addition, the condition requires that notification be made when the unit is first shutdown. At this point it would not be reasonable to be able to predict the length of the shutdown.

- The modified condition eliminates a provision allowing IDEM to excuse a failure to obtain the required monitoring data if it does not exceed more than 5% of the required data in any one quarter. We believe that this provision in our current permit is an appropriate consideration of real world circumstances, and since the current language only provides that IDEM has the discretion to excuse gaps in the monitoring data it does not undermine IDEM's authority to ensure that reasonable steps are being taken to meet the monitoring requirements of the rule. We request that this portion of the current condition be retained in the modified permit

#### **Response to Comment 1:**

Condition C.18, Compliance Monitoring Plan-Failure to Take Response Steps, is revised to Compliance Response Plan-Preparation, Implementation, Records, and Reports. The changes are primarily made to re-organize the condition and clarify its intent. The requirements of Condition C.18 apply to the new emission units and IDEM, OAQ may revise the applicable permit conditions. The permit conditions are revised to include Paragraph (b)(1) which requires the source to implement the Compliance Response Plan. If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the source is required to implement additional response steps. Pursuant to 326 IAC 2-7-5 (3)(C)(ii), each Part 70 permit shall include provisions for the reporting of deviations from Part 70 permit requirements, including those attributable to upset conditions as defined in a Part 70 permit, the probable causes of such deviations, and any corrective actions or preventive measures taken. Part 70 does not allow an excuse from reporting failures. Condition C.18 does not require the Permittee to predict the length of the shutdown. If the response to an out of range parameter or abnormal reading is to shut down the unit and the shut down cannot occur for at least ten (10) days then the Permittee must notify IDEM, OAQ of the anticipated shut down date.

IDEM, OAQ may use enforcement discretion, but can not create an exemption through the permit. The provision regarding IDEM, OAQ's discretion to excuse failure to perform monitoring under certain conditions was revised since the original Part 70 permit was issued. IDEM, OAQ retains the discretion to excuse minor incidents of missing data; however, OAQ has determined that it is not necessary to state criteria regarding the exercise of that discretion in the permit. No change is made to the permit as a result of this comment.

#### **Comment 2:**

Condition D.5.2 (e) through (h), Prevention of Significant Deterioration (PSD). This condition contains limits such that the requirements of the PSD rules do not apply. The condition limits the combined PM and PM<sub>10</sub> emissions from both shot blast machines to less than 24 tons/year and 14 tons/year, respectively. The two projects were applied for separately at different times as a result of separate management decisions and were due to completely different circumstances. The LN7-3 replacement blast machine was installed in 2004 due to failure of an existing unit. The LN2-T blast machine is a backup blast unit to be installed in 2005. Therefore, the modifications should be treated as separate events and each blast unit should be subject to limits that would ensure that the PSD rules would not apply. The limits should restrict emissions to less than 25 tons/year and 15 tons/year respectively, from each machine, not to less than 24 tons of PM and 14 tons/year for PM combined. The limits on Paragraphs (e) and (f) should therefore be 5.7 pounds/hour each, and the limits in paragraphs (g) and (h) should be 3.4 pounds/hour each.

#### **Response to Comment 2:**

IDEM, OAQ understands that the installation of the replacement blast machine, identified as LN7-3 wheel blast, and the construction of the pangborn rotoblast machine, identified as LN2-T, are a result of separate management decisions and were due to completely different circumstances. The Permittee provided the copies of invoices for the two blast machines. The invoice for the blast machine, identified as LN7-3, is dated 12/9/03 and the unit was used to replace the broken unit in 2004. The invoice for the blast unit, identified as LN2-T, is dated 6/24/04 and the source is awaiting approval to install this unit. This unit will be a redundant or backup unit since a number of current shot blast units at the source are old and will likely either need to be down for maintenance or may require replacement. The additional information

proves that the projects were planned separately and are unrelated. The installation of the replacement machine and the construction of the rotoblast machine are unrelated and not dependent on one another. Therefore, the modifications are treated as separate events and each blast unit will be subject to limits that would ensure that the PSD rules would not apply. The PSD minor limits will restrict the PM and PM<sub>10</sub> emissions from each blast unit to less than 25 tpy and 15 tpy, respectively. Condition D.5.2 is revised to change the hourly PM and PM<sub>10</sub> emission limits as follows:

D.5.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD not applicable), the following conditions shall apply:

- (a) The PM emissions from the baghouse DC23 controlling the LN2-N shot blast machine shall not exceed 5.48 pounds per hour.
- (b) The PM emissions from the baghouse DC21 controlling the #18 Monorail shot blast machine shall not exceed 5.48 pounds per hour.
- (c) The PM emissions from the baghouse DC33 controlling the LN2-S Rm shot blast machine shall not exceed 5.48 pounds per hour.
- (d) The PM emissions from the baghouse DC6 controlling the Chill room tumble blast shot blast machine (Chill Tmbl) and the Chill room cabinet blast shotblast machine (Chill Cbnt) shall not exceed 5.48 pounds per hour.
- (e) The PM emissions from the baghouse DC8 controlling the LN7-3 shot blast machine shall not exceed ~~4.34~~ **5.68** pounds per hour.
- (f) The PM emissions from the baghouse DC22 controlling the LN2-T shot blast machine shall not exceed ~~4.44~~ **5.68** pounds per hour.
- (g) The PM<sub>10</sub> emissions from the baghouse DC8 controlling the LN7-3 shot blast machine shall not exceed ~~2.54~~ **3.4** pounds per hour.
- (h) The PM<sub>10</sub> emissions from the baghouse DC22 controlling the LN2-T shot blast machine shall not exceed ~~0.66~~ **3.4** pounds per hour.

Therefore, the requirements of 326 IAC 2-2 (PSD) shall not apply.

The following changes are made to the Technical Support Document with this addendum. However IDEM prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the Technical Support Document that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that all comments and responses are documented and part of the records regarding this permit decision.

IDEM agrees that TSD should have read as follows:

**State Rule Applicability - Individual Facilities**

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

**Shot Blast Machine, identified as LN7-3, and controlled by baghouse DC-8 and constructed in 2004**  
**Pangborn Rotoblast machine, identified as LN2-T, and controlled by baghouse DC-22 and constructed in 2004**

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable to the shot blast machines, identified as LN7-3 and LN2-T, the following conditions shall apply:

- (a) The PM emissions from the baghouse DC8 controlling the LN7-3 shot blast machine shall not exceed ~~4.34~~ **5.68** pounds per hour.
- (b) The PM emissions from the baghouse DC22 controlling the LN2-T shot blast machine shall not exceed ~~4.44~~ **5.68** pounds per hour.
- (c) The PM<sub>10</sub> emissions from the baghouse DC8 controlling the LN7-3 shot blast machine shall not exceed ~~2.54~~ **3.4** pounds per hour.
- (b) The PM<sub>10</sub> emissions from the baghouse DC22 controlling the LN2-T shot blast machine shall not exceed ~~0.66~~ **3.4** pounds per hour.

The above limits are equivalent to PM and PM<sub>10</sub> emissions of **24 25** and **44 15** tons per year, respectively from the LN7-3 and LN2-T shot blast machines. Therefore, the requirements of 326 IAC 2-2 (PSD) shall not apply.

### Comment 3:

Condition D.5.8, Broken or Failed Bag Detection. This condition includes significant modifications from the current permit language and would affect not only the proposed emission units, but also other emission units included in this section of the permit. Paragraph (a) for multi-compartment baghouses has been amended to remove the provision which would allow for continuous operation of the failed compartments in the event the failure qualifies as an "emergency", or if there are zero visible emissions. This provision remains in paragraph (b) as it relates to single compartment baghouses for events that qualify as an emergency. Paragraph (a) has also been amended to require notification to IDEM if repairs to the multi-compartment baghouses are to take 10 days or more to repair. Lastly, paragraph (b) has been amended to add a long list of ways in which the bag failure may be detected, beyond indications from pressure drop or visible emissions observations. This condition as proposed is not based on any underlying specific observation, and sets up two very different sets of requirements for multi-compartment and single compartment baghouses. In addition, similar conditions in other sections of the permit are consistent with the current permit language and therefore taken as a whole sets up an unduly complicated set of requirements. We request this condition not be modified and the current permit language be retained.

### Response to Comment 3:

Pursuant to 40 CFR 70.5 (a)(3)(B) and 326 IAC 2-7-5(3)(A)(ii), the monitoring requirements are included in the permit when an underlying applicable requirement does not contain monitoring requirements. Many of the compliance monitoring provisions in this permit are expressly required by 326 IAC 2-7-5(3)(A)(ii) because the underlying applicable requirement does not require periodic monitoring. 326 IAC 2-7-5(3) states that the Part 70 permits must include: "Monitoring and related record keeping and reporting requirements which assure that all reasonable information is provided to evaluate continuous compliance with the applicable requirements." This provision goes on to clearly identify that any existing requirements establish minimum requirements for the compliance monitoring provision of the permit.

The multi-compartment baghouses can function by sealing the defected compartments and redirecting the air flow. Therefore, IDEM, OAQ decided the Permittee shall be required to notify IDEM, OAQ if they determine that the broken bag will not be fixed within 10 days rather than require an emission unit to automatically shutdown when a broken bag occurred that caused visible emissions. The notification would tell OAQ when the Permittee expects to fix the problems. Once OAQ receives the notification, it can be decided whether stack test will be required. Such operation will not be possible for single compartment baghouses and therefore the emergency provisions are included in the permit for such baghouses. IDEM, OAQ has revised the ways in which bag failure may be detected, beyond indications from pressure drop or visible emissions observations since the original Part 70 permit was issued and such revisions are made to the compliance monitoring condition. There will be no changes to this condition in the final permit due to this comment.

#### **Comment 4:**

Technical Support Document. The following issues were identified based on the review of the technical support document.

- On page 1 under the heading “Un-permitted Emission Units and Pollution Control Equipment”, it is indicated that the LN7-3 blast unit is an un-permitted facility. On page 2 under the heading “Enforcement Issue” it is further indicated that the unit has been constructed and operated prior to receiving a proper permit. These statements are inaccurate. The application for the replacement unit was made pursuant to the provisions of 326 IAC 2-7-10.5 (b), which allows for the replacement of an emission unit that meets specific criteria, which we believe we have met. We do recognize that we were required to submit an application for the unit within 30 days of the installation, and the application was late.
- On page 3 and in Appendix A the uncontrolled Potential to Emit for PM is estimated to be 2308.3 tons/year. This is a completely unrealistic and inaccurate estimate of the uncontrolled emissions from the unit. The AP-42 emission factor for cleaning and finishing operations is 17 lbs/ton, and this is the factor used in IDEM’s assessment. However, the AP-42 document goes on to indicate that only 0.1 lbs/ton is emitted to the atmosphere. This is an indication of the fact that the vast majority of particles generated by cleaning and finishing operations are large and would fall out in the facility, and would not be emitted to the atmosphere. As such the estimate included in the TSD vastly over estimates the Potential to Emit PM from these operations.

#### **Response to Comment 4:**

The Permittee replaced the shot blast machine, identified as LN6-TT, with a new blast machine, identified as LN7-3, without prior approval. The blast machine, identified as LN6-TT, failed due to overloading and the machine and associated control equipment were replaced. Therefore, the Permittee does not meet the criteria specified in 326 IAC 2-7-10.5 (b)(3). The installation of blast machine, identified as LN7-3 wheel blast, and the associated baghouse, identified as DC-8, was unpermitted. Therefore, no change is made to the permit due to this comment and the referral to enforcement was appropriate.

The potential to emit for particulate matter for the cleaning and finishing operations is based on the emission factor in Table 12.10-7 of AP-42. The emission calculations for existing similar operations at the source as described in Part 70 permit no. 6002 were also based on same methodology. The AP-42 uncontrolled potential emission factor for such operations is 17 lbs/ton. The shot blast machines, identified as LN7-3 wheel blast and LN2-T, are controlled by dedicated baghouses, identified as DC-8 and DC-22, respectively. Hence, all the emissions generated from the shot blast machines are controlled by the associated control systems and are not allowed to settle in the building. Hence, the total emission factor is used to calculate the uncontrolled potential emissions. There will be no changes to the permit due to this comment.

## Indiana Department of Environmental Management Office of Air Quality

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

#### Source Background and Description

<b>Source Name:</b>	<b>Harrison Steel Castings Company</b>
<b>Source Location:</b>	<b>900 South Mound Street, Attica, IN 47918</b>
<b>County:</b>	<b>Fountain</b>
<b>SIC Code:</b>	<b>3321 and 3325</b>
<b>Operation Permit No.:</b>	<b>T045-6002-00002</b>
<b>Operation Permit Issuance Date:</b>	<b>November 30, 2001</b>
<b>Significant Source Modification No.:</b>	<b>045-19746-00002</b>
<b>Significant Permit Modification No.:</b>	<b>045-20240-00002</b>
<b>Permit Reviewer:</b>	<b>Gaurav Shil/EVP</b>

The Office of Air Quality (OAQ) has reviewed a Part 70 permit modification application from Harrison Steel Castings Company relating to the construction and the operation of the following emission units and pollution control devices:

- (a) One (1) blast machine, identified as LN7-3 wheel blast, constructed in 2004 with a maximum capacity of 25 tons of steel per hour with emissions controlled by baghouse, identified as DC-8.
- (b) One (1) pangborn rotoblast machine, identified as LN2-T, to be constructed by 2005 with a maximum capacity of 6 tons of steel per hour with emissions controlled by baghouse, identified as DC-22.

*(Note: The blast machine and baghouse, identified as LN7-3 and DC-8, respectively, replaced the existing blast machine, identified as LN6-TT, and baghouse, identified as DC-24.)*

#### Unpermitted Emission Units and Pollution Control Equipment

The source consists of the following unpermitted facility:

- (a) One (1) blast machine identified as LN7-3 wheel blast, constructed in 2004 with a maximum capacity of 25 tons of steel per hour with emissions controlled by baghouse, identified as DC-8.

#### Permitted Emission Units and Pollution Control Equipment Removed from the Source

The source also consists of the following previously permitted emission unit and pollution control device that has been removed from service:

- (a) One (1) twin table blast machine, identified as LN6-TT, constructed in 1959 with a maximum capacity of 25 tons of steel per hour with emissions controlled by a baghouse, identified as DC24.

### **Explanation of Modification Requested**

This significant source and significant permit modification consists of the following changes to Part 70 permit T045-6002-00002:

- (a) The replacement of the twin table blast machine and the associated baghouse with a new blast machine and a baghouse and construction of a new blast unit controlled by a fabric filter dust collector. Due to these changes, revisions are made to the existing Part 70 No. 045-6002-00002. The specific changes made to existing Part 70 permit, as described above and approved herein, are shown at the end of this document.

### **Existing Approvals**

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

- (a) T045-6002-00002 issued on November 30, 2001;
- (b) SSM 045-12788-00002 issued on June 13, 2001; and
- (c) MPM 045-15172-00002 issued on April 23, 2002.

### **Enforcement Issue**

- (a) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled "Unpermitted Emission Units and Pollution Control Equipment".
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

### **Recommendation**

The staff recommends to the Commissioner that the Significant Source Modification and Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

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

An application for the purposes of this review was received on July 19, 2004 and October 8, 2004.

### **Emission Calculations**

See Appendix A of this document for detailed emissions calculations (Appendix A, page 1).

### **Potential To Emit Before Controls (Modification)**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source 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."

Pollutant	Potential To Emit (tons/year)
PM	2308.3
PM-10	230.9
SO <sub>2</sub>	0.00
VOC	0.00
CO	0.00
NO <sub>x</sub>	0.00
HAPs	0.00

**Justification for Modification**

The Title V permit is being modified through a Significant Source Modification and Significant Permit Modification. The Permittee proposed to limit the potential to emit of PM and PM-10 to less than twenty-five (25) tons per year and fifteen (15) tons per year, respectively by complying with the following constraint:

- (a) Using a particulate air pollution control device as follows:
  - (1) Achieving and maintaining ninety-nine percent (99%) efficiency.
  - (2) Complying with a no visible emission standard.
  - (3) Certifying to the commissioner that the control device supplier guarantees that a specific outlet concentration, in conjunction with design air flow, will result in actual emissions less than twenty-five (25) tons of particulate matter (PM) or fifteen (15) tons per year of particulate matter with an aerodynamic diameter less than or equal to ten (10) micrometers (PM10).

The PM and PM-10 potential to emit before controls will exceed major source thresholds for federal permitting programs. The PM and PM-10 potential emissions before controls from the shot blaster machines, identified as LN7-3 and LN2-T are 2308.3 tons per year and 230.9 tons per year, respectively. Hence, the source modification cannot be processed in accordance with the procedures of 326 IAC 2-7-10.5 (d)(4)(C) (minor modification) and shall be processed in accordance with the procedures described in 326 IAC 2-7-10.5 (g) (significant modification).

**County Attainment Status**

The source is located in Fountain County.

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

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NOx are considered when evaluating the rule applicability relating to ozone. Fountain County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NOx were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

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

**Source Status**

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	Greater than 100
PM-10	Greater than 100
SO <sub>2</sub>	Less than 100
VOC	Greater than 100
CO	Less than 100
NO <sub>x</sub>	Less than 100

- (a) This existing source is a major stationary source because at least one attainment regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the 28 listed source categories (secondary metal production).
- (b) These emissions are based upon the technical support document for Part 70 No. 045-6002-00002.

**Potential to Emit After Controls for the Modification**

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units for the modification.

Process/facility	Potential to Emit (tons/year)							
	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	Single HAP	Total HAPs
Proposed Modification*	23.1	2.3	-	-	-	-	-	-
Total Emissions	23.1	2.3	-	-	-	-	-	-
PSD or Offset Significant Level	25	15	40	40	100	40	N/A	N/A

\* Shot blast machines LN7-3 and LN2-T

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

## Federal Rule Applicability

### 40 CFR 64, Compliance Assurance Monitoring

The requirements of 40 CFR Part 64, Compliance Assurance Monitoring, apply to a pollutant-specific emissions unit (PSEU), as defined in 40 CFR 64.1, at a major source that is required to obtain a Part 70 or 71 permit if the PSEU meets the following criteria:

- (1) the unit is subject to an emission limitation or standard for an applicable regulated air pollutant,
- (2) the unit uses a control device as defined in 40 CFR 64.1 to comply with that emission limitation or standard, and
- (3) the unit has a potential to emit (PTE) before controls of the applicable regulated air pollutant equal to or greater than 100 percent of the amount (tons per year) of the pollutant required for a source to be classified as a Part 70 major source.

This source was issued initial Part 70 permit no. T045-6002-00002 on November 30, 2001. The Shot Blast Machine, identified as LN7-3, as PSEU has uncontrolled PTE of PM<sub>10</sub> at greater than 100 percent of the applicable major Part 70 threshold. The unit is also subject to an emission limitation or standard for an applicable regulated air pollutant and uses a control device to comply with the emission limitation or standard. Therefore, the Shot Blast Machine, identified as LN7-3, shall meet the criteria for Compliance Assurance Monitoring applicability. The emissions from this shot blast machine will be controlled by baghouse, identified as DC-8 which shall be subject to the compliance monitoring requirements in Conditions D.5.5 through D.5.8. Compliance with these permit conditions shall assure compliance with 40 CFR 64 requirements.

The pangborn rotoblast machine, identified as LN2-T, does not have uncontrolled PTE of PM<sub>10</sub> at greater than 100 percent of the applicable major Part 70 threshold. Therefore, the rotoblast machine does not meet the criteria for Compliance Assurance Monitoring applicability.

## State Rule Applicability - Entire Source

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

This existing source is a major stationary source because it is one of the 28 listed source categories (i.e. secondary metal production) under 326 IAC 2-2, and potential volatile organic compound (VOC) and particulate matter (PM & PM-10) emissions are greater than 100 tons per year. This modification to an existing major stationary source is not major because the emissions increase is less than the applicable PSD significant threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

### 326 IAC 5-1 (Opacity Limitations)

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

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

## State Rule Applicability - Individual Facilities

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

**Shot Blast Machine, identified as LN7-3, and controlled by baghouse DC-8 and constructed in 2004**

**Pangborn Rotoblast machine, identified as LN2-T, and controlled by baghouse DC-22 and constructed in 2004**

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable to the shot blast machines, identified as LN7-3 and LN2-T, the following conditions shall apply:

- (a) The PM emissions from the baghouse DC8 controlling the LN7-3 shot blast machine shall not exceed 4.34 pounds per hour.
- (b) The PM emissions from the baghouse DC22 controlling the LN2-T shot blast machine shall not exceed 1.14 pounds per hour.
- (c) The PM<sub>10</sub> emissions from the baghouse DC8 controlling the LN7-3 shot blast machine shall not exceed 2.54 pounds per hour.
- (b) The PM<sub>10</sub> emissions from the baghouse DC22 controlling the LN2-T shot blast machine shall not exceed 0.66 pounds per hour.

The above limits are equivalent to PM and PM<sub>10</sub> emissions of 24 and 14 tons per year, respectively from the LN7-3 and LN2-T shot blast machines. Therefore, the requirements of 326 IAC 2-2 (PSD) shall not apply.

326 IAC 6-3-2 (Particulate emission limitations, work practices, and control technologies)

Pursuant to this rule the particulate matter (PM) from the facilities shall be limited by the following:

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 maximum process rate for the shot blast machine, identified as LN7-3, is 25 tons per hour. Hence, based on the above formula the allowable particulate emission rate shall be 35.4 pounds per hour.

The maximum process rate for the shot blast machine, identified as LN2-T is 6 tons per hour. Hence, based on the above formula the allowable particulate emission rate shall be 13.62 pounds per hour. The baghouses, identified as DC8 and DC22, shall be in operation at all times the shot blast machines are in operation, in order to comply with the emission limits. Based on the calculations (Appendix A, page 1) the shot blasting processes are in compliance with this limit.

## Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

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

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

In addition to the compliance monitoring conditions for all controlled stack exhausts the baghouses, identified as DC-8 and DC-22, have applicable compliance monitoring conditions as specified below:

- (a) The Permittee shall record the total static pressure drop across the baghouse at least once per shift when the blast machine is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (b) The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.
- (c) An inspection shall be performed each calendar quarter of all bags controlling the shot blast machine when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.
- (d) In the event that bag failure has been observed:
  - (i) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 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.

- (ii) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have 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).

### Changes Proposed

- 1. The changes listed below have been made to the Part 70 Operating Permit (T045-6002-00002) for the addition of one (1) blast machine, identified as LN7-3 wheel blast, and one (1) pangborn rotoblast machine, identified as LN2-T.
- 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:

- (5) The shot blasting operations consisting of the following;
  - (h) ~~One (1) twin table blast machine, identified as LN6-TT, constructed in 1959 with a maximum capacity of 25 tons of steel per hour with emissions controlled by a baghouse, identified as DC24.~~  
**One (1) blast machine, identified as LN7-3 wheel blast, constructed in 2004 with a maximum capacity of 25 tons of steel per hour with emissions controlled by a baghouse, identified as DC8.**
  - (m) **One (1) pangborn rotoblast machine, identified as LN2-T, to be constructed by 2005 with a maximum capacity of 6 tons of steel per hour with emissions controlled by baghouse, identified as DC-22.**

### SECTION D.5

### FACILITY OPERATION CONDITIONS

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

The shot blasting operations consisting of the following;

- (a) Two (2) twin table blast machines, identified as L3/4 - NTT and L3/4 - STT, both constructed in 1961 each with a maximum capacity of 25 tons of steel per hour with emissions from L3/4 - NTT controlled by baghouse DC16 and emissions from L3/4 - STT controlled by baghouse DC18.
- (b) One (1) Nelle Belle shotblast machine, identified as Nelle, constructed in 1955 with a maximum capacity of 60 tons of steel per hour with emissions controlled by a baghouse, identified as DC7.
- (c) One (1) Wheelabrator Frye shotblast machine, identified as #16 Monorail, constructed in 1976 with a maximum capacity of 25.7 tons of metal per hour with emissions controlled by a baghouse, identified as DC17.
- (d) Two (2) room blast machines, identified as LN3-Rm and LN5-S Rm, constructed in 1962 and 1967, respectively, with a maximum capacity of 8 tons of steel per hour each with emissions from LN3-RM controlled by baghouse DC30 and emissions from LN5-S Rm controlled by baghouse DC28

## SECTION D.5

## FACILITY OPERATION CONDITIONS

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

- (e) One (1) room blast machine, identified as LN5-N, constructed in 1960 with a maximum capacity of 10 tons of steel per hour with emissions controlled by a baghouse, identified as DC11.
- (f) One (1) room blast machine, identified as LN2-N, constructed in 1981 with a maximum capacity of 13 tons of steel per hour with emissions controlled by a baghouse, identified as DC23.
- (g) One (1) tumble blast machine, identified as LN1-TMBL, constructed in 1945 with a maximum capacity of 4.5 tons of steel per hour with emissions controlled by a baghouse, identified as DC10.
- (h) ~~One (1) twin table blast machine, identified as LN6-TT, constructed in 1959 with a maximum capacity of 25 tons of steel per hour with emissions controlled by a baghouse, identified as DC24.~~  
**One (1) blast machine, identified as LN7-3 wheel blast, constructed in 2004 with a maximum capacity of 25 tons of steel per hour with emissions controlled by a baghouse, identified as DC8.**
- (i) One (1) monorail blast machine, identified as #18 Monorail, constructed in 1980 with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC21.
- (j) One (1) room blast machine, identified as LN2-S Rm, constructed in 1979 with a maximum capacity of 7 tons of steel per hour with emissions controlled by a baghouse, identified as DC33.
- (k) One (1) chill room tumble blast machine, identified as Chill Tmbl, constructed July 1, 1977, with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC6.
- (l) One (1) chill room cabinet blast machine, identified as Chill Cbnt, constructed in 1978 with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC6.
- (m) **One (1) pangborn rotoblast machine identified as LN2-T, to be constructed by 2005 with a maximum capacity of 6 tons of steel per hour with emissions controlled by baghouse, identified as DC-22.**

(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.5.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (~~Process Operations~~ **Particulate Emission Limitations for Manufacturing Processes**), the following conditions shall apply:

- (a) The allowable PM emission rate from each of the baghouses DC16 and DC18 controlling the shotblast machines identified as the twin table shotblast machines L3/4-NTT and L3/4-STT, shall not exceed 35.4 pounds per hour each when operating at a process weight rate of 25 tons of metal castings per hour each.
- (b) The allowable PM emission rate from the baghouse DC7 controlling the shotblast machine identified as the Nelle Belle shotblast machine (Nelle) shall not exceed 46.3 pounds per hour when operating at a process weight rate of 60 tons of metal castings per hour.

- (c) The allowable PM emission rate from the baghouse DC17 controlling the shotblast machine identified as the Wheelabrator Frye shotblast machine (#16 Monorail) shall not exceed 36.1 pounds per hour when operating at a process weight rate of 25.7 tons of metal castings per hour.
- (d) The allowable PM emission rate from each of the baghouses DC30 and DC28 controlling the shotblast machines identified as the room blast shotblast machines LN3-Rm and LN5-S Rm, shall not exceed 16.5 pounds per hour when operating at a process weight rate of 8 tons of metal castings per hour each.
- (e) The allowable PM emission rate from the baghouse DC11 controlling the shotblast machine identified as the room blast shotblast machine LN5-N shall not exceed 19.2 pounds per hour when operating at a process weight rate of 10 tons of metal castings per hour.
- (f) The allowable PM emission rate from the baghouse DC23 controlling the shotblast machine identified as the room blast shotblast machine LN2-N shall not exceed 22.9 pounds per hour when operating at a process weight rate of 13 tons of metal castings per hour.
- (g) The allowable PM emission rate from the baghouse DC10 controlling the shotblast machine identified as the tumble blast shotblast machine LN1-TMBL shall not exceed 11.2 pounds per hour when operating at a process weight rate of 4.5 tons of metal castings per hour.
- (h) The allowable PM emission rate from the baghouse ~~DC24~~ **DC8** controlling the shotblast machine identified as the ~~twin table blast shotblast machine LN6-TT~~ **LN7-3 wheel blast** shall not exceed 35.4 pounds per hour when operating at a process weight rate of 25 tons of metal castings per hour.
- (i) The allowable PM emission rate from the baghouse DC21 controlling the shotblast machine identified as the #18 monorail shotblast machine shall not exceed 20.9 pounds per hour when operating at a process weight rate of 11.4 tons of metal castings per hour.
- (j) The allowable PM emission rate from the baghouse DC33 controlling the shotblast machine identified as the room blast shotblast machine LN2-S Rm shall not exceed 15.1 pounds per hour when operating at a process weight rate of 7 tons of metal castings per hour.
- (k) The allowable PM emission rate from the baghouse DC6 controlling the shotblast machines identified as the chill room tumble blast shotblast machine (Chill Tmb) and the chill room cabinet blast shotblast machine (Chill Cbnt) shall not exceed 33.3 pounds per hour when operating at a combined process weight rate of 22.8 tons of metal castings per hour.
- (l) The allowable PM emission rate from the baghouse DC22 controlling the shotblast machine identified as LN2-T rotoblast shall not exceed 13.62 pounds per hour when operating at a process weight rate of 6 tons of metal castings per hour.**

The pounds per hour limitations for (a), and (c) through ~~(k)~~ **(l)** above were calculated with the following equation:

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

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

where E = rate of emission in pounds per hour; and

P = process weight rate in tons per hour

The pounds per hour limitation for (b) above was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate greater than 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55 P^{0.11} - 40$$

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

#### D.5.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) and ~~40 CFR 52.24~~ not applicable, the following conditions shall apply:

- (a) The PM emissions from the baghouse DC23 controlling the LN2-N shot blast machine shall not exceed 5.48 pounds per hour.
- (b) The PM emissions from the baghouse DC21 controlling the #18 Monorail shot blast machine shall not exceed 5.48 pounds per hour.
- (c) The PM emissions from the baghouse DC33 controlling the LN2-S Rm shot blast machine shall not exceed 5.48 pounds per hour.
- (d) The PM emissions from the baghouse DC6 controlling the Chill room tumble blast shot blast machine (Chill Tmbl) and the Chill room cabinet blast shotblast machine (Chill Cbnt) shall not exceed 5.48 pounds per hour.
- (e) The PM emissions from the baghouse DC8 controlling the LN7-3 shot blast machine shall not exceed 4.34 pounds per hour.**
- (f) The PM emissions from the baghouse DC22 controlling the LN2-T shot blast machine shall not exceed 1.14 pounds per hour.**
- (g) The PM<sub>10</sub> emissions from the baghouse DC8 controlling the LN7-3 shot blast machine shall not exceed 2.54 pounds per hour.**
- (h) The PM<sub>10</sub> emissions from the baghouse DC22 controlling the LN2-T shot blast machine shall not exceed 0.66 pounds per hour.**

Therefore, the requirements of 326 IAC 2-2 (PSD) and ~~40 CFR 52.24~~ shall not apply.

#### D.5.3 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 each of the control devices listed in this section.

### **Compliance Determination Requirements**

#### D.5.4 Particulate Matter

In order to comply with the requirements of Conditions D.5.1 and D.5.2, the following conditions shall apply:

- (a) The baghouse, DC16, for PM and PM10 control shall be in operation at all times when the L3/4-NTT shot blast machine is in operation.
- (b) The baghouse, DC18, for PM and PM10 control shall be in operation at all times when the L3/4-STT shot blast machine is in operation.

- (c) The baghouse, DC7, for PM and PM10 control shall be in operation at all times when the Nelle Belle shot blast machine is in operation.
- (d) The baghouse, DC17, for PM and PM10 control shall be in operation at all time when the Wheelabrator Frye shot blast machine is in operation.
- (e) The baghouse, DC30, for PM and PM10 control shall be in operation at all times when the LN3-Rm shot blast machine is in operation.
- (f) The baghouse, DC28, for PM and PM10 control shall be in operation at all times when the LN5-SRm shot blast machine is in operation.
- (g) The baghouse, DC11, for PM and PM10 control shall be in operation at all times when the LN5-N shot blast machine is in operation.
- (h) The baghouse, DC23, for PM and PM10 control shall be in operation at all times when the LN2-N shot blast machine is in operation.
- (i) The baghouse, DC10, for PM and PM10 control shall be in operation at all times when the LN1-TMBL shot blast machine is in operation.
- (j) The baghouse, DC248, for PM and PM10 control shall be in operation at all times when the ~~LN6-TT~~ LN7-3 shot blast machine is in operation.
- (k) The baghouse, DC21, for PM and PM10 control shall be in operation at all times when the #18 Monorail shot blast machine is in operation.
- (l) The baghouse, DC33, for PM and PM10 control shall be in operation at all times when the LN2-S Rm shot blast machine is in operation.
- (m) The baghouse, DC6, shall be in operation at all times when the Chill Tmbl and Chill Cbnt shot blast machines are in operation.
- (n) **The baghouse, DC22, for PM and PM10 control shall be in operation at all times when the LN2-T shot blast machine is in operation.**

#### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)][40 CFR 64]**

##### D.5.5 Visible Emissions Notations

- (a) Visible emission notations of each of the shot blasting machines stack exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting start-up or shut down times.
- (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) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with ~~Section C - Compliance Monitoring Plan - Failure to Take~~

~~Response Steps~~ **Section C -Compliance Response Plan - Preparation, Implementation, Records, and Reports**, shall be considered a deviation from this permit.

#### D.5.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across each of the baghouses used in conjunction with the shot blasting machines, at least once per shift when the shot blasting machines are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across baghouses DC11 and DC30 shall be maintained within the range of 0.2 - 6.0 inches of water or a range established during the latest stack test. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across each of the other baghouses listed in this section shall be maintained within the range of 2.0 - 8.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. **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 - Compliance Monitoring Plan - Failure to Take Response Steps~~ **Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports**, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C -Pressure Gauge and Other 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.5.7 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the shot blasting machines when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. **Inspections required by this condition shall not be performed in consecutive months.** All defective bags shall be replaced.

#### D.5.8 Broken or Failed Bag Detection

In the event that bag failure has been observed.

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. ~~Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B - Emergency Provisions).~~ Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with ~~Section C - Compliance Monitoring Plan - Failure to Take Response Steps~~ **Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports**, shall be considered a deviation from this permit. **If operations continue after bag failure is observed and it will be 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.**
- (b) For single compartment baghouses, **if failure is indicated by a significant drop in the baghouse pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if the bag failure is determined by other means, such as gas temperatures, flow rates, air filtration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have 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).

**Compliance with the above compliance monitoring requirements shall assure compliance with 40 CFR 64 requirements for Shot Blast Machine, identified as LN7-3, and controlled by baghouse, identified as DC-8.**

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

#### D.5.9 Record Keeping Requirements

- (a) In order to document compliance with Condition D.5.5, the Permittee shall maintain records of visible emission notations of the shot blasting machines stack exhaust(s) once per shift.
- (b) In order to document compliance with condition D.5.6, the Permittee shall maintain records of the ~~following operational parameters~~ **total static pressure drop across each baghouse** once per shift ~~during normal operation when venting to the atmosphere:~~
- (1) ~~Inlet and outlet differential static pressure; and~~
- (2) ~~Cleaning cycle operation.~~
- (c) In order to document compliance with Condition D.5.7, the Permittee shall maintain records of the results of the inspections required under Condition D.5.7 and the dates the vents are redirected.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.
2. Condition C.18, Compliance Monitoring Plan-Failure to Take Response Steps, is revised to Compliance Response Plan-Preparation, Implementation, Records, and Reports as shown below. Part 70 does not allow an excuse from reporting failures. IDEM, OAQ may use enforcement discretion, but can not create an exemption through the permit. The rest of the changes are more made to re-organize the condition and clarify it's intent. Paragraph (a) contained more of a speech than an actual requirement, now it simply states the source is required to prepare a CRP. Paragraph (b) requires the source to implement the CRP. Paragraph (c) defines when the source is excused from taking response steps. Paragraph (d) clarifies that corrective action doesn't automatically excuse a deviation. Paragraph (e) defines the recordkeeping requirements. Paragraph (f) clarifies when monitoring is required. The old paragraph (f) has been removed because as described above, IDEM, OAQ does not have the authority through Part 70 to create an exemption from reporting failures. The title of this condition is referred to in Table of Contents and many other conditions. Therefore, Conditions D.2.8 (e), D.2.9, D.2.11, D.3.6 (e), D.3.7, D.3.9 (a), D.5.5 (e), D.5.6, D.5.8 (a), D.6.6 (e), D.6.7, D.6.9 (a), D.7.5, D.7.7, D.8.11 (e), D.8.12, D.8.14 (a), and D.8.15 (c) are also revised to reflect the change without replication herein.

#### **C.18 Compliance Monitoring Response Plan - Failure to Take Response Steps Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]**

- (a) ~~The Permittee is required to prepare implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. The compliance monitoring plan can be either an entirely new document, consist in whole of information contained in other documents, or consist of a combination of new information and information contained in other documents. If the compliance monitoring plan incorporates by reference information contained in other documents, the Permittee shall identify as part of the compliance monitoring plan the documents in which the information is found. The elements of the compliance monitoring plan are:~~

- ~~(1) This condition;~~
  - ~~(2) The Compliance Determination Requirements in Section D of this permit;~~
  - ~~(3) The Compliance Monitoring Requirements in Section D of this permit;~~
  - ~~(4) The Record Keeping and Reporting Requirements in Section C (General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and~~
  - ~~(5) A a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, **supplemented from time to time by the Permittee**, and maintained on site, and is comprised of:
    - ~~(A)(1)~~ Reasonable response steps that may be implemented in the event that ~~compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.~~
    - ~~(B) A time schedule for taking reasonable response steps including a schedule for devising additional response steps for situations that may not have been predicted.~~~~
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows: ~~Failure to take reasonable response steps may constitute a violation of the permit.~~
- (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or**
  - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.**
  - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.**
  - (4) Failure to take reasonable response steps shall constitute a violation of the**

- permit.**
- (c) ~~Upon investigation of a compliance monitoring excursion, the~~ **The Permittee is excused from taking not required to take any** further response steps for any of the following reasons:
- (1) A false reading occurs due to the malfunction of the monitoring equipment **and** ~~This shall be an excuse from taking further response steps providing that~~ prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.
  - (3) An automatic measurement was taken when the process was not operating.
  - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) **When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B- Deviations from Permit Requirements and Conditions.**
- ~~(d)(e)~~ **(e)** ~~Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken.~~ **The Permittee shall record all instances when response steps are taken.** In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- ~~(e)(f)~~ **(f)** ~~Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed at all times when the equipment emission unit is operating, except for time necessary to perform quality assurance and maintenance activities. If monitoring is required by Section D and the equipment is not operating, then the Permittee may record the fact that the equipment is not operating or perform the required monitoring.~~
- ~~(f)~~ ~~At its discretion, IDEM may excuse the Permittee's failure to perform the monitoring and record keeping as required by Section D, if the Permittee provides adequate justification and documents that such failures do not exceed five percent (5%) of the operating time in any quarter. Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.~~

## Conclusion

The construction and operation of shotblast machines identified as the LN7-3 wheel blast and LN2-T rotoblast shall be subject to the conditions of the attached proposed Significant Source Modification No.:045-19746-00002 and Significant Permit Modification No.: 045-20240-00002.

**Appendix A: Steel and Ductile Iron Castings Plant**

**Company Name:** Harrison Steel Castings Company  
**Address City IN Zip:** 900 North Mound Street, Attica, Indiana 47918  
**Part 70 SSM No.:** 045-19746-00002  
**Reviewer:** Gaurav Shil / EVP  
**Date:** 3/16/2005

Shot Blaster (Wheel Blast, LN7-3)							
Type of Material:	Iron		Maximum Throughput (ton/hr)	25			
	<b>PM lbs/ton metal</b>	<b>PM10 lbs/ton metal</b>	<b>SOx lbs/ton metal</b>	<b>NOx lbs/ton metal</b>	<b>VOC lbs/ton metal</b>	<b>CO lbs/ton metal</b>	<b>Lead lbs/ton metal</b>
	17	1.7	0.00	0.00	0.0	0.0	0.0
Potential Emissions (lbs/hr)	425.0	42.5	0.0	0.0	0.0	0.0	0.0
Potential Emissions (ton/yr)	1861.5	186.2	0.0	0.0	0.0	0.0	0.0
Control Efficiency (%)	99.0%	99.0%	0.0%	0.0%	0.0%	0.0%	99.0%
Controlled Emissions (ton/yr)	18.6	1.9	0.0	0.0	0.0	0.0	0.0

Shot Blaster (Pangborn Rotoblast, LN2-T)							
Type of Material:	Iron		Maximum Throughput (ton/hr)	6			
	<b>PM lbs/ton metal</b>	<b>PM10 lbs/ton metal</b>	<b>SOx lbs/ton metal</b>	<b>NOx lbs/ton metal</b>	<b>VOC lbs/ton metal</b>	<b>CO lbs/ton metal</b>	<b>Lead lbs/ton metal</b>
	17	1.7	0.00	0.00	0.0	0.0	0.0
Potential Emissions (lbs/hr)	102.0	10.2	0.0	0.0	0.0	0.0	0.0
Potential Emissions (ton/yr)	446.8	44.7	0.0	0.0	0.0	0.0	0.0
Control Efficiency (%)	99.0%	99.0%	0.0%	0.0%	0.0%	0.0%	99.0%
Controlled Emissions (ton/yr)	4.5	0.4	0.0	0.0	0.0	0.0	0.0

**Compliance with 326 IAC 6-3-2 requirements**

**Shot Blaster, LN7-3**

**Allowable particulate emission rate =  $4.1 P^{0.67} =$**  35.43 lb/hr  
**Controlled PM emissions =** 4.25 lb/hr

**Shot Blaster, LN2-T**

**Allowable particulate emission rate =  $4.1 P^{0.67} =$**  13.62 lb/hr  
**Controlled PM emissions =** 1.02 lb/hr

The above calculations demonstrate compliance with the allowable PM emission limits of 35.43 lbs/hr and 13.62 for baghouses identified as DC-8 and DC-22, respectively.