INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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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: February 25, 2005

RE: Harrison Steel Castings Company / 045-20502-00002

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 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) 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-MOD.dot 1/10/05

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February 25, 2005

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

Re: 045-20502
First Minor 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 a steel and ductile iron castings plant. An application to modify the source was received by the Office of Air Quality (OAQ) on December 8, 2004. Pursuant to the provisions of 326 IAC 2-7-10.5(d)(4)(e), a minor 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) core sand mixer, with a maximum capacity of 6 tons of cores per hour, to be used in conjunction with the Airset core production process.

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 unit 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 minor source modification authorizes construction of the core sand mixer. 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 Alic Bent, c/o OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204, or at 973-575-2555, extension 3206, or dial 1-800-451-6027, and ask for extension 3-6878.

Sincerely,
February 25, 2005

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
AB / 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

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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

First Minor Source Modification No.:045-20502-00002	Pages Affected: 1, 9, 55 - 58, 74
Issued by: Origin signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: February 25, 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, identified as Pep Core, constructed in 1989 with a maximum capacity of 9 tons of sand per hour with emissions uncontrolled. The Airset core making system consists of two (2) core sand mixers, one constructed in 1989 and the other to be constructed in 2005, with maximum capacities of 9 tons of sand per hour and 6 tons of sand per hour, respectively.

SECTION D.7 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]
The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.

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 ton new sand storage hopper and a seven (7) ton new sand storage hopper.

(b) One (1) Airset core making machine, identified as Pep Core, constructed in 1989 with a maximum capacity of 9 tons of sand per hour with emissions uncontrolled. The Airset core making system consists of two (2) core sand mixers, one constructed in 1989 and the other to be constructed in 2005, with maximum capacities of 9 tons of sand per hour and 6 tons of sand per hour, respectively.

(c) One (1) Pepset mold making machine, constructed in 1994 with a maximum capacity of 45 tons of sand per hour with emissions uncontrolled.

(d) One (1) Oil core making machine, identified as Red CO_2, constructed in 1988 with a maximum capacity of 0.05 tons of sand per hour with emissions uncontrolled.

(e) One (1) Airset core making machine equipped with a mixer, identified as Zircon, constructed in 1992 with a maximum capacity of 9 tons of sand per hour with emissions uncontrolled.

(f) Five (5) Oil Sand core making benches, constructed in 1959, each with a maximum capacity of 0.4 tons of oil sand per hour or 0.6 tons of CO_2 sand per hour.

(g) Two (2) Shell core making machines, constructed in 1962 and 1973, each with a maximum capacity of 0.075 tons of sand per hour.

(h) One (1) Shell core making machine, constructed in 1976, with a maximum capacity of 0.125 tons of sand per hour.

(i) One (1) Airset core making machine, constructed in 1976, with a maximum capacity of 16.5 tons of sand per hour.

(j) One (1) core wash process, constructed prior to 1977, with emissions uncontrolled and exhausting internally.

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

D.7.1 VOC Emissions [326 IAC 8-1-6] [326 IAC 2-2]

The Isocure core making machine and the Pepset mold making machine each have potential emissions of VOC greater than 40 tons per year, therefore, in order to render the requirements of 326 IAC 8-1-6 (BACT) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the following conditions shall apply:

(a) The scrubber controlling the Isocure core machine shall be in operation at all times when the core machine is in operation.

(b) The VOC/TEA emissions from the scrubber controlling the TEA gas emissions from the Isocure core making machine shall not exceed 2.54 pound per hour.

(c) The uncontrolled VOC emissions from the Isocure core making machine and mixer shall not exceed 5.43 pounds per hour.

(d) The VOC emissions from the Pepset mold making machine shall not exceed 5.48 pounds per hour.

(e) The sand throughput to the Pepset mold making machine shall not exceed 73,846.8 tons per 12 consecutive month period.

(f) The total resin usage for the Airset core making machine sand mixer, constructed in 2005, shall be limited to less than 1,000,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. This is equivalent to VOC emissions of less 25 tons per year.

(g) The VOC emissions from the Airset core making machine sand mixer shall not exceed 0.05 pounds of VOC per pound of core resin.

Therefore, the requirements of 326 IAC 8-1-6 (BACT) shall not apply. Compliance with above limits will also render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.7.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the scrubber.

Compliance Determination Requirements

D.7.3 VOC Control

In order to comply with the requirements of Condition D.7.1, the scrubber for VOC (TEA) emissions control shall be in operation at all times when the Isocure core machine is in operation.

D.7.4 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

Within 36 months after issuance of this permit, the Permittee shall perform VOC (TEA) emissions testing on the scrubber used to control the Isocure core machine using methods as approved by the Commissioner, in order to demonstrate compliance with Condition D.7.1. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

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

D.7.5 Parametric Monitoring

The Permittee shall monitor and record the acid content, pressure drop, and flow rate of the scrubber, at least once per shift when the associated Isocure core machine is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the scrubber shall be maintained within the range of 2.0 and 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 flow rate of the scrubber shall be maintained at no less than 120 gallons per minute, or a minimum established during the latest stack test. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the acid content of each of the scrubbers shall be maintained at a pH level of less than or equal to 2, or an acid content established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading, or when the flow rate is below the above mentioned minimum level for any one reading, or when the pH is above the above mentioned maximum level for any one reading. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

The instruments used for determining the pressure, flow rate, and pH level 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.7.6 Scrubber Inspections

An inspection shall be performed each calendar quarter of the scrubber controlling the Isocure core machine when venting to the atmosphere. A scrubber 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.

D.7.7 Failure Detection

In the event that a scrubber failure has been observed:

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). Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

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

D.7.8 Record Keeping Requirements

(a) In order to document compliance with condition D.7.5, the Permittee shall maintain records of the following operational parameters for the scrubber once per shift during normal operation:

(1) pressure drop;

(2) flow rate; and

(3) acid content (pH level).

(b) In order to document compliance with Condition D.7.6, the Permittee shall maintain records of the results of the inspections required under Condition D.7.6 and the dates the vents are redirected.

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

D.7.9 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.7.1(e) and D.7.1(f) shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting form located at the end of this permit, or its equivalent, within thirty (30)days after the end of the quarter being reported. The report submitted by the Permittee does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

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

Part 70 Quarterly Report

Source Name: Harrison Steel Castings Co.
Source Address: 900 N. Mound St., Attica, IN 47918
Mailing Address: 900 N. Mound St., P.O. Box 60, Attica, IN 47918
Part 70 Permit No.: T045-6002-00002
Facility: Airset Core Making Machine Sand Mixer (constructed in 2005)
Parameter: VOC
Limit: Total resin usage for the Airset core making machine sand mixer (constructed in 2005) shall be limited to 1,000,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Resin Usage This Month	Resin Usage Previous 11 Months	Resin Usage 12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

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

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

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

Source Background and Description

Source Name:	**Harrison Steel Castings Company**
Source Location:	**900 North Mound Street, Attica, IN 47918**
County:	**Fountain**
SIC Code:	**3321 and 3325**
Operation Permit No.:	**T045-6002-00002**
Operation Permit Issuance Date:	**November 30, 2001**
Minor Source Modification No.:	**045-20502-00002**
Significant Permit Modification No.:	**045-20409-00002**
Permit Reviewer:	**Alic Bent/EVP**

The Office of Air Quality (OAQ) has reviewed a modification application from Harrison Steel Castings Company relating to revisions to their steel and ductile iron castings permit as follows:

One Airset core making machine, identified as Pep Core, constructed in 1989 with a maximum of 9 tons of sand per hour with emissions uncontrolled. The Airset core making system consists of two (2) core sand mixers, one constructed in 1989 and the other to be constructed in 2005, with maximum capacities of 9 tons of sand per hour and 6 tons of sand per hour, respectively.

History

On December 8, 2004, Harrison Steel Castings Company submitted an application to the OAQ requesting to add a 2nd core sand mixer to be used in conjunction with the existing Airset core production process. The proposed mixer will allow the source to make core sand mix from either Zircon sand (which is currently used in the existing process), or Chromite sand. The proposed mixer will have the capacity to supply the core machine with 6 tons of mixed core sand per hour. The cores are produced using a two part phenolic urethane system with a liquid catalyst to set the resin. At 6 tons of cores per hour and a conservative emission factor of 1.1 pounds per ton of cores used, which is equivalent to 0.05 pounds of VOCs per pound of core resin, the potential to emit VOCs from the new mixer would be 28.9 tons per year. The source is proposing to limit total resin usage to less than 1,000,000 pounds of resin per year, which will result in a limited potential to emit of less than 25 tons of VOC per year.

Special Issue - Increased Utilization of Existing Processes

The source currently operates a core sand mixer, constructed in 1989, which is used in conjunction with the existing Airset core production process. The proposed core sand mixer is being added to allow the source to make core sand mix from either Zircon sand, or Chromite sand. The core machine makes one core at a time and cannot use the different mixers simultaneously. The proposed mixer is being added to provide an alternate type of sand and does not increase the capacity of the core production process, since the core machines are the bottle-neck of the whole core production process. Therefore, IDEM has determined that the addition of the new core sand mixer does not result in the increase utilization of the core production process or any of the processes up stream or down stream of the core production unit.

Existing Approvals

The source was issued a Part 70 Operating Permit T045-6002-00002 on November 30, 2001. The source has since received the following:

(a) First Significant Source Modification No.: 045-12788, issued on June 13, 2001;

(b) First Minor Permit Modification No.: 045-15172, issued on April 23, 2002; and

The source has two (2) pending permits, Second Significant Source Modification (SSM) No.: 045-19746-00002 and First Significant Permit Modification (SPM) No.: 045-20240-00002. These permits were public noticed during the period December 29, 2004 to January 28, 2005. However, the permits have been not issued. The units being modified in the two (2) pending permits (2^{nd} SSM and 1^{st} SPM) are not related to the units being modified in the proposed Minor Source Modification (MSM) No.: 045-20502-00002 and Significant Permit Modification (SPM) No.: 045-20409-00002. The regulated pollutants emitted for 2^{nd} SSM/1^{st} SPM are PM and PM10 while the only regulated pollutant for the proposed MSM/SPM is VOC, and both modifications are not subject to the requirements of PSD. Therefore, IDEM has determined that the units being permitted through the two (2) pending permits (2^{nd} SSM and 1^{st} SPM) and the proposed MSM/SPM can be treated as separate construction projects and don't have to be combined for permit review.

Enforcement Issue

The source has an enforcement action pending for noncompliance with their BACT limits.

Recommendation

The staff recommends to the Commissioner that the Minor 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 December 8, 2004. Additional information was received on January 17, 2005.

Emission Calculations

See Appendix A: pages 1 of 1 of this document for detailed emissions calculations.

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	--
PM-10	--
SO_2	--
VOC	28.9
CO	--
NO_x	--
Naphthalene	1.69

Justification for Modification

The Title V permit is being modified through a Minor Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(d)(4)(E) because it is a modification for which the potential to emit is limited to less than twenty-five(25) tons per year of VOC by limiting the raw material throughput. The Minor Source Modification will be incorporated into the permit through a Significant Permit Modification because new limitations and standards are required to be added to the existing Title V permit.

County Attainment Status

The source is located in Fountain County.

Pollutant	Status
PM-10	Attainment
SO_2	Attainment
NO_2	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 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_2	Less than 100
VOC	Greater than 100
CO	Less than 100
NOx	Less than 100

(a) This existing source is a major PSD 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, specifically a secondary metal production facility.

(b) These emissions are based upon the technical support document for the Significant Source Modification No.: 045-12788-00002.

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.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Core Sand Mixer	--	--	--	< 25	--	--	1.46 (naphthalene)
Total for this modification	--	--	--	< 25	--	--	1.46 (naphthalene)
PSD Significance Level	25	15	40	40	100	40	0.6 (Lead)

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

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) incorporated into this permit.

(b) The National Emission Standards for Hazardous Air Pollutants (NESHAP), 326 IAC 20, (40 CFR Part 63.7680, Subpart EEEEE (Iron and Steel Foundries) applies to each new or existing iron and steel foundry that is a major source of HAP emissions. The rule covers emissions from metal melting furnaces, scrap preheaters, pouring areas, pouring stations, automated conveyor and pallet cooling lines that use a sand mold system, automated shakeout lines that use a sand mold system, and mold and core making lines. The final rule also covers fugitive emissions from foundry operations.

This source is an existing steel and ductile iron castings foundry that is a major source of HAP emissions. Pursuant to this rule, as an existing affected source the Permittee must comply with 40 CFR 63, Subpart EEEEE on and after April 22, 2007. Since this rule has a future compliance date, the specific details of the rule and how the permittee will demonstrate compliance are not provided in the permit. The Permittee shall submit an application for a significant permit modification at least nine months prior to the April 22, 2007 compliance date that will specify the option or options for the emission limitations and standards and methods for determining compliance chosen by the Permittee. At that time, the Department will include the specific details of the rule and how the Permittee will demonstrate compliance. In addition, pursuant to 40 CFR 63, Subpart EEEEE, the Permittee shall submit the requisite notifications and reports pursuant to Subpart EEEEE and 40 CFR 63, Subpart A, and such are contained in the permit.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

Since this source is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, this source is subject to 326 IAC 2-6 (Emission Reporting). The source also has potential to emit greater than or equal to 250 tons per year of VOC; therefore, an emission statement covering the previous calendar year must be submitted by July 1 annually. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

State Rule Applicability - Individual Facilities

326 IAC 8-1-6 (BACT)

VOC emissions from the Airset core making machine sand mixer, constructed in 2005, shall be limited to less than 25 tons per year as follows:

(a) The total resin usage for the Airset core making machine sand mixer, constructed in 2005, shall be limited to less than 1,000,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.

(b) The VOC emissions from the Airset core making machine sand mixer, constructed in 2005, shall not exceed 0.05 pound per pound of resin.

Therefore, the requirements of 326 IAC 8-1-6 (BACT) shall not apply. The usage requirements shall also make the requirements of 326 IAC 2-2 (PSD) not applicable.

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.

There are no compliance monitoring requirements applicable to this modification.

Changes Proposed

The changes listed below have been made to the Part 70 Operating Permit T045-6002-00002 to incorporate the new core sand mixer. Language that has been deleted has been shown with a line through it and language that has been added is shown in bold.

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

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

(8) Core and mold making operations consisting of the following:

(b) One (1) Airset core making machine, identified as Pep Core, constructed in 1989 with a maximum capacity of 9 tons of sand per hour with emissions uncontrolled. **The Airset core making system consists of two (2) core sand mixers, one constructed in 1989 and the other to be constructed in 2005, with maximum capacities of 9 tons of sand per hour and 6 tons of sand per hour, respectively.**

SECTION D.7 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]
The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.

Core and mold making operations consisting of the following:

(b) One (1) Airset core making machine, identified as Pep Core, constructed in 1989 with a maximum capacity of 9 tons of sand per hour with emissions uncontrolled. **The Airset core making system consists of two (2) core sand mixers, one constructed in 1989 and the other to be constructed in 2005, with maximum capacities of 9 tons of sand per hour and 6 tons of sand per hour, respectively.**

D.7.1 VOC Emissions [326 IAC 8-1-6] [326 IAC 2-2]

The Isocure core making machine and the Pepset mold making machine each have potential emissions of VOC greater than 40 tons per year, therefore, in order to render the requirements of 326 IAC 8-1-6 (BACT) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the following conditions shall apply:

(a) The scrubber controlling the Isocure core machine shall be in operation at all times when the core machine is in operation.

(b) The VOC/TEA emissions from the scrubber controlling the TEA gas emissions from the Isocure core making machine shall not exceed 2.54 pound per hour.

(c) The uncontrolled VOC emissions from the Isocure core making machine and mixer shall not exceed 5.43 pounds per hour.

(d) The VOC emissions from the Pepset mold making machine shall not exceed 5.48 pounds per hour.

(e) The sand throughput to the Pepset mold making machine shall not exceed 73,846.8 tons per 12 consecutive month period.

(f) The total resin usage for the Airset core making machine sand mixer, constructed in 2005, shall be limited to less than 1,000,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. This is equivalent to VOC emissions of less than 25 tons per year.

(g) The VOC emissions from the Airset core making machine sand mixer shall not exceed 0.05 pounds of VOC per pound of core resin.

D.7.9 Reporting Requirements

A quarterly summary of the information to document compliance with Condition**s** D.7.1(e) and **D.7.1(f)** shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting form located at the end of this permit, or its equivalent, within thirty (30)days after the end of the quarter being reported. The report submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

Part 70 Quarterly Report

Source Name: Harrison Steel Castings Co.
Source Address: 900 N. Mound St., Attica, IN 47918
Mailing Address: 900 N. Mound St., P.O. Box 60, Attica, IN 47918
Part 70 Permit No.: T045-6002-00002
Facility: Airset Core Making Machine Sand Mixer (constructed in 2005)
Parameter: VOC
Limit: Total resin usage for the Airset core making machine sand mixer (constructed in 2005) shall be limited to less than 1,000,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Resin Usage This Month	Resin Usage Previous 11 Months	Resin Usage 12 Month Total
Month 1			
Month 2			
Month 3			

☐ **No deviation occurred in this quarter.**

☐ **Deviation/s occurred in this quarter.**
Deviation has been reported on:

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

Attach a signed certification to complete this report.

Conclusion

The operation of this steel and ductile iron castings plant shall be subject to the conditions of the attached proposed Minor Source Modification No. 045-20502-00002 and Significant Permit Modification No. 045-20409-00002.

Appendix A: Emission Calculations
Airset Core Making Machine Sand Mixer

Company Name: Harrison Steel Castings Co.
Address City IN Zip: 900 N. Mound St., Attica, IN 47918
Permit Number: MSM045-20502-00002
Reviewer: AB/EVP

Uncontrolled Emissions		
Process rate	6	tons/hour
Uncontrolled VOC emission factor	0.05	lbs VOC/lb resin
Uncontrolled VOC emission factor	1.1	lbs VOC/ton metal
Uncontrolled VOC Emissions (lbs/hr)	6.6	lbs/hour
Uncontrolled HAP Emissions (lbs/hr)	0.3861	lbs/hour
Uncontrolled HAP Emissions (tons/yr)	1.691118	tons/year
Uncontrolled VOC Emissions (tons/yr)	28.908	tons/year

Limited Potential to Emit		
Annual Resin Usage Limit	1,000,000	lbs/year
Annual Core Production	45,454.54	tons/year
Annual VOC Emissions	25	tons/year
Annual HAP Emissions	1.4625	tons/year

Methodology

Emission factors are from testing performed from phenolic urethane resin systems that showed an emission rate of 0.65 lbs/ton of cores at 1% resin content. A conservative emission factor of 1.0 lb/ton of cores at 1% resin content has been used. This equates 0.05 lbs VOC per lb resin.
Uncontrolled VOC emissions (tons/yr) = Process rate (tons/hr) * emission factor (lbs VOC/ton metal) * 8760 hr/yr * ton/2000 lb
Uncontrolled HAP emissions (tons/yr) = Process rate (tons/hr) * emission factor (lbs HAP/ton metal) * 8760 hr/yr * ton/2000 lb