

**NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT**

Proposed Approval of Construction and Operation Permit
for **Bremen Casting, Inc.**
in **Marshall County**

CP-099-9992, Plt ID-099-00001

Notice is hereby given that the above company located at 500 North Baltimore Street, Bremen, Indiana, has made application to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) for a permit to construct and operate a molding line. The addition of the new Sinto #1 molding line to the existing six (6) permitted molding lines is for added flexibility in producing castings. The allowable gray iron handled at the source by all molding lines combined remains the same at 12 tons per hour, before and after the addition of the new Sinto #1 molding line. Therefore, there will be no net PTE increase for any of the criteria pollutants.

Notice is hereby given that there will be a period of 30 days from the date of publication of this notice during which any interested person may comment on why this proposed permit should or should not be issued. Appropriate comments should be related to air quality issues, interpretation of the applicable state and federal rules, calculations made, technical issues, or the effect that the operation of this facility would have on any aggrieved individuals. A copy of the application and staff review is available for examination at the **Bremen Public Library, 304 N. Jackson Street, Bremen, Indiana**. All comments, along with supporting documentation, should be submitted in writing to the IDEM, OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana 46206-6015. If appropriate adverse comments concerning the **air pollution impact** of this proposed source are received, together with a request for a public hearing, such a hearing may be held to give further consideration to this application.

Persons not wishing to comment at this time, but wishing to receive notice of future proceedings conducted related to this action, must submit a written request to the Office of Air Management (OAM), at the above address. All interested parties of record will receive a notice of the decision on this matter and will then have 15 days after receipt of the Notice of Decision to file a petition for administrative review. Procedures for filing such a petition will be enclosed with the Notice.

Questions should be directed to Scott Pan, c/o OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or at 1-973-575-2555 ext. 3248 or at 1-800-451-6027.

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

SCP/EVP

**CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT**

**Bremen Casting, Inc.
500 North Baltimore Street
Bremen, Indiana 46506**

is hereby authorized to construct

- (a) One (1) molding line, identified as Sinto #1, capable of utilizing 160 molds (600 pounds per mold) per hour to process 6 tons per hour of the molten gray or ductile iron produced by the existing permitted cupola or the two (2) existing permitted electric induction furnaces, with exhaust gas venting through four (4) stacks identified as DS-14, DS-15, DS-16 and DS-17.

The addition of the new Sinto #1 molding line to the existing six (6) molding lines is for added flexibility in producing castings. The allowable gray or ductile iron handled at the source by all molding lines combined remains the same at 12 tons per hour, before and after the addition of the new Sinto #1 molding line.

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP-099-9992-00001	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

Construction Conditions

General Construction Conditions

1. That the data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).
2. That this permit 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.

Effective Date of the Permit

3. That pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.
4. That pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. That notwithstanding Construction Condition No. 6, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

First Time Operation Permit

6. That this document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:
 - (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
 - (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
 - (c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
 - (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees).

- (e) The Permittee has submitted their Part 70 application (#T099-6206-00001) on September 9, 1996 for the existing source. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

- 7. That when the facility is constructed and placed into operation the following operation conditions shall be met:

Operation Conditions

General Operation Conditions

- 1. That the data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).
- 2. That the permittee shall 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.

Preventive Maintenance Plan

- 3. That pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:
 - (a) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices.
 - (b) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.
 - (c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

Transfer of Permit

- 4. That pursuant to 326 IAC 2-1-6 (Transfer of Permits):
 - (a) In the event that ownership of this gray and ductile iron casting manufacturer is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.
 - (b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.
 - (c) The OAM shall reserve the right to issue a new permit.

Permit Revocation

5. That pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:
- (a) Violation of any conditions of this permit.
 - (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
 - (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
 - (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
 - (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

Availability of Permit

6. That pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by the IDEM or other public official having jurisdiction.

Performance Testing

7. That pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) compliance stack tests shall be performed for PM within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed according to 326 IAC 3-6 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Commissioner.
- (a) A test protocol shall be submitted to the OAM, Compliance Data Section, 35 days in advance of the test.
 - (b) The Compliance Data Section shall be notified of the actual test date at least two (2) weeks prior to the date.
 - (c) All test reports must be received by the Compliance Data Section within 45 days of completion of the testing.
 - (d) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.

- (e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.

PSD Minor Modification Limit

8. That the gray or ductile iron handled at the source by the new Sinto #1 molding line and the six (6) existing permitted molding lines combined shall be limited to 12 tons per hour. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply.

Annual Emission Reporting

9. That pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee must annually submit an emission statement for the source. This statement must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31.

Opacity Limitations

10. That pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:
- (a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.
- (b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

Particulate Matter Limitation

11. That pursuant to 326 IAC 6-3 (Process Operations), PM and PM-10 emissions from the Sinto #1 molding line shall not exceed the allowable particulate matter (PM) emission rate of at 45.3 lb/hr when operating at a maximum process weight rate of 54 tons/hr. The emission limit is calculated using the following equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{for } P \text{ greater than } 30 \text{ tons per hour}$$

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

Visible Emission Notations

12. That visible emission notations of all exhausts to the atmosphere from the Sinto #1 molding line shall be performed once per working shift. A trained employee will record whether emissions are normal or abnormal.

- (a) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, 80% of the time, the process is in operation, not counting start up or shut down time.
- (b) In the case of batch or discontinuous operation, readings shall be taken during that part of the operation specified in the facility's specific condition prescribing visible emissions.
- (c) 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 and abnormal visible emissions for that specific process.
- (d) The Preventive Maintenance Plan for this facility shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

Fugitive Dust Emissions

13. That pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any of the criteria specified in 326 IAC 6-4-2(1) through (4) are violated. Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM. [326 IAC 6-4-5(c)].

Record Keeping Requirements

14. That a log of information necessary to document compliance with operation permit condition no. 8 shall be maintained. The iron handling rate shall be the combined melting rate for both the cupola and the two (2) electric induction furnaces at the source. The melting rate shall be determined, on a per batch basis, by dividing the total iron melted by the number of melting hours. These records shall be kept for at least the past 36 month period and made available upon request to the Office of Air Management (OAM)

Open Burning

15. That the permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6.

Emergency Reduction Plans

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

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

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within 180 calendar days from the date on which this source commences operation.

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

- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (g) Upon direct notification by IDEM, OAM that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate level. [326 IAC 1-5-3]

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name: Bremen Casting, Inc.
 Source Location: 500 North Baltimore Street, Bremen, Indiana 46506
 County: Marshall
 Construction Permit No.: CP-099-9992-00001
 SIC Code: 3321
 Permit Reviewer: Scott Pan/EVP

The Office of Air Management (OAM) has reviewed an application from Bremen Casting, Inc. relating to the construction and operation of one (1) molding machine, consisting of the following equipment:

- (a) One (1) molding line, identified as Sinto #1, capable of utilizing 160 molds (600 pounds per mold) per hour to process 6 tons per hour of the molten gray iron produced by the existing permitted cupola or the two (2) existing permitted electric induction furnaces, with exhaust gas venting through four (4) stacks identified as DS-14, DS-15, DS-16 and DS-17.

The addition of the new Sinto #1 molding line to the existing six (6) molding lines is for added flexibility in producing castings. The allowable gray iron handled at the source by all molding lines combined remains the same at 12 tons per hour, before and after the addition of the new Sinto #1 molding line.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
DS-14	Sinto #1	40	3.5	35,000	120
DS-15, DS-16 & DS-17	Sinto #1	40	2.33 each	14,000 each	120

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

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

A complete application for the purposes of this review was received on August 10, 1998.

Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (one (1) page).

Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)
Particulate Matter (PM)	198.4	110.4
Particulate Matter (PM-10)	198.4	110.4
Sulfur Dioxide (SO ₂)	---	0.5
Volatile Organic Compounds (VOC)	---	3.7
Carbon Monoxide (CO)	---	0.0
Nitrogen Oxides (NO _x)	---	0.3
Single Hazardous Air Pollutant (HAP)	---	0.9
Combination of HAPs	---	0.9

- (a) Allowable emissions are determined from the applicability of rule 326 IAC 6-3 (see page 1 of 1 Appendix A for detailed calculations).
- (b) The potential emissions before control are less than the allowable emissions, therefore, the potential emissions before control are used for the permitting determination.
- (c) Allowable emissions (as defined in the Indiana Rule) of PM and PM-10 are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.

County Attainment Status

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Marshall County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Marshall County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source Part 70 Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Emissions (ton/yr)
PM	2251.3
PM10	1479.0
SO ₂	55.2
VOC	434.5
CO	7621.3
NO _x	55.7

- (a) This existing source is a major stationary source because it is in one of the 28 listed source categories and at least one regulated pollutant is emitted at a rate of 100 tons per year or more.
- (b) These emissions were based on the Part 70 application submitted on Sept. 9, 1996 by the company (ID # T099-6206-00001).

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity):

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO ₂ (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO _x (ton/yr)
Net Emissions	0.0 **	0.0 **	0.0 **	0.0 **	0.0 **	0.0 **
PSD or Offset Significant Level	25	15	40	40	100	40

** The addition of the new Sinto #1 molding line to the existing six (6) permitted molding lines is for added flexibility in producing castings. The allowable gray iron handled at the source by all molding lines combined remains the same at 12 tons per hour, before and after the addition of the new Sinto #1 molding line. Therefore, there will be no net PTE increase for any of the criteria pollutants.

- (a) 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, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 (T-099-6206-00001) application on Sept. 3, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (326 IAC 12), 40 CFR Part 60, applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63, applicable to this source.

State Rule Applicability

326 IAC 2-1-3.4 (New Source Toxics Control)

The HAPs usages for the modification are not subject to the requirements of 326 IAC 2-1-3.4, because the allowable single HAP and any combination of the HAPs emissions, due to the modification, are less than 10 and 25 tons per year, respectively.

326 IAC 2-6 (Emission Reporting)

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source emits more than 100 tons/yr of PM, PM-10, VOC and CO. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Visible Emissions Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following, unless otherwise stated in this permit:

- (a) Visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings as determined by 326 IAC 5-1-4,
- (b) Visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions)

This source is subject to 326 IAC 6-4 fugitive dust emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), fugitive dust shall not be visible crossing the boundary or property line of a source. Observances of visible emissions crossing property lines may be refuted by factual data expressed in 326 IAC 6-4-2 (1), (2), or (3).

326 IAC 6-3-2 (Process Operations)

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable particulate matter (PM) emissions from the Sinto #1 molding line is limited at 45.3 lb/hr when operating at a maximum process weight rate of 54 tons/hr. The emission limit is calculated using the following equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{for } P \text{ greater than } 30 \text{ tons per hour}$$

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

The Sinto #1 molding line has a maximum PM emission rate of 25.2 lb/hr and will be in compliance with 326 IAC 6-3-2, without any add-on control device.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

- (a) This modification will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Amendments to Clean Air Act.

Conclusion

The construction of this molding line will be subject to the conditions of the attached proposed **Construction Permit No. CP-099-9992-00001.**

Appendix A: Secondary Metal Production

Gray Iron Foundry

Company Name: Bremen Castings, Inc.
 Address City IN Zip: 500 North Baltimore Street, Bremen, Indiana 46506
 CP: CP099-9992
 Plt ID: 099-00001
 Reviewer: Scott Pan/EVP
 Date: Aug 6, 1998

Pouring/Casting (SCC# 3-04-003-20)							
Type of Material:	Iron		Maximum Throughput (ton/hr)		6		
	PM lbs/ton metal	PM10 lbs/ton metal	SOx lbs/ton metal	NOx lbs/ton metal	VOC lbs/ton metal	CO lbs/ton metal	Lead lbs/ton metal
	2.8	2.8	0.02	0.01	0.14	0.0	0.0162
Potential Emissions (lbs/hr)	16.8	16.8	0.1	0.1	0.8	0.0	0.1
Potential Emissions (ton/yr)	73.6	73.6	0.5	0.3	3.7	0.0	0.4
Castings Cooling (SCC# 3-04-003-25)							
Type of Material:	Iron		Maximum Throughput (ton/hr)		6		
	PM lbs/ton metal	PM10 lbs/ton metal	SOx lbs/ton metal	NOx lbs/ton metal	VOC lbs/ton metal	CO lbs/ton metal	Lead lbs/ton metal
	1.4	1.4	0.00	0.00	0.0	0.0	0.0162
Potential Emissions (lbs/hr)	8.4	8.4	0.0	0.0	0.0	0.0	0.1
Potential Emissions (ton/yr)	36.8	36.8	0.0	0.0	0.0	0.0	0.4
Total Emissions (ton/yr)	110.4	110.4	0.5	0.3	3.7	0.0	0.9

Compliance with 326 IAC 6-3-2:

PM emissions of castings pouring and cooling for the mold machine Sinto #1 is subject to the requirements of 326 IAC 6-3-2 which requires that for the maximum weight rate of 54 tons/hr (48 and 6 tons/hr for sand and iron, respectively) is calculated by the equation: $E (\text{allowable emissions, lb/hr}) = 55.0 * P (\text{process weight rate, tons/hr})^{0.11 - 40}$
 $= 55.0 * (54)^{0.11 - 40} = 45.3 \text{ lb/hr} > 25.2 \text{ lb/hr}$ (potential emissions for pouring & cooling comined) **will comply**

- Note: (1) Potential Emissions (lb/hr) = Emission Factor (lb/ton) * Material throughput (ton/hr)
 (2) Potential Emissions (lb/day) = Potential Emissions (lb/hr) * 24 (hr/day)
 (3) Potential Emissions (ton/yr) = Potential Emissions (lb/hr) * 8760 (hr/yr) * (1/2000 ton/lb)

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document for New Construction and Operation

Source Name: Bremen Casting, Inc.
Source Location: 500 North Baltimore Street, Bremen, Indiana 46506
County: Marshall
Construction Permit No.: CP-099-9992-00001
SIC Code: 3321
Permit Reviewer: Scott Pan/EVP

On August 29, 1998, the Office of Air Management (OAM) had a notice published in the Plymouth Pilot News, Plymouth, Indiana, stating that Bremen Casting, Inc. had applied for a construction permit to construct and operate one (1) molding machine. The notice also stated that OAM proposed to issue a permit for this installation 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.

Upon further review, the OAM has decided to make the following revisions to the permit:

The performance testing in Operation Condition number 7 has been revised to remove the requirement for testing PM-10, because Operation Condition number 11 only has limitation on PM not on PM-10. The first paragraph of Operation Condition number 7 was revised as follows:

Performance Testing

7. That pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) compliance stack tests shall be performed for PM ~~and PM-10~~ within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed according to 326 IAC 3-6 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Commissioner.

On September 28, 1998, Bremen Casting, Inc. submitted comments on the proposed construction permit. The summary of the comments and corresponding responses is as follows:

Comment #1:

At Bremen Casting, the ductile iron is handled through the use of the two (2) electric induction furnaces (EIF) and then the proposed molding machine. The handling of ductile iron was not mentioned in the proposed permit or TSD. Please include the handling of ductile iron into the equipment description for both the proposed permit and TSD.

Response #1:

The source is limited to processing 12 tons of iron per hour. The emission factors used to calculate potential to emit (PTE) for air pollutants in the review of this proposed permit are associated with iron in general and not with any specific type of iron. Therefore, the source is allowed to process different types of iron, as long as the source stays with the limit of processing 12 tons of iron per hour. The equipment listing, as well as Operation Condition number 8 on the proposed permit are thus revised as follows:

Revision on equipment list

- (a) One (1) molding line, identified as Sinto #1, capable of utilizing 160 molds (600 pounds per mold) per hour to process 6 tons per hour of the molten gray **or ductile** iron produced by the existing permitted cupola or the two (2) existing permitted electric induction furnaces, with exhaust gas venting through four (4) stacks identified as DS-14, DS-15, DS-16 and DS-17.

The addition of the new Sinto #1 molding line to the existing six (6) molding lines is for added flexibility in producing castings. The allowable gray **or ductile** iron handled at the source by all molding lines combined remains the same at 12 tons per hour, before and after the addition of the new Sinto #1 molding line.

Revision on Condition number 8

PSD Minor Modification Limit

8. That the gray **or ductile** iron handled at the source by the new Sinto #1 molding line and the six (6) existing permitted molding lines combined shall be limited to 12 tons per hour. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply.

Comment #2:

At Bremen Casting, the melting of iron is conducted on a per batch basis (each melting batch will take about 12 to 16 hours) and it is not appropriate to determine iron handling rate for every hour. The maximum iron handling rate, which is same as the iron melting rate, should instead be determined by dividing the total iron melted by the number of hours for each batch. Please revise Operation Condition number 14 to indicate that the iron handling rate record keeping should be done for each batch of iron melted.

Response #2:

OAM agrees that it will be more practical to determine the iron handling rate on a per batch basis. Therefore, the Operation Condition number 14 is revised as follows:

Record Keeping Requirements

14. That a log of information necessary to document compliance with operation permit condition no. 8 shall be maintained. **The iron handling rate shall be the combined melting rate for both the cupola and the two (2) electric induction furnaces at the source. The melting rate shall be determined, on a per batch basis, by dividing the total iron melted by the number of melting hours.** These records shall be kept for at least the past 36 month period and made available upon request to the Office of Air Management (OAM).