

**CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT**

**Auburn Foundry Inc.
2278 West County Road 48
Auburn, IN 46706**

is hereby authorized to construct

a modification to an existing gray iron foundry at Plant #2, consisting of the following equipment:

- a) one (1) new continuous steel shot blast machine, with a maximum blast rate of 50 pounds per hour (lbs/hr), processing a maximum of 25,892 pounds of gray iron casting per hour with one (1) existing baghouse (System #3) for particulate control, exhausting through Stack ID#15.

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-033-9777-00042 | |
| 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 (T-033-7726-00042) on December 13, 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 iron foundry 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 particulate matter 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 3-2.1 (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.

Annual Emission Reporting

8. 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 46206-60115

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

Malfunction Condition

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

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. (a) That pursuant to 326 IAC 6-3 (Process Operations), the baghouse shall be in operation at all times when the shot blast machine is in operation, and shall not exceed the allowable particulate matter (PM) emission rate of 22.83 pounds per hour.
- (b) Annual PM and PM-10 emissions shall not exceed 100 tons per year. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR52.21 will not apply.

Baghouse Operating Condition

12. That the baghouse shall be operated at all times when the shot blast machine is in operation.
- (a) The Permittee shall take readings of the total static pressure drop across the baghouses, at least once per week. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 2.0 and 8.0 inches of water. The Preventive Maintenance Plan for these baghouses shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of this range for any one reading.
 - (b) The instrument used for determining the pressure shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.
 - (c) The gauge employed to take the pressure drop across the baghouses or any part of the facility shall have a scale such that the expected normal reading shall be no less than 20 percent of full scale and be accurate within $\pm 2\%$ of full scale reading. The instrument shall be quality assured and maintained as specified by the vendor.
 - (d) An inspection shall be performed each calendar quarter of the all the baghouses. Defective bags shall be replaced. A record shall be kept of the results of the inspection and the number of bags replaced.
 - (e) In the event that a bag's failure has been observed:
 - (i) The affected compartments will be shut down immediately until the failed units have been replaced. For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.
 - (ii) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

Visible Emission Notations

13. That visible emission notations of all exhaust to the atmosphere from the baghouse shall be performed once per working day. 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

14. 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)].

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.

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
FAX NUMBER - (317) 233-5967**

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

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE: IT HAS POTENTIAL TO EMIT 25 LBS/HR PARTICULATES ? _____, 100 LBS/HR VOC ? _____, 100 LBS/HR SULFUR DIOXIDE ? _____ OR 2000 LBS/HR OF ANY OTHER POLLUTANT ? _____ EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

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

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON THE NEXT PAGE ? Y N

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

COMPANY: Auburn Foundry Inc. PHONE NO. (219)925-0900

LOCATION: (CITY AND COUNTY) Auburn, DeKalb County

PERMIT NO. 033-9777 AFS PLANT ID: 033-00042 AFS POINT ID: _____ INSP: Doyle Houser

CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/19____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/19____ AM/PM

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL * SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name: Auburn Foundry, Inc.
 Source Location: 2278 West County Road 48, Auburn, IN 46706
 County: DeKalb
 Construction Permit No.: CP-033-9777-00042
 SIC Code: 3321
 Permit Reviewer: Yvette de los Angeles/EVP

The Office of Air Management (OAM) has reviewed an application from Auburn Foundry, Inc. relating to the construction and operation of a modification to the existing gray iron foundry at Plant #2, consisting of the following equipment:

- (a) one (1) new continuous steel shot blast machine, with a maximum blast rate of 50 pounds per hour (lbs/hr), processing a maximum of 13,200 pounds of gray iron casting per hour with one (1) existing baghouse (System #3) for particulate control, exhausting through Stack ID#15.

Stack Summary

| Stack ID | Operation | Height (feet) | Diameter (feet) | Flow Rate (acfm) | Temperature (°F) |
|----------|--------------------------|---------------|-----------------|------------------|------------------|
| 15 | for shot blaster machine | 196 | 3.67 | 36,000 | 105 |

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 May 15, 1998.

Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (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) | 63.58 | 450.51 |
| Particulate Matter (PM10) | 63.58 | 450.51 |
| Sulfur Dioxide (SO ₂) | NA | NA |
| Volatile Organic Compounds (VOC) | NA | NA |
| Carbon Monoxide (CO) | NA | NA |
| Nitrogen Oxides (NO _x) | NA | NA |
| Single Hazardous Air Pollutant (HAP) | NA | NA |
| Combination of HAPs | NA | NA |

- (a) Allowable emissions are determined from the applicability of rule 326 IAC 6-3-2. See attached spreadsheets for detailed calculations.
- (b) The allowable emissions based on the rules cited are less than the potential emissions, therefore, the allowable emissions are used for the permitting determination.
- (c) Allowable emissions (as defined in the Indiana Rule) of Particulate Matter (PM) 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. DeKalb 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) DeKalb County has been classified as attainment or unclassifiable for PM-10. 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 PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/or as otherwise limited):

| Pollutant | Emissions (ton/yr) |
|------------------|--------------------|
| PM | 100.74 |
| PM10 | 73.17 |
| SO ₂ | 2.00 |
| VOC | 73.00 |
| CO | neg. |
| NO _x | 2.00 |
| Single HAP | 4.00 |
| Combination HAPs | 4.00 |

- (a) This existing source is a major stationary source because it is 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 Construction Permit CP-033-3496-00042, issued on June 30, 1994 and Registration No. CP-033-8728-00042, issued on September 23, 1997.

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

| Pollutant | PM (ton/yr) | PM10 (ton/yr) | SO ₂ (ton/yr) | VOC (ton/yr) | CO (ton/yr) | NO _x (ton/yr) |
|---------------------------------|-------------|---------------|--------------------------|--------------|-------------|--------------------------|
| Proposed Modification | 9.01 | 9.01 | NA | NA | NA | NA |
| Contemporaneous Increases | — | — | — | — | — | --- |
| Contemporaneous Decreases | — | — | — | — | — | --- |
| Net Emissions | 9.01 | 9.01 | NA | NA | NA | NA |
| PSD or Offset Significant Level | 25 | 15 | 40 | 40 | 100 | 40 |

- (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-033-7726-00042) application on December 13, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Federal Rule Applicability

There are no New Source Performance Standards (326 IAC 12), and 40 CFR Part 60 applicable to this facility.

There are no National Emission Standard for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63, applicable to this source.

State Rule Applicability

326 IAC 2-6 (Emission Reporting)

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source emits more than 10 tons/yr (for specific counties) or 100 tons/yr of VOC. 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 6-3-2 (Particulate Emissions Limitations)

The continuous shot blast machine is subject to particulate matter limitations under 326 IAC 6-3-2. Pursuant to this rule, particulate emissions from the shot blast machine shall be limited to 14.52 lb/hr based on the following equation:

$$E = 4.10 P^{0.67} \text{ (for process weights less than 60,000 lbs/hr)}$$

where E = maximum allowable rate of emission (lbs/hr)

P = process weight (tons/hr): 6.6 tons/hr

$$E = 4.10(6.6^{0.67}) = 14.52 \text{ lbs/hr} = 63.58 \text{ tons/yr}$$

Based on this calculation, the controlled potential PM emissions of 9.01 tons/yr are less than the allowable emissions of 63.58 tons/yr, therefore, this shot blaster complies with the rule.

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) None of these listed air toxics will be emitted from this proposed construction.
- (b) See attached spreadsheets for detailed air toxic calculations.

Conclusion

The construction of this shot blast machine will be subject to the conditions of the attached proposed **Construction Permit No. CP-033-9777-00042**.

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

Addendum to the
Technical Support Document for New Construction and Operation

Source Name: Auburn Foundry, Inc.
Source Location: 2278 West County Road 48, Auburn, IN 46706
County: DeKalb
Construction Permit No.: CP-033-9777-00042
SIC Code: 3321
Permit Reviewer: Yvette de los Angeles/EVP

On July 22, 1998, the Office of Air Management (OAM) had a notice published in the Auburn Evening Star, Auburn, Indiana, stating that Auburn Foundry, Inc. had applied for a construction permit to construct and operate at their gray iron foundry (Plant #2), a new continuous steel shot blast machine with control. 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 changes to the Construction Permit:

1. Operation condition No. 7 Performance Testing was added:

Performance Testing

7. That pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) compliance stack tests shall be performed for particulate matter 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 3-2.1 (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.

On August 18, 1998, Joseph VanCamp submitted comments on the proposed construction permit on behalf of Auburn Foundry, Inc. The summary of the comments and corresponding responses is as follows:

Comment #1

The shot blast machine process has been changed to the following:

maximum blast rate = 50 pounds per hour of sheet shot
 maximum process throughput = 25,892 pounds per hour of gray iron castings

A maximum unit process rate of 25,942 pounds per hour (blast process rate of 25,892 pounds per hour plus shot addition rate of 50 pounds per hour) equates to an allowable emission quantity of 22.83 pounds per hour.

Response #1

The allowable rate of emission has increased from 63.38 tons per year to 99.99 tons per year. However, the controlled emissions have remained the same (9.01 tons per year) and have not triggered any new rules, therefore, OAM, IDEM acknowledges the change request and the corresponding changes are shown in the permit and the calculations.

- 1. The equipment description for the column grain dryer on page 1 of 5 of the TSD, and on page 1 of 5 of the Construction Permit is revised to read as follows (deletions in strikeout):

one (1) new continuous steel shot blast machine, with a maximum blast rate of 50 pounds per hour (lbs/hr), processing a maximum of ~~43,200~~ 25,892 pounds of gray iron casting per hour with one (1) existing baghouse (System #3) for particulate control, exhausting through Stack ID#15.

- 2. The Total Potential and Allowable Emissions table, page 2 of 5 in the TSD, should read as follows:

| Pollutant | Allowable Emissions (tons/year) | Potential Emissions (tons/year) |
|--------------------------------------|---------------------------------|---------------------------------|
| Particulate Matter (PM) | 99.99 | 450.51 |
| Particulate Matter (PM10) | 99.99 | 450.51 |
| Sulfur Dioxide (SO ₂) | NA | NA |
| Volatile Organic Compounds (VOC) | NA | NA |
| Carbon Monoxide (CO) | NA | NA |
| Nitrogen Oxides (NO _x) | NA | NA |
| Single Hazardous Air Pollutant (HAP) | NA | NA |
| Combination of HAPs | NA | NA |

- 3. Under the State Rule Applicability, page 4 of 5 in the TSD, the following has been revised (deletions in strikeout):

326 IAC 6-3-2 (Particulate Emissions Limitations)

The continuous shot blast machine is subject to particulate matter limitations under 326 IAC 6-3-2. Pursuant to this rule, particulate emissions from the shot blast machine shall be limited to ~~44.52~~ 22.83 lb/hr based on the following equation:

$$E = 4.10 P^{0.67} \text{ (for process weights less than 60,000 lbs/hr)}$$

where E = maximum allowable rate of emission (lbs/hr)

P = process weight (tons/hr): ~~6.6~~ 13.0 tons/hr

$$E = 4.10(\del{6.6}13.0^{0.67}) = \del{44.52} 22.83 \text{ lbs/hr} = \del{63.58} 99.99 \text{ tons/yr}$$

Based on this calculation, the controlled potential PM emissions of 9.01 tons/yr are less than the allowable emissions of ~~63.58~~ 99.99 tons/yr, therefore, this shot blaster complies with the rule.

4. Operation condition 11 (a) (formerly condition 10) on page 5 of 9 has been changed as follows (deletion on strikeout):

Particulate Matter Limitation

11. (a) That pursuant to 326 IAC 6-3 (Process Operations), the baghouse shall be in operation at all times when the shot blast machine is in operation, and shall not exceed the allowable particulate matter (PM) emission rate of ~~44.52~~ 22.83 pounds per hour.

Comment #2

This facility was incorrectly identified as a major stationary source on page 3 of 5 in the Technical Support Document. The source status was inadvertently based upon Construction Permit No. CP-033-3496-00042 issued on June 30, 1994. This original permit was modified and replaced with Construction Permit No. CP-033-5793-00042 issued on May 22, 1998. This facility should still be considered a minor source, and as such, has not triggered PSD applicability at this time.

Response #2

1. The Source Status, page 3 of 4 in the Technical Support Document, has been modified accordingly, and has been shown not to trigger PSD requirements, therefore, this facility has been considered a PSD minor modification based on Construction Permit No. CP-033-5793-00042.

Source Status

Existing Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/or as otherwise limited):

| Pollutant | Emissions (ton/yr) |
|------------------|--------------------|
| PM | 99 |
| PM10 | 52 |
| SO ₂ | 2 |
| VOC | 22 |
| CO | neg. |
| NO _x | 1 |
| Single HAP | NA |
| Combination HAPs | NA |

- (a) This existing source is a not major stationary source because even though it is one of the 28 listed source categories, it does not emit 100 tons per year or more of any regulated pollutant. Therefore, pursuant to 326 IAC 2-2 and 40 CFR 52.21, the PSD requirements do not apply.
 - (b) These emissions were based on the Construction Permit CP-033-5793-00042, issued on May 22, 1998.
2. The Proposed Modification, page 3 of 4, has been changed to reflect a PSD minor source limitation of 100 tons per year for all criteria pollutants.

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

| Pollutant | PM (ton/yr) | PM10 (ton/yr) | SO ₂ (ton/yr) | VOC (ton/yr) | CO (ton/yr) | NO _x (ton/yr) |
|-----------------------|-------------|---------------|--------------------------|--------------|-------------|--------------------------|
| Proposed Modification | 9.01 | 9.01 | NA | NA | NA | NA |
| PSD Threshold Level | 100 | 100 | 100 | 100 | 100 | 100 |

This modification to an existing minor stationary source is not major because the emission 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.

3. Operation condition 11 (b) (formerly condition 10) on page 5 of 9 has been changed as follows (deletion on strikeout):

Particulate Matter Limitation

- 11. (b) Annual PM and PM-10 emissions shall not exceed ~~24~~ 100 tons per year ~~and annual PM-10 emissions shall not exceed 14 tons per year~~. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR52.21 will not apply.

Comment #3

The Visible Emission Notations on page 6 of 9 stated that readings must be taken “once per working shift.” This requirement is extensive and should be changed to “once per working day” to be consistent with the existing facility permit.

Response #3

To be consistent with the current Construction Permit No. CP-033-5793-00042, operating condition No. 13 (formerly 12) page 6 of 9, Visible Emission Notations, has been changed as follows (deletion on strikeout):

Visible Emission Notations

- 13. That visible emission notations of all exhaust to the atmosphere from the baghouse shall be performed ~~once per working shift~~ once per working day. A trained employee will record whether emissions are normal or abnormal.

Comment #4

The Emergency Reduction Plan requirement on page 6 of 9 has never been required by permit prior to this time. The existing facility permit does not mention this requirement.

Response #4

The Emergency Reduction Plan has been removed since the potential to emit is less than 100 tons/yr or more of any pollutant.

Mail to: Permit Administration & Development Section
Office Of Air Management
100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

Auburn Foundry Inc.
2278 West County Road 48
Auburn, IN 46706

Affidavit of Construction

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

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____.
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____.
(Company Name)
4. I hereby certify that Auburn Foundry, Inc., 2278 West County Road 48, Auburn, Indiana, 46706, has constructed the shot blaster in conformity with the requirements and intent of the construction permit application received by the Office of Air Management on May 15, 1998 and as permitted pursuant to **Construction Permit No. CP-033-9777, Plant ID No. 033-00042** issued on _____.
5. I hereby certify that Auburn Foundry, Inc. is now subject to the Title V program and has submitted a Title V operating permit application on December 13, 1996.

Further Affiant said not.

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

Signature

Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of
Indiana on this _____ day of _____, 19 _____.

My Commission expires: _____

Signature

Name (typed or printed)

Appendix A: Process Particulate Emissions

Company Name: Auburn Foundry, Inc.
Address City IN Zip: 2278 West County Road 48, Auburn, IN 46706
CP: 033-9777
Plt ID: 033-00042
Reviewer: Yvette de los Angeles
Date: August 27, 1998

| Uncontrolled Potential Emissions (tons/year) | | | | | | | |
|--|--------------|---|---|--------------------------------------|--------------------|-------------------------------------|-----------------|
| A. Baghouses | | | | | | | |
| Process | No. of Units | Grain Loading per Actual Cubic Foot of Outlet Air | Air to Cloth Ratio Air Flow (acfm/ft ²) | Total Filter Area (ft ²) | Control Efficiency | Total (lbs/hr) | Total (tons/yr) |
| Shot Blaster Baghouse System #3 | 1 | 0.01 | 4.0 | 6,000 | 98.00% | 102.86 | 450.51 |
| Total Emissions Based on Rated Capacity at 8,760 Hours/Year | | | | | | | 450.51 |
| Controlled Potential Emissions (tons/year) | | | | | | | |
| A. Baghouses | | | | | | | |
| Process | No. of Units | Grain Loading per Actual Cubic Foot of Outlet Air | Air to Cloth Ratio Air Flow (acfm/ft ²) | Total Filter Area (ft ²) | Control Efficiency | Total (lbs/hr) | Total (tons/yr) |
| Shot Blaster Baghouse System #3 | 1 | 0.01 | 4.0 | 6,000 | 98.00% | 2.06 | 9.01 |
| Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls | | | | | | | 9.01 |
| Allowable Rate of Emission (From 326 IAC 6-3-2) | | | | | | | |
| A. Baghouses | | | | | | | |
| Process | No. of Units | Maximum Process Weight Rate* (lbs/hr) | Maximum Process Weight Rate (tons/hr) | | | Allowable Rate of Emission (lbs/hr) | Total (tons/yr) |
| Shot Blaster Baghouse System #3 | 1 | 25,942 | 13.0 | | | 22.83 | 99.99 |
| Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls | | | | | | | 99.99 |
| * The maximum unit process rate of 25,942 pounds per hour = blast process rate (25,892 pounds per hour) + shot rate (50 pounds per hour) | | | | | | | |

Methodology:**State Potential (uncontrolled):**

Baghouse (tons/yr) = No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)

Federal Potential (controlled):

Baghouse (tons/yr) = No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs

Allowable Rate of Emission (from 326 IAC 6-3-2)

Since the allowable process weight rate (P) < 60,000 lbs/hr, the following equation must be used:

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

where P = 13,200 lbs/hr

$$\text{Baghouse (lbs/yr)} = 4.10 * [P \text{ (lbs/hr)} / 2000 \text{ (lbs/ton)}]^{0.67}$$

$$\text{Baghouse (tons/yr)} = \text{Baghouse (lbs/yr)} * 1 \text{ (ton)} / 2000 \text{ (lbs)} * 8760 \text{ (hrs)} / 1 \text{ (yr)}$$