

Synthetic Minor Determination and/or **Netting Determination**

Permit To Install **06-06692**

A. Source Description

For this modification, Burnham Foundry is proposing to modify the existing cupola. The modification is being made as an energy conservation project which will result in a reduction of the amount of coke used in the process. Specifically, Burnham is proposing to replace the existing cupola liner, which has a water cooled shell with a 66 inch inside diameter, with a seven inch refractory lining. The installation of the refractory lining results in a reduced inside diameter of 60 inches. The location of the facility is 2345 Licking Road, Zanesville, Muskingum County, Ohio.

B. Facility Emissions and Attainment Status

The plant is located in Muskingum County. Currently, Muskingum County is attainment for particulate, sulfur dioxide (SO₂), carbon monoxide (CO), ozone, lead, and oxides of nitrogen (NO_x). The maximum potential to emit, for emission unit P905, at 57,000 tons metal charged per year is:

Pollutant	Tons Per Year
PE	29.36 (increase 7.89)
SO_x	3.88 (increase 1.02)
NO_x	2.85 (increase 0.75)
VOC/OC	5.13 (increase 1.34)

C. Source Emissions

Burnham Foundry, will limit the emission unit's total production to 57,000 tons metal charged in any rolling 12-month period. Emissions for the facility will be limited as a result of the production restriction.

D. Conclusion

The operational restrictions on any rolling 12-month period production (limited to 57,000 tons (metal charged) per 12-month period), monitoring, and recordkeeping requirements as required by this permit are sufficient to provide federally enforceable limitations for ensuring that the applicable PSD threshold will not be exceeded.



State of Ohio Environmental Protection Agency

RE: DRAFT PERMIT TO INSTALL CERTIFIED MAIL
MUSKINGUM COUNTY

Street Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center

Application No: 06-06692

DATE: 11/27/2001

Burnham Foundry
Paul Spradling
2345 Licking Rd
Zanesville, OH 43702

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of \$200 will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Very truly yours,

Thomas G. Rigo
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

SEDO

WV



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install
Terms and Conditions

Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance

DRAFT PERMIT TO INSTALL 06-06692

Application Number: 06-06692
APS Premise Number: 0660010101
Permit Fee: **To be entered upon final issuance**
Name of Facility: Burnham Foundry
Person to Contact: Paul Spradling
Address: 2345 Licking Rd
Zanesville, OH 43702

Location of proposed air contaminant source(s) [emissions unit(s)]:

**2345 Licking Rd
Zanesville, Ohio**

Description of proposed emissions unit(s):

Melting foundry returns purchased scrap metal and fluxes Chapter 31 modification built prior to 1972.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Issued: To be entered upon final issuance
Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.10 below if no deviations occurred during the quarter.

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- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

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6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. 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 federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally

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applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit To Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule

Burnham Foundry

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3745-77-08(C)(3)(d).

Facility ID: 0660010101

- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35 , the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

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Facility ID: 0660010101

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B. State Only Enforceable Permit To Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

4. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

5. Termination of Permit To Install

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may

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be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

6. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

7. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

8. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

9. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit To Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

10. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

C. Permit To Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	29.36 (increase 7.89)
SO _x	3.88 (increase 1.02)
NO _x	2.85 (increase 0.75)
VOC/OC	5.13 (increase 1.34)

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Burnham Foundry

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Issued: To be entered upon final issuance

Facility ID: 0660010101

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PTI A

Emissions Unit ID: P905

Issued: To be entered upon final issuance

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

None

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

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PTI A**

Emissions Unit ID: P905

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P905 - Melting foundry returns, purchased scrap metal, and fluxes. Chapter 31 modification of gray iron cupola built prior to 1972. Emissions vented to afterburner and wet scrubber.	OAC rule 3745-31-05 (A)(3)	OAC rule 3745-18-06(E)
		OAC rule 3745-17-07(A)
		OAC rule 3745-21-08 (D)
		OAC rule 3745-31-05(D)
	OAC rule 3745-17-11	

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PTI A**

Emissions Unit ID: P905

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Applicable Emissions
Limitations/Control Measures

The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).

OC emissions shall not exceed 4.14 pounds per hour.

NOx emissions shall not exceed 2.3 pound per hour.

SOx emissions shall not exceed 3.13 pound per hour.

Total particulate emissions shall not exceed 23.69 pounds per hour.

Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

The charge door to cupola will remain closed during those times when the cupola is not being charged to minimize or eliminate visible emissions.

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05 (A)(3)

The emission limitation

specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05 (A)(3)

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

See A.I.2.a below.

OC emissions shall not exceed 5.13 tons per rolling 12- month period.

NOx emissions shall not exceed 2.85 tons per rolling 12- month period.

SOx emissions shall not exceed 3.88 tons per rolling 12- month period.

Total particulate emissions shall not exceed 29.36 tons per rolling 12-month period from the stack.

2. Additional Terms and Conditions

- 2.a** The direct flame afterburner or equivalent device shall be installed and operated at all times the cupola is in operation.

II. Operational Restrictions

1. The static pressure drop across the scrubber shall be greater than or equal to 46.0 inches of water.
2. The pH of the scrubber liquor shall be maintained within the range of 5.5 to 9.0.
3. Emissions unit gases shall be burned at 1300 degrees Fahrenheit in a direct flame afterburner or equivalent device, designed for a minimum of 0.3 second residence time.
4. The maximum annual production rate for this emissions unit shall not exceed 57,000 tons of metal charged in any rolling 12 - month period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following:
 - a. the total weight of metal charged (in tons) in this emissions unit;
 - b. the total weight of metal charged (in tons) in this emissions unit during the previous 12-month period;

The permittee has existing data on which to base the 12-month total at the time this permit is issued.

2. The permittee shall properly operate and maintain equipment to continuously monitor the static pressure drop across the scrubber, pH of the scrubber liquor, and the afterburner temperature while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.
3. The permittee shall collect and record the following information once per shift during each day the emissions unit is in operation:
 - a. the pressure drop across the scrubber, in inches of water column;
 - b. the pH of the scrubber liquor;
 - c. the afterburner temperature, in degrees Fahrenheit; and
 - d. hours of cupola operation.

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4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions and any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the scrubber and afterburner parameters were not maintained at the following levels:

Scrubber Parameters

- a. a static pressure drop across the scrubber of greater than or equal to 46.0 inches of water;
- b. a pH of the scrubber liquor within the range of 5.5 to 9.0.

Afterburner Parameter

- a. 1300 degrees Fahrenheit in a direct flame afterburner or equivalent device, designed for a minimum of 0.3 second residence time.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month total metal charged limitation.
 3. If no deviations are observed during a given period, the permittee shall submit a report which states that no deviations were observed during that period. (These reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)
 4. The permittee shall submit semiannual written reports which:

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- a. identify all days during which any visible fugitive particulate emissions and visible particulate emissions were observed from the stack serving this emissions unit; and
- b. describe any corrective actions taken to eliminate the visible particulate emissions.

These reports shall be submitted to the Ohio EPA, Southeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

5. Within 120 days after promulgation of 40 CFR 63 Subpart LLLLL, the permittee shall submit an Initial Notification Report which certifies whether or not the permittee is subject to the promulgated standard. If the permittee is subject to the final standard, the following information shall also be included in the Initial Notification Report:
 - a. The name and mailing address of the permittee;
 - b. The physical location of the source if it is different from the mailing address;
 - c. Identification of the relevant MACT standard and the permittee's compliance date;
 - d. A brief description of the nature, design, size, and method of operation of the source, including the operating design capacity and an identification of each emission point of each hazardous air pollutant;
 - e. A statement of whether or not the permittee is a major source or an area source according to the promulgated MACT.
6. Within 60 days following completion of the required compliance demonstration activity specified in the 40 CFR 63 Subpart LLLLL, the permittee shall submit a notification of compliance status that contains the following information:
 - a. The methods used to determine compliance;
 - b. The results of any performance tests, opacity or visible emission observations, continuous monitoring systems (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted;
 - c. The methods that will be used for determining continuous compliance, including a description of monitoring and reporting requirements and test methods;
 - d. The type and quantity of hazardous air pollutants emitted by the source, reported in units

Emissions Unit ID: P905

and averaging times in accordance with the test methods specified in 40 CFR 63 Subpart LLLLL;

- e. An analysis demonstrating whether the affected source is a major source or an area source;
- f. A description of the air pollution control equipment or method for each emission point, including each control device or method for each hazardous air pollutant and the control efficiency (percent) for each control device or method; and
- g. A statement of whether or not the permittee has complied with the requirements of 40 CFR 63 Subpart LLLLL.

V. Testing Requirements

- 1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

23.69 pounds per hour of particulate emissions

Applicable Compliance Method:

Compliance shall be demonstrated based upon the stack testing requirements specified in section A.V.2.
 - b. Emission Limitation:

20% opacity as a 6-minute average

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Applicable Compliance Method:

Compliance with the visible emission limit shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996. No visible emission testing is specifically required by this permit, but, if appropriate, it may be requested pursuant to OAC rule 3745-15-04 (A).

c. Emission Limitation:

20% opacity as a 3-minute average

Applicable Compliance Method:

Compliance shall be demonstrated based upon the requirements specified in OAC rule 3745-17-03(B)(3) and the methods and procedures required in 40 CFR Part 60, Appendix A, Method 9.

d. Emission Limitation-
4.14 lbs/hr of OCs

Applicable Compliance Method-

Compliance shall be determined by multiplying the actual hourly cupola metal charge rate of 23.0 tons by a OC emission factor of 0.18 lbs/ton. The emission factor was obtained from FIRE version 6.23 for SCC 3-04-003-01 (gray iron cupola).

e. Emission Limitation-
5.13 TPY of OCs as rolling 12 month

Applicable Compliance Method-

Compliance shall be determined by multiplying the actual yearly cupola metal charge rate of 57,000 tons by a OC emission factor of 0.18 lbs/ton divided by 2000 lbs/ton. The emission factor was obtained from FIRE version 6.23 for SCC 3-04-003-01 (gray iron cupola).

f. Emission Limitation-
2.3 lbs/hr of NOx

Applicable Compliance Method-

Compliance shall be determined by multiplying the actual hourly cupola metal charge rate of 23.0 tons by a NOx emission factor of 0.10 lbs/ton. The emission factor was obtained

Emissions Unit ID: P905

from FIRE version 6.23 for SCC 3-04-003-01 (gray iron cupola).

- g. Emission Limitation-
2.85 TPY of NO_x as rolling 12 month

Applicable Compliance Method-

Compliance shall be determined by multiplying the actual yearly cupola metal charge rate of 57,000 tons by a NO_x emission factor of 0.10 lbs/ton divided by 2000 lbs/ton. The emission factor was obtained from FIRE version 6.23 for SCC 3-04-003-01 (gray iron cupola).

- h. Emission Limitation-
3.08 lbs/hr of SO_x

Applicable Compliance Method-

Compliance shall be determined as follows:

$$(1.25 \text{ lbs SO}_x / \text{ tons metal charged}) \times (23.0 \text{ tons metal charged / hour}) = 28.75 \text{ lbs SO}_x / \text{ hour}$$

$$(28.75 \text{ lbs SO}_x / \text{ hour}) \times 0.99^* = 28.46 \text{ lbs SO}_x / \text{ hour (captured and vented to control equipment)}$$

$$A. (28.46 \text{ lbs SO}_x / \text{ hour}) \times (1 - 0.90)^{**} = 2.85 \text{ lbs SO}_x / \text{ hour (SO}_x \text{ exiting the control equipment)}$$

$$B. (28.75 \text{ lbs SO}_x / \text{ hour}) \times (1 - 0.99) = 0.288 \text{ lbs SO}_x / \text{ hour (SO}_x \text{ not captured by control equipment)}$$

$$\text{Total Emissions} = A + B$$

$$(2.85 \text{ lbs SO}_x / \text{ hour}) + (0.288 \text{ lbs SO}_x / \text{ hour}) = 3.13 \text{ lbs SO}_x / \text{ hour}$$

The SO_x emission factor of 1.25 lbs SO_x/ton metal charged is obtained from FIRE version 6.23 for SCC 3-04-003-01 (gray iron cupola).

* 0.99 is the capture efficiency as provided by the applicant.

** 0.90 is the control efficiency as provided by the applicant.

- i. Emission Limitation-
3.88 tons of SO_x as rolling 12 month

Applicable Compliance Method-

Compliance shall be determined as follows:

$$(1.25 \text{ lbs SO}_x / \text{ tons metal charged}) \times (57,000 \text{ tons metal charged / year}) = 71,250 \text{ lbs / year}$$

$$(71,250 \text{ lbs / year}) \times (1 \text{ ton / 2000 lbs}) = 35.7 \text{ tons SO}_x / \text{ year (uncontrolled)}$$

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$(35.7 \text{ tons SOx / year}) \times 0.99 = 35.34 \text{ tons SOx / year}$ (SOx captured and vented to control equipment)

A. $(35.34 \text{ tons SOx / year}) \times (1-0.90) = 3.53 \text{ ton SOx / year}$ (exiting the control equipment)

B. $(35.34 \text{ tons SOx / year}) \times (1-0.99) = 0.357 \text{ ton SOx / year}$ (SOx not captured)

Total Emissions = A + B

$(3.53 \text{ ton SOx / year}) + (0.357 \text{ ton SOx / year}) = 3.88 \text{ tons SOx / year}$

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The particulate emission testing shall be conducted within 1 year prior to the expiration of this permit.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.
 - c. The following test method shall be employed to demonstrate compliance with the allowable mass emission rate: for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(9). Alternative USEPA approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity of 23.0 tons of metal charged per hour.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

Burnham Foundry
PTI Application: 06-06603
Issued

Facility ID: 0660010101

Emissions Unit ID: P905

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B) do not apply to the fugitive particulate emissions from this emissions unit.

**Burnh
PTI A**

Emissions Unit ID: P905

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P905 - Melting foundry returns, purchased scrap metal, and fluxes. Chapter 31 modification of gray iron cupola built prior to 1972. Emissions vented to afterburner and wet scrubber.	OAC rule 3745-31-05	None.

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

25

Burnh

PTI A

Issued: To be entered upon final issuance

Emissions Unit ID: P905

None.

NEW SOURCE REVIEW FORM B

PTI Number: 06-06692 Facility ID: 0660010101

FACILITY NAME Burnham Foundry

FACILITY DESCRIPTION Melting foundry returns purchased scrap metal and fluxes Chapter 31 modification built prior to 1972. CITY/TWP Zanesville

SIC CODE 3321 SCC CODE 30400301 EMISSIONS UNIT ID P905

EMISSIONS UNIT DESCRIPTION Melting foundry returns purchased scrap metal and fluxes Chapter 31 modification built prior to 1972.

DATE INSTALLED Proposed modification December 2001

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	attainment	23.69	29.36	23.69	29.36
PM ₁₀	attainment				
Sulfur Dioxide	attainment	3.13	3.88	3.13	3.88
Organic Compounds	attainment	4.14	5.13	4.14	5.13
Nitrogen Oxides	attainment	2.3	2.85	2.3	2.85
Carbon Monoxide	attainment	not applicable	not applicable	not applicable	not applicable
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NO NESHAP? NO PSD? NO OFFSET POLICY? NO

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? NO

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ Not Available.

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? _____ YES _____ NO

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 06-06692 Facility ID: 0660010101

FACILITY NAME Burnham Foundry

FACILITY DESCRIPTION	Melting foundry returns purchased scrap metal and fluxes Chapter 31 modification built prior to 1972.	CITY/TWP	Zanesville
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Ohio EPA Permit to Install Information Form Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit **hard copy items to Pam McGraner**, AQM&P, DAPC, Central Office, and electronic files to **airpti@epa.state.oh.us**

Please fill out the following. If the checkbox does not work, replace it with an 'X'

	<u>Electronic</u>	<u>Additional information File Name Convention (your PTI # plus this letter)</u>	<u>Hard Copy</u>	<u>None</u>
<u>Calculations (required)</u>	<input checked="" type="checkbox"/>	0000000c.wpd	<input type="checkbox"/>	
<u>Modeling form/results</u>	<input type="checkbox"/>	0000000s.wpd	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>PTI Application (complete or partial)*</u>	<input type="checkbox"/>	0000000a.wpd	<input type="checkbox"/>	<input type="checkbox"/>
<u>BAT Study</u>	<input type="checkbox"/>	0000000b.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Other/misc.</u>	<input checked="" type="checkbox"/>	0000000t.wpd	<input type="checkbox"/>	<input type="checkbox"/>

* Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.

Please complete (see comment bubble to the left for additional instructions):

NSR Discussion

Please complete for these type permits (For PSD/NSR Permit, place mouse over this text):

Synthetic Minor Determination and/or **Netting Determination**

Permit To Install **ENTER PTI NUMBER HERE**

A. Source Description

For this modification, Burnham Foundry is proposing to modify the existing cupola. The modification is being made as an energy conservation project which will result in a reduction of the amount of coke used in the process. Specifically, Burnham is proposing to replace the existing cupola liner, which has a water cooled shell with a 66 inch inside diameter, with a seven inch refractory lining. The installation of the refractory lining results in a reduced inside diameter of 60 inches. The location of the facility is 2345 Licking Road, Zanesville, Muskingum County, Ohio.

B. Facility Emissions and Attainment Status

The plant is located in Muskingum County. Currently, Muskingum County is attainment for particulate, sulfur dioxide (SO₂), carbon monoxide (CO), ozone, lead, and oxides of nitrogen (NO_x). The maximum potential to emit, for emission unit P905, at 57,000 tons metal charged per year is:

Pollutant	Tons Per Year
	PE29.36 (increase 7.89)
	SO_x3.88 (increase 1.02)
	NO_x2.85 (increase 0.75)
	VOC/OC5.13 (increase 1.34)

NEW SOURCE REVIEW FORM B

PTI Number: 06-06692 Facility ID: 0660010101

FACILITY NAME Burnham Foundry

FACILITY DESCRIPTION Melting foundry returns purchased scrap metal and fluxes Chapter 31 modification built prior to 1972. CITY/TWP Zanesville

C.Source Emissions

Burnham Foundry, will limit the emission unit's total production to 57,000 tons metal charged in any rolling 12-month period. Emissions for the facility will be limited as a result of the production restriction.

D.Conclusion

The operational restrictions on any rolling 12-month period production (limited to 57,000 tons (metal charged) per 12-month period), monitoring, and recordkeeping requirements as required by this permit are sufficient to provide federally enforceable limitations for ensuring that the applicable PSD threshold will not be exceeded.

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:
NONE

Please complete:

**SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	29.36 (increase 7.89)
SO _x	3.88 (increase 1.02)
NO _x	2.85 (increase 0.75)
VOC/OC	5.13 (increase 1.34)

NEW SOURCE REVIEW FORM B

PTI Number: 06-06692

Facility ID: 0660010101

FACILITY NAME Burnham Foundry

FACILITY DESCRIPTION	Melting foundry returns purchased scrap metal and fluxes Chapter 31 modification built prior to 1972.	CITY/TWP	Zanesville
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