State of Ohio Environmental Protection Agency

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12/4/2008

JOAO SARAIVA
NATIONAL BRONZE & METALS, INC
5311 W RIVER RD N
LORAIN, OH 44055

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0247080759
Permit Number: P0104000
Permit Type: Renewal
County: Lorain

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install and Operate ("PTIO") which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully.

Ohio EPA maintains a document entitled "Frequently Asked Questions about the PTIO". The document can be downloaded from the DAPC Web page, www.epa.state.oh.us/dapc, from the "Permits" link. This document contains additional information related to your permit, such as what activities are covered under the PTIO, who has enforcement authority over the permit and Ohio EPA's authorization to inspect your facility and records. Please contact the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469 if you need assistance.

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission ("ERAC") under Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and describe the action complained of and the grounds for the appeal. The appeal must be filed with the ERAC within thirty (30) days after notice of the Director's action. A filing fee of $70.00 must be submitted to the ERAC with the appeal, although the ERAC, has discretion to reduce the amount of the filing fee if you can demonstrate (by affidavit) that payment of the full amount of the fee would cause extreme hardship. If you file an appeal of this action, you must notify Ohio EPA of the filing of the appeal (by providing a copy to the Director) within three (3) days of filing your appeal with the ERAC. Ohio EPA requests that a copy of the appeal also be provided to the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the ERAC at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, OH 43215

If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Northeast District Office. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page www.epa.state.oh.us/dapc.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-NEDO

State of Ohio Environmental Protection Agency
Division of Air Pollution Control

FINAL

Air Pollution Permit-to-Install and Operate
for
NATIONAL BRONZE & METALS, INC

Facility ID: 0247080759
Permit Number: P0104000
Permit Type: Renewal
Issued: 12/4/2008
Effective: 12/4/2008
Expiration: 12/4/2018

State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Air Pollution Permit-to-Install and Operate
for
NATIONAL BRONZE & METALS, INC

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Authorization

Facility ID: 0247080759
Application Number(s): A0036172
Permit Number: P0104000
Permit Description: PTIO Renewal
Permit Type: Renewal
Permit Fee: $0.00
Issue Date: 12/4/2008
Effective Date: 12/4/2008
Expiration Date: 12/4/2018
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

NATIONAL BRONZE & METALS, INC
5311 W RIVER RD N
Sheffield, OH 44055

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 43087
(330)425-9171

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section 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 described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski
Director

Authorization (continued)

Permit Number: P0104000
Permit Description: PTIO Renewal

Permits for the following emissions unit(s) or groups of emissions units are in this document as indicated below:

Emissions Unit ID:	**P028**
Company Equipment ID:	P028
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P029**
Company Equipment ID:	P029
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P030**
Company Equipment ID:	P030
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P031**
Company Equipment ID:	P031
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P032**
Company Equipment ID:	P032
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P033**
Company Equipment ID:	P033
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P034**
Company Equipment ID:	P034
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P035**
Company Equipment ID:	P035
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. **What does this permit-to-install and operate ("PTIO") allow me to do?**

   This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. **Who is responsible for complying with this permit?**

   The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

   The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. **What records must I keep under this permit?**

   You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. **What are my permit fees and when do I pay them?**

   There are two fees associated with permitted air contaminant sources in Ohio:

   - PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

     You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

   - Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. **When does my PTIO expire, and when do I need to submit my renewal application?**

   This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Ohio EPA DAPC, Northeast District Office in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the

change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

   a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

      (1) None.

   b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

      (1) None.

C. Emissions Unit Terms and Conditions

1. P028, P028

Operations, Property and/or Equipment Description:

Machine Shop -equipped with two lathes, a band saw and a drill press for the purpose of machining graphite parts, controlled by a 4800 acfm fabric filter

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Particulate emissions (PE): 0.01 gr/dscf, 0.41 lb/hr and 1.80 tpy The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).
b.	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
c.	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) The pressure drop across the baghouse shall be maintained within the range of 2 to 6 inches of water while the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendation, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.

e) Reporting Requirements

(1) The permittee shall report in the Permit Evaluation Report (PER) pressure drop deviations (excursions) that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified.

(2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

f) Testing Requirements

(1) Compliance with the allowable emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

0.01 gr/dscf and 0.41 lb/hr PE

Applicable Compliance Method:

Compliance with the mass emission limitations shall be demonstrated by using Method 5 as outlined in 40 CFR Part 60, Appendix A. No testing is specifically required by this permit but, if appropriate, may be required pursuant to OAC rule 3745-15-04(A). Such testing may be required at opacity levels less than those required by the visible emissions limit in Section C.1.b).

b. Emission Limitation:

1.80 tpy PE

Applicable Compliance Method:

Compliance with the annual PE limitation shall be determined by multiplying the hourly PE rate by 8760 hours (total hours in a year) and dividing by 2000 (pounds in a ton).

c. Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

Compliance with the opacity limitation from the baghouse exhaust shall be demonstrated by using Method 9 as outlined in 40 CFR Part 60, Appendix A, if required by the Ohio EPA.

g) Miscellaneous Requirements

(1) None.

2. P029, P029

Operations, Property and/or Equipment Description:

Vertical induction melting furnace no. 1 equipped with a baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-02(A)	Particulate emissions shall be less than 10.0 tons/yr. See Section b)(2)a.
b.	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 1.85 lbs/hr. See Section b)(2)b.
c.	OAC rule 3745-17-07(A)(1)	The requirements established pursuant to OAC rule 3745-17-07(B)(1) are less stringent than the requirements established pursuant to 40 CFR Part 60, Subpart M.
d.	40 CFR Part 60, Subpart M	Visible particulate emissions from the stack associated with this emissions unit shall not exceed 10 percent opacity, as a 6-minute average.

(2) Additional Terms and Conditions

a. Permit to Install 02-22809 for this air contaminant source takes into account the use of a baghouse system, whenever this air contaminant source is in operation, with a minimum control efficiency of 90%, by weight for particulate emissions, as

a voluntary restriction as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

b. The calculated uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 lbs/hr. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(ii), Figure II of OAC rule 3745-17-11 does not apply. The particulate emission limitation of 1.85 lbs/hr was established in accordance with Table I of OAC rule 3745-17-11 using a maximum process weight rate of 0.304 ton/yr provided by the permittee in the permit application.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for 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.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that (a) identify all days during which any 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 Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

(2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

Particulate emissions shall be less than 10.0 tons/yr.

Applicable Compliance Method:

Demonstration of compliance with the allowable hourly particulate emission limitation of 1.85 lbs/hr ensures particulate emissions are less than 10.0 tons/yr.

b. Emission Limitation:

Particulate emissions shall not exceed 1.85 lbs/hr.

Applicable Compliance Method:

i. Compliance shall be determined using the following equation:

PE (lbs/hr) = PWR x 0.70 lb/ton x 1 ton/2000 lbs

Where

PE = the calculated particulate emission rate in lbs/hr;

PWR = the hourly process weight rate of materials entering the furnace, in lbs/hr, or the maximum process weight rate of 608 lbs/hr;

0.70 lb/ton = emission factor from AP-42, Section 12.9, Table 12.9-2 for emissions from electric induction furnaces utilizing brass and bronze controlled by a baghouse; and

1 ton/2000 lbs = conversion from tons to lbs.

ii. If required, compliance shall be demonstrated in accordance with Method 5 as outlined in 40 CFR Part 60, Appendix A.

(2) The permittee shall conduct, or have conducted, emissions testing of the baghouse associated with this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months of installation of new equipment.

b. The emission testing shall be conducted to demonstrate compliance with the visible particulate emission limitation of 10 percent opacity, as a 6-minute average, from the stack associated with this emissions unit.

c. The emission test shall be conducted while the emissions unit is operating at normal or representative operating conditions. Prior to testing, the permittee shall propose to the Ohio EPA Northeast District Office an operating scenario for

the furnaces which is representative of actual operating conditions and particulate input rate to the baghouse.

d. Compliance with the visible particulate emission limitation shall be determined in accordance with Method 9 in 40 CFR Part 60, Appendix A.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 tests. Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s) 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.

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 Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

g) Miscellaneous Requirements

(1) None.

3. P030, P030

Operations, Property and/or Equipment Description:

Vertical induction melting furnace no. 2 equipped with a baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-02(A)	Particulate emissions shall be less than 10.0 tons/yr. See Section b)(2)a.
b.	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 1.85 lbs/hr. See Section b)(2)b.
	OAC rule 3745-17-07(A)(1)	The requirements established pursuant to OAC rule 3745-17-07(B)(1) are less stringent than the requirements established pursuant to 40 CFR Part 60, Subpart M.
	40 CFR Part 60, Subpart M	Visible particulate emissions from the stack associated with this emissions unit shall not exceed 10 percent opacity, as a 6-minute average.

(2) Additional Terms and Conditions

a. Permit to Install 02-22809 for this air contaminant source takes into account the use of a baghouse system, whenever this air contaminant source is in operation, with a minimum control efficiency of 90%, by weight for particulate emissions, as

a voluntary restriction as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

b. The calculated uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 lbs/hr. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(ii), Figure II of OAC rule 3745-17-11 does not apply. The particulate emission limitation of 1.85 lbs/hr was established in accordance with Table I of OAC rule 3745-17-11 using a maximum process weight rate of 0.304 ton/yr provided by the permittee in the permit application.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for 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.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that (a) identify all days during which any 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 Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

(2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

Particulate emissions shall be less than 10.0 tons/yr.

Applicable Compliance Method:

Demonstration of compliance with the allowable hourly particulate emission limitation of 1.85 lbs/hr ensures particulate emissions are less than 10.0 tons/yr.

b. Emission Limitation:

Particulate emissions shall not exceed 1.85 lbs/hr.

Applicable Compliance Method:

i. Compliance shall be determined using the following equation:

PE (lbs/hr) = PWR x 0.70 lb/ton x 1 ton/2000 lbs

Where

PE = the calculated particulate emission rate in lbs/hr;

PWR = the hourly process weight rate of materials entering the furnace, in lbs/hr, or the maximum process weight rate of 608 lbs/hr;

0.70 lb/ton = emission factor from AP-42, Section 12.9, Table 12.9-2 for emissions from electric induction furnaces utilizing brass and bronze controlled by a baghouse; and

1 ton/2000 lbs = conversion from tons to lbs.

ii. If required, compliance shall be demonstrated in accordance with Method 5 as outlined in 40 CFR Part 60, Appendix A.

(2) The permittee shall conduct, or have conducted, emissions testing of the baghouse associated with this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months of installation of new equipment.

b. The emission testing shall be conducted to demonstrate compliance with the visible particulate emission limitation of 10 percent opacity, as a 6-minute average, from the stack associated with this emissions unit.

c. The emission test shall be conducted while the emissions unit is operating at normal or representative operating conditions. Prior to testing, the permittee shall propose to the Ohio EPA Northeast District Office an operating scenario for

the furnaces which is representative of actual operating conditions and particulate input rate to the baghouse.

d. Compliance with the visible particulate emission limitation shall be determined in accordance with Method 9 in 40 CFR Part 60, Appendix A.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 tests. Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s) 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.

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 Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

g) Miscellaneous Requirements

(1) None.

4. P031, P031

Operations, Property and/or Equipment Description:

Vertical induction melting furnace no. 3 equipped with a baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-02(A)	Particulate emissions shall be less than 10.0 tons/yr. See Section b)(2)a.
b.	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 1.85 lbs/hr. See Section b)(2)b.
	OAC rule 3745-17-07(A)(1)	The requirements established pursuant to OAC rule 3745-17-07(B)(1) are less stringent than the requirements established pursuant to 40 CFR Part 60, Subpart M.
	40 CFR Part 60, Subpart M	Visible particulate emissions from the stack associated with this emissions unit shall not exceed 10 percent opacity, as a 6-minute average.

(2) Additional Terms and Conditions

a. Permit to Install 02-22809 for this air contaminant source takes into account the use of a baghouse system, whenever this air contaminant source is in operation, with a minimum control efficiency of 90%, by weight for particulate emissions, as

a voluntary restriction as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

b. The calculated uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 lbs/hr. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(ii), Figure II of OAC rule 3745-17-11 does not apply. The particulate emission limitation of 1.85 lbs/hr was established in accordance with Table I of OAC rule 3745-17-11 using a maximum process weight rate of 0.304 ton/yr provided by the permittee in the permit application.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for 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.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that (a) identify all days during which any 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 Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

(2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

Particulate emissions shall be less than 10.0 tons/yr.

Applicable Compliance Method:

Demonstration of compliance with the allowable hourly particulate emission limitation of 1.85 lbs/hr ensures particulate emissions are less than 10.0 tons/yr.

b. Emission Limitation:

Particulate emissions shall not exceed 1.85 lbs/hr.

Applicable Compliance Method:

i. Compliance shall be determined using the following equation:

PE (lbs/hr) = PWR x 0.70 lb/ton x 1 ton/2000 lbs

Where

PE = the calculated particulate emission rate in lbs/hr;

PWR = the hourly process weight rate of materials entering the furnace, in lbs/hr, or the maximum process weight rate of 608 lbs/hr;

0.70 lb/ton = emission factor from AP-42, Section 12.9, Table 12.9-2 for emissions from electric induction furnaces utilizing brass and bronze controlled by a baghouse; and

1 ton/2000 lbs = conversion from tons to lbs.

ii. If required, compliance shall be demonstrated in accordance with Method 5 as outlined in 40 CFR Part 60, Appendix A.

(2) The permittee shall conduct, or have conducted, emissions testing of the baghouse associated with this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months of installation of new equipment.

b. The emission testing shall be conducted to demonstrate compliance with the visible particulate emission limitation of 10 percent opacity, as a 6-minute average, from the stack associated with this emissions unit.

c. The emission test shall be conducted while the emissions unit is operating at normal or representative operating conditions. Prior to testing, the permittee shall propose to the Ohio EPA Northeast District Office an operating scenario for

the furnaces which is representative of actual operating conditions and particulate input rate to the baghouse.

d. Compliance with the visible particulate emission limitation shall be determined in accordance with Method 9 in 40 CFR Part 60, Appendix A.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 tests. Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s) 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.

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 Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

g) Miscellaneous Requirements

(1) None.

5. P032, P032

Operations, Property and/or Equipment Description:

Horizontal induction melting furnace no. 4 equipped with a baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-02(A)	Particulate emissions shall be less than 10.0 tons/yr. See Section b)(2)a.
b.	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 1.52 lbs/hr. See Section b)(2)b.
	OAC rule 3745-17-07(A)(1)	The requirements established pursuant to OAC rule 3745-17-07(B)(1) are less stringent than the requirements established pursuant to 40 CFR Part 60, Subpart M.
	40 CFR Part 60, Subpart M	Visible particulate emissions from the stack associated with this emissions unit shall not exceed 10 percent opacity, as a 6-minute average.

(2) Additional Terms and Conditions

a. Permit to Install 02-22809 for this air contaminant source takes into account the use of a baghouse system, whenever this air contaminant source is in operation, with a minimum control efficiency of 90%, by weight for particulate emissions, as

a voluntary restriction as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

b. The calculated uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 lbs/hr. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(ii), Figure II of OAC rule 3745-17-11 does not apply. The particulate emission limitation of 1.52 lbs/hr was established in accordance with Table I of OAC rule 3745-17-11 using a maximum process weight rate of 0.228 ton/yr provided by the permittee in the permit application.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for 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.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that (a) identify all days during which any 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 Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

(2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

Particulate emissions shall be less than 10.0 tons/yr.

Applicable Compliance Method:

Demonstration of compliance with the allowable hourly particulate emission limitation of 1.52 lbs/hr ensures particulate emissions are less than 10.0 tons/yr.

b. Emission Limitation:

Particulate emissions shall not exceed 1.52 lbs/hr.

Applicable Compliance Method:

i. Compliance shall be determined using the following equation:

PE (lbs/hr) = PWR x 0.70 lb/ton x 1 ton/2000 lbs

Where

PE = the calculated particulate emission rate in lbs/hr;

PWR = the hourly process weight rate of materials entering the furnace, in lbs/hr, or the maximum process weight rate of 456 lbs/hr;

0.70 lb/ton = emission factor from AP-42, Section 12.9, Table 12.9-2 for emissions from electric induction furnaces utilizing brass and bronze controlled by a baghouse; and

1 ton/2000 lbs = conversion from tons to lbs.

ii. If required, compliance shall be demonstrated in accordance with Method 5 as outlined in 40 CFR Part 60, Appendix A.

(2) The permittee shall conduct, or have conducted, emissions testing of the baghouse associated with this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months of installation of new equipment.

b. The emission testing shall be conducted to demonstrate compliance with the visible particulate emission limitation of 10 percent opacity, as a 6-minute average, from the stack associated with this emissions unit.

c. The emission test shall be conducted while the emissions unit is operating at normal or representative operating conditions. Prior to testing, the permittee shall propose to the Ohio EPA Northeast District Office an operating scenario for

the furnaces which is representative of actual operating conditions and particulate input rate to the baghouse.

d. Compliance with the visible particulate emission limitation shall be determined in accordance with Method 9 in 40 CFR Part 60, Appendix A.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 tests. Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s) 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.

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 Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

g) Miscellaneous Requirements

(1) None.

6. P033, P033

Operations, Property and/or Equipment Description:

Horizontal induction melting furnace no. 5 equipped with a baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-02(A)	Particulate emissions shall be less than 10.0 tons/yr. See Section b)(2)a.
b.	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 1.52 lbs/hr. See Section b)(2)b.
	OAC rule 3745-17-07(A)(1)	The requirements established pursuant to OAC rule 3745-17-07(B)(1) are less stringent than the requirements established pursuant to 40 CFR Part 60, Subpart M.
	40 CFR Part 60, Subpart M	Visible particulate emissions from the stack associated with this emissions unit shall not exceed 10 percent opacity, as a 6-minute average.

(2) Additional Terms and Conditions

a. Permit to Install 02-22809 for this air contaminant source takes into account the use of a baghouse system, whenever this air contaminant source is in operation, with a minimum control efficiency of 90%, by weight for particulate emissions, as

a voluntary restriction as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

b. The calculated uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 lbs/hr. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(ii), Figure II of OAC rule 3745-17-11 does not apply. The particulate emission limitation of 1.52 lbs/hr was established in accordance with Table I of OAC rule 3745-17-11 using a maximum process weight rate of 0.228 ton/yr provided by the permittee in the permit application.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for 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.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that (a) identify all days during which any 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 Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

(2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

f) Testing Requirements

(1) Compliance with the emission limitations in Section 6.b) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

Particulate emissions shall be less than 10.0 tons/yr.

Applicable Compliance Method:

Demonstration of compliance with the allowable hourly particulate emission limitation of 1.52 lbs/hr ensures particulate emissions are less than 10.0 tons/yr.

b. Emission Limitation:

Particulate emissions shall not exceed 1.52 lbs/hr.

Applicable Compliance Method:

i. Compliance shall be determined using the following equation:

PE (lbs/hr) = PWR x 0.70 lb/ton x 1 ton/2000 lbs

Where

PE = the calculated particulate emission rate in lbs/hr;

PWR = the hourly process weight rate of materials entering the furnace, in lbs/hr, or the maximum process weight rate of 456 lbs/hr;

0.70 lb/ton = emission factor from AP-42, Section 12.9, Table 12.9-2 for emissions from electric induction furnaces utilizing brass and bronze controlled by a baghouse; and

1 ton/2000 lbs = conversion from tons to lbs.

ii. If required, compliance shall be demonstrated in accordance with Method 5 as outlined in 40 CFR Part 60, Appendix A.

(2) The permittee shall conduct, or have conducted, emissions testing of the baghouse associated with this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months of installation of new equipment.

b. The emission testing shall be conducted to demonstrate compliance with the visible particulate emission limitation of 10 percent opacity, as a 6-minute average, from the stack associated with this emissions unit.

c. The emission test shall be conducted while the emissions unit is operating at normal or representative operating conditions. Prior to testing, the permittee shall propose to the Ohio EPA Northeast District Office an operating scenario for

the furnaces which is representative of actual operating conditions and particulate input rate to the baghouse.

d. Compliance with the visible particulate emission limitation shall be determined in accordance with Method 9 in 40 CFR Part 60, Appendix A.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 tests. Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s) 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.

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 Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

g) Miscellaneous Requirements

(1) None.

7. P034, P034

Operations, Property and/or Equipment Description:

Horizontal induction melting furnace no. 6 equipped with a baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-02(A)	Particulate emissions shall be less than 10.0 tons/yr. See Section b)(2)a.
b.	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 1.52 lbs/hr. See Section b)(2)b.
	OAC rule 3745-17-07(A)(1)	The requirements established pursuant to OAC rule 3745-17-07(B)(1) are less stringent than the requirements established pursuant to 40 CFR Part 60, Subpart M.
	40 CFR Part 60, Subpart M	Visible particulate emissions from the stack associated with this emissions unit shall not exceed 10 percent opacity, as a 6-minute average.

(2) Additional Terms and Conditions

a. Permit to Install 02-22809 for this air contaminant source takes into account the use of a baghouse system, whenever this air contaminant source is in operation, with a minimum control efficiency of 90%, by weight for particulate emissions, as

a voluntary restriction as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

b. The calculated uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 lbs/hr. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(ii), Figure II of OAC rule 3745-17-11 does not apply. The particulate emission limitation of 1.52 lbs/hr was established in accordance with Table I of OAC rule 3745-17-11 using a maximum process weight rate of 0.228 ton/yr provided by the permittee in the permit application.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for 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.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that (a) identify all days during which any 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 Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

(2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

Particulate emissions shall be less than 10.0 tons/yr.

Applicable Compliance Method:

Demonstration of compliance with the allowable hourly particulate emission limitation of 1.52 lbs/hr ensures particulate emissions are less than 10.0 tons/yr.

b. Emission Limitation:

Particulate emissions shall not exceed 1.52 lbs/hr.

Applicable Compliance Method:

i. Compliance shall be determined using the following equation:

PE (lbs/hr) = PWR x 0.70 lb/ton x 1 ton/2000 lbs

Where

PE = the calculated particulate emission rate in lbs/hr;

PWR = the hourly process weight rate of materials entering the furnace, in lbs/hr, or the maximum process weight rate of 456 lbs/hr;

0.70 lb/ton = emission factor from AP-42, Section 12.9, Table 12.9-2 for emissions from electric induction furnaces utilizing brass and bronze controlled by a baghouse; and

1 ton/2000 lbs = conversion from tons to lbs.

ii. If required, compliance shall be demonstrated in accordance with Method 5 as outlined in 40 CFR Part 60, Appendix A.

(2) The permittee shall conduct, or have conducted, emissions testing of the baghouse associated with this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months of installation of new equipment.

b. The emission testing shall be conducted to demonstrate compliance with the visible particulate emission limitation of 10 percent opacity, as a 6-minute average, from the stack associated with this emissions unit.

c. The emission test shall be conducted while the emissions unit is operating at normal or representative operating conditions. Prior to testing, the permittee shall propose to the Ohio EPA Northeast District Office an operating scenario for

the furnaces which is representative of actual operating conditions and particulate input rate to the baghouse.

d. Compliance with the visible particulate emission limitation shall be determined in accordance with Method 9 in 40 CFR Part 60, Appendix A.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 tests. Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s) 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.

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 Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

g) Miscellaneous Requirements

(1) None.

8. P035, P035

Operations, Property and/or Equipment Description:

Horizontal induction melting furnace no. 7 equipped with a baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-02(A)	Particulate emissions shall be less than 10.0 tons/yr. See Section b)(2)a.
b.	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 1.52 lbs/hr. See Section b)(2)b.
	OAC rule 3745-17-07(A)(1)	The requirements established pursuant to OAC rule 3745-17-07(B)(1) are less stringent than the requirements established pursuant to 40 CFR Part 60, Subpart M.
	40 CFR Part 60, Subpart M	Visible particulate emissions from the stack associated with this emissions unit shall not exceed 10 percent opacity, as a 6-minute average.

(2) Additional Terms and Conditions

a. Permit to Install 02-22809 for this air contaminant source takes into account the use of a baghouse system, whenever this air contaminant source is in operation, with a minimum control efficiency of 90%, by weight for particulate emissions, as

a voluntary restriction as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

b. The calculated uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 lbs/hr. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(ii), Figure II of OAC rule 3745-17-11 does not apply. The particulate emission limitation of 1.52 lbs/hr was established in accordance with Table I of OAC rule 3745-17-11 using a maximum process weight rate of 0.228 ton/yr provided by the permittee in the permit application.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for 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.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that (a) identify all days during which any 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 Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

(2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

f) Testing Requirements

(1) Compliance with the emission limitations in Section C.8.b) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

Particulate emissions shall be less than 10.0 tons/yr.

Applicable Compliance Method:

Demonstration of compliance with the allowable hourly particulate emission limitation of 1.52 lbs/hr ensures particulate emissions are less than 10.0 tons/yr.

b. Emission Limitation:

Particulate emissions shall not exceed 1.52 lbs/hr.

Applicable Compliance Method:

i. Compliance shall be determined using the following equation:

PE (lbs/hr) = PWR x 0.70 lb/ton x 1 ton/2000 lbs

Where

PE = the calculated particulate emission rate in lbs/hr;

PWR = the hourly process weight rate of materials entering the furnace, in lbs/hr, or the maximum process weight rate of 456 lbs/hr;

0.70 lb/ton = emission factor from AP-42, Section 12.9, Table 12.9-2 for emissions from electric induction furnaces utilizing brass and bronze controlled by a baghouse; and

1 ton/2000 lbs = conversion from tons to lbs.

ii. If required, compliance shall be demonstrated in accordance with Method 5 as outlined in 40 CFR Part 60, Appendix A.

(2) The permittee shall conduct, or have conducted, emissions testing of the baghouse associated with this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months of installation of new equipment.

b. The emission testing shall be conducted to demonstrate compliance with the visible particulate emission limitation of 10 percent opacity, as a 6-minute average, from the stack associated with this emissions unit.

c. The emission test shall be conducted while the emissions unit is operating at normal or representative operating conditions. Prior to testing, the permittee shall propose to the Ohio EPA Northeast District Office an operating scenario for

the furnaces which is representative of actual operating conditions and particulate input rate to the baghouse.

d. Compliance with the visible particulate emission limitation shall be determined in accordance with Method 9 in 40 CFR Part 60, Appendix A.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 tests. Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s) 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.

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 Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

g) Miscellaneous Requirements

(1) None.