



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL MODIFICATION  
GUERNSEY COUNTY**

**CERTIFIED MAIL**

Street Address:

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

Mailing Address:  
Lazarus Gov. Center

**Application No: 06-05869**

**DATE:** 2/28/2002

Shieldalloy Metallurgical Corp  
Stephen Petrasko  
PO Box 310  
Cambridge, OH 43725

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install modification for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit modification. 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 modification 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 modification 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 modification a fee of **\$ 300** 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

PA



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

**Permit To Install**

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

**DRAFT MODIFICATION OF PERMIT TO INSTALL 06-05869**

Application Number: 06-05869  
APS Premise Number: 0630010005  
Permit Fee: **To be entered upon final issuance**  
Name of Facility: Shieldalloy Metallurgical Corp  
Person to Contact: Stephen Petrasko  
Address: PO Box 310  
Cambridge, OH 43725

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

**Rte 209 S  
Cambridge, Ohio**

Description of proposed emissions unit(s):

**Modification to PTI 06-05869 to reflect the use of a baghouse in lieu of a wet scrubber and associated monitoring, record keeping and reporting requirements.**

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification 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 source(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 included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Shieldalloy Metallurgical Corp

Facility ID: 0630010005

PTI Application: 06-05869

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 Record keeping 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 record keeping 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 record keeping 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, record keeping, 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

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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.

## **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

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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 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.

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

#### **12. 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.

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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 Record keeping Requirements**

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or record keeping 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 record keeping 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. 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.

## **5. 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.

## **6. 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.

## **7. 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).

## **8. Construction Compliance Certification**

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the

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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.

**9. 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.

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

<u>Pollutant</u>	<u>Tons Per Year</u>
Particulates	11.0
SO <sub>2</sub>	342.1
NO <sub>x</sub>	39.0
CO	341.6
OC	39

**Shieldalloy Metallurgical Corp**

**Facility ID: 0630010005**

**PTI Application: 06-05869**

**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

**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>	<u>Applicable Emissions Limitations/Control Measures</u>
F002 - Lime Silos 1 and 2	OAC rule 3745-31-05(A)(3)	<p>Particulate emissions shall not exceed 0.010 gr/dscf of exhaust gases or no visible emissions, whichever is less stringent.</p> <p>Particulate emissions shall not exceed 0.4 ton per year.</p>

**2. Additional Terms and Conditions**

- 2.a The permittee shall employ best available control measures on the emissions unit for the purpose of ensuring compliance with the above mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to maintain enclosures and vent emissions to a baghouse to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

- 1. The permittee shall perform daily checks, while the equipment is in operation and when the weather conditions allow, for any visible particulate emissions from 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 emission;
- 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 semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission limitation-

Particulate emissions shall not exceed 0.010 gr/dscf of exhaust gases or no visible emissions, whichever is less stringent.

Applicable Compliance Method-

If required, compliance shall be determined in accordance with 40 CFR 60 Appendix A, Methods 1-5 and the procedures specified in OAC rule 3745-17-03(B)(1). No testing is specifically required and compliance will be based upon the monitoring and record keeping in section A.III.

Compliance with the no visible emissions limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22 and the procedures specified in OAC rule 3745-17-03(B)(1), or

- b. Emission Limitation

Particulate emissions shall not exceed 0.4 ton per year.

Applicable Compliance Methods

Compliance shall be based upon the following equation:

$$0.010 \text{ gr/dscf} * 450 \text{ ft}^3/\text{min (per application)} * 60 \text{ min/hr} \div 7000 \text{ gr/lb} = 0.04 \text{ lb/hr}$$

$$0.04 \text{ lb/hr} * (\text{actual hours of operation}) * 0.0005 \text{ T/lb} = \text{TPY of particulates}$$

**Shieldalloy Metallurgical Corp**  
**PTI Application: 06-05860**  
**Issued**

**Facility ID: 0630010005**

**Emissions Unit ID: F002**

**VI. Miscellaneous Requirements**

None

Shield

PTI A

Emissions Unit ID: F002

Issued: To be entered upon final issuance

**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>
F002 - Lime Silos 1 and 2	none	none

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

Shield  
PTI A

Emissions Unit ID: **F003**

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>	<u>Applicable Emissions Limitations/Control Measures</u>
F003 - Gypsum Silos 1 and 2	OAC rule 3745-31-05(A)(3)	Particulate emissions shall not exceed 0.010 gr/dscf of exhaust gases or no visible emissions, whichever is less stringent.  Particulate emissions shall not exceed 0.12 ton per year.

**2. Additional Terms and Conditions**

- 2.a The permittee shall employ best available control measures on the emissions unit for the purpose of ensuring compliance with the above mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to maintain enclosures and vent emissions to a baghouse to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

1. The permittee shall perform daily checks, while the equipment is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible

**Shield****PTI A**Emissions Unit ID: **F003****Issued: To be entered upon final issuance**

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 emission;
- 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 semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**V. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission limitation-

Particulate emissions shall not exceed 0.010 gr/dscf of exhaust gases or no visible emissions, whichever is less stringent.

Applicable Compliance Method-

If required, compliance shall be determined in accordance with 40 CFR 60 Appendix A, Methods 1-5 and the procedures specified in OAC rule 3745-17-03(B)(1). No testing is specifically required and compliance will be based upon the monitoring and record keeping in section A.III.

Compliance with the no visible emissions limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22 and the procedures specified in OAC rule 3745-17-03(B)(1)

- b. Emission Limitation

Particulate emissions shall not exceed 0.12 ton per year.

Shieldalloy Metallurgical Corp

PTI Application: 06-05860

Issued

Facility ID: 0630010005

Emissions Unit ID: F003

#### Applicable Compliance Methods

Compliance shall be based upon the following equation:

$$0.010 \text{ gr/dscf} * 150 \text{ ft}^3/\text{min (per application)} * 60 \text{ min/hr} \div 7000 \text{ gr/lb} = 0.013 \text{ lb/hr}$$

$$0.013 \text{ lb/hr} * (\text{actual hours of operation}) * 0.0005 \text{ T/lb} = \text{TPY of particulates}$$

#### VI. Miscellaneous Requirements

None

Shield

PTI A

Emissions Unit ID: F003

Issued: To be entered upon final issuance

**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>
F003 - Gypsum Silos 1 and 2	none	none

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

Shield

PTI A

Emissions Unit ID: P014

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>	
P014 - Multiple Hearth Roaster	OAC rule 3745-31-05(A)(3)	OAC rule 3745-18-06(E)
		40 CFR 52.21
	OAC rule 3745-17-07(B)	
	OAC rule 3745-17-11(B)(2)	

**Shield****PTI A**Emissions Unit ID: **P014****Issued: To be entered upon final issuance**

<u>Applicable Emissions Limitations/Control Measures</u>	
Particulate emissions shall be limited to 0.010 gr/dscf of exhaust gases and no visible emissions.	equivalent to the requirements of 40 CFR 52.21.
Particulate emissions shall not exceed 10.5 tons per year.	Emissions of carbon monoxide shall be limited to 78.0 lbs/hr and 341.7 TPY.
Emissions of nitrogen oxides shall be limited to 8.9 lbs/hr and 39.0 TPY.	Emissions of sulfur dioxide (SO <sub>2</sub> ) shall be limited to 78.1 lbs/hr and 342.1 TPY.
Emissions of organic compounds shall be limited to 8.9 lbs/hr and 39.0 TPY.	
The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-11(B)(2) and OAC rule 3745-17-07(B).	
Fugitive particulate emissions shall not exceed 20% opacity as a three minute average.	
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 requirements established pursuant to this rule are	

**Issued: To be entered upon final issuance****2. Additional Terms and Conditions**

- 2.a** The permittee shall employ best available control measures on the Multiple Hearth Roaster for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee shall install and maintain enclosures and vent emissions to a dry scrubber and a baghouse which is capable of meeting the applicable requirements to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.b** Prior to the installation of the continuous SO<sub>2</sub> monitoring system, the permittee shall submit information detailing the proposed location of the sampling site(s) in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2 for approval by the Ohio EPA, Central Office.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous SO<sub>2</sub> monitoring system designed to ensure continuous valid and representative readings of SO<sub>2</sub>. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous SO<sub>2</sub> monitoring system must be kept on site and available for inspection during regular office hours.

**II. Operational Restrictions**

1. The pressure drop across the baghouse shall be maintained within the range of 2 to 10 inches of water while the emissions unit is in operation.

**III. Monitoring and/or Record keeping Requirements**

1. The permittee shall perform daily checks, while the equipment is in operation, for any unusual visible emissions of fugitive dust from the emissions unit. A record of the necessary and completed corrective actions resulting from the daily checks shall be maintained by the permittee.
2. The permittee shall operate and maintain equipment to continuously monitor and record SO<sub>2</sub> from this emissions unit in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the continuous SO<sub>2</sub> monitoring system including, but not limited to, parts per million SO<sub>2</sub> on a fifteen minute average basis, emissions of SO<sub>2</sub> in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and

magnitude of manual calibration adjustments.

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.

3. 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.
4. 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 recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a once per shift basis.

#### IV. Reporting Requirements

1. The permittee shall submit quarterly reports which identify each day that the observations required under the monitoring section of this permit were not performed and each day that any corrective measures required to be taken pursuant to the monitoring section of this permit were not performed.
2. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration magnitude, reason (if known), and corrective actions taken (if any), of all instances of SO<sub>2</sub> values in excess of the applicable limits specified in OAC Chapter 3745-18, in units of the applicable standard(s). These reports shall also contain the total SO<sub>2</sub> emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting any continuous SO<sub>2</sub> monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit

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operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

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.

3. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify that all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible stack particulate emissions were observed from this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation

Emissions of sulfur dioxide shall be limited to 78.1 lbs/hr

### Applicable Compliance Method

Compliance shall be determined in accordance with the continuous emissions monitoring found in Section A.III. Compliance with the ton per year limitation shall be determined in accordance with the continuous emissions monitoring found in Section A.III.

Within 60 days of start-up of the emissions unit, the permittee shall conduct certification tests of the continuous SO<sub>2</sub> monitoring system pursuant to ORC section 3704.03(I) and

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40 CFR Part 60, Appendix B, Performance Specification 2. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office within 30 days after the test is completed. Certification of the continuous SO<sub>2</sub> monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 2.

## b. Emission Limitation

20% opacity as a three minute average

## Applicable Compliance Method

If required, compliance shall be determined in accordance with 40 CFR 60 Appendix A, Method 9.

## c. Emission Limitation

Emissions of carbon monoxide shall be limited to 78.0 lbs/hr and 341.7 TPY.

## Applicable Compliance Method

Compliance shall be determined in accordance with 40 CFR 60 Appendix A, Method 10 and the procedures specified in OAC rule 3745-21-03. Compliance shall be determined by multiplying the hourly emission rate, determined through the performance testing specified above, by 8760 hr/yr and 0.0005 ton/lb to obtain the tons per year of carbon monoxide

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted within 3 months after issuance of the permit.

The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for carbon monoxide.

The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for carbon monoxide, Method 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior

approval from the Ohio EPA.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

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.

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.

d. Emission Limitation

Particulate emissions shall be limited to 0.010 gr/dscf of exhaust gases and no visible emissions.

Applicable Compliance Method

Compliance shall be determined in accordance with 40 CFR 60 Appendix A, Methods 1 - 5 and the procedures specified in OAC rule 3745-17-03(B)(1). Compliance with the no visible emissions limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22 and the procedures specified in OAC rule 3745-17-03(B)(1),

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted within 3 months after issuance of the permit.

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The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate matter.

The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulate, Method 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

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.

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.

e. Emission Limitation

Particulate emissions shall not exceed 10.5 tons per year.

Applicable Compliance Method

Compliance shall be determined using the following equation:

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(Tested emission rate in grains per dry standard cubic feet) \* 27,841 dscf/min \* 60 min/hr  
 ÷ 7000 gr/lbs = lb/hr

lb/hr \* (actual hours of operation)hr/yr \* 0.0005 ton/lb = tons per year

f. Emission Limitation

Emissions of nitrogen oxides shall be limited to 8.9 lbs/hr and 39.0 TPY.

Applicable Compliance Method

Compliance shall be determined by using the emission factor (As supplied by the applicant from the manufacture) of 0.04 lb/min of NO<sub>x</sub> and multiplying by 60 min/hr to obtain the hourly emission rate. Compliance with the 10.5 TPY NO<sub>x</sub> emission limit shall be determined by a one-time calculation based upon maximum potential hours of operation as detailed in the following equation:

$$0.04 \text{ lb/min} * 60 \text{ min/hr} * 8760 \text{ hrs/yr} * 0.0005 \text{ T/lb} = 10.5 \text{ TPY}$$

**VI. Miscellaneous Requirements**

None

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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>
P014 - Multiple Hearth Roaster	none	none

**2. Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

1. The permittee shall collect and record the following information for each change where air toxic modeling was required pursuant to the Air Toxic Policy:
  - a. Background data that describes the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
  - b. Documentation of its evaluation and determination that the changed emissions unit still satisfies the Air Toxic Policy; and,
  - c. Where computer modeling is preformed, a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

**IV. Reporting Requirements**

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None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

This permit allows the use of materials specified by the permittee in the permit to install application for this emissions unit. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worse case" pollutant(s):

**Pollutant:** TolueneTLV (ug/m<sup>3</sup>): 754,000

Maximum Hourly Emission Rate (lbs/hr): 0.26

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 0.0737MAGLC (ug/m<sup>3</sup>): 18,000**Pollutant:** Sulfuric AcidTLV (ug/m<sup>3</sup>): 1,000

Maximum Hourly Emission Rate (lbs/hr): 0.96

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 2.72MAGLC (ug/m<sup>3</sup>): 23.8

Physical changes or changes in the method of operation of the emissions unit that result in changes to the

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factors affecting the air toxic analysis could result in noncompliance with this permit to install. In order to avoid this noncompliance situation, prior to initiating any changes, permittees are required to conduct an evaluation to determine that the "Air Toxic Policy" is still satisfied. Changes that can affect the "Air Toxic Policy" include, but are not limited to, the following:

- a. Changes in the composition of the materials used, or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

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- b. Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,
- c. Physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

The Ohio EPA will not consider any of the above-mentioned as a "modification" requiring a permit to install, if the following conditions are met:

- a. The change is not otherwise considered a "modification" under OAC Chapter 3745-31;
- b. The permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. Prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.