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Facility Name: **Elyria Foundry**

Application Number: **02-2455**

Date: **Draft PTI (Date will be entered upon final issuance)**

### **GENERAL PERMIT CONDITIONS**

#### **TERMINATION OF PERMIT TO INSTALL**

Substantial construction for installation must take place within 18 months of the effective date of this permit. This deadline may 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.

#### **NOTICE OF INSPECTION**

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

#### **CONSTRUCTION OF NEW SOURCES**

The proposed source(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 are inadequate or cannot meet applicable standards.

If the construction of the proposed source(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 Ohio Administrative Code (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

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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 applicable standards.

### **PERMIT TO INSTALL FEE**

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

### **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.

### **APPLICABILITY**

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

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### **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.

### **PERMIT TO OPERATE APPLICATION**

A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be filed no later than thirty days after commencement of operation.

### **SOURCE OPERATION AFTER COMPLETION OF CONSTRUCTION**

This facility is permitted to operate each source described by this permit to install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws and regulations.

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal &amp; OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
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AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **Elyria Foundry** located in **Lorain** County. The emissions units listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

3.5 TPH

<u>Ohio EPA Source Number</u>	<u>Source Identification</u>	<u>Description</u>
F001 (Mod)	F004 (Mod)	Modification to EIF #1 to increase maximum melt rate from 2.5 TPH to 3.5 TPH
F002 (Mod) cont'd		
F003 (Mod)		Modification to EIF #3 to increase maximum melt rate from 2.5 TPH to 3.5 TPH
F002 (Mod)		Modification to EIF #2 to increase maximum melt rate from 2.5 TPH to

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal &amp; OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
Modification to EIF #4 to increase maximum melt rate from 2.5 TPH to 3.5 TPH	BAT <u>Determination</u>			3745-17-07
	PM: 5.25 lbs/hr, 8.25 TPY.		Applicable Federal & OAC Rules	3745-31-05
	VE's not to exceed 20% opacity as a 3-minute average.	PM: 5.25 lbs/hr, 8.25 TPY.	3745-31-05	
	Pb, 0.15 lb/hr, 0.25 TPY	VE's not to exceed 20% opacity as a 3-minute average.		3745-17-08
		Pb, 0.15 lb/hr, 0.25 TPY	3745-17-08	3745-17-07
			3745-17-07	
				3745-31-05
			3745-31-05	
	PM: 5.25 lbs/hr, 8.25 TPY.	PM: 5.25 lbs/hr, 8.25 TPY.		
	VE's not to exceed 20% opacity as a 3-minute average.	VE's not to exceed 20% opacity as a 3-minute average.		3745-17-08
	Pb, 0.15 lb/hr, 0.25 TPY	Pb, 0.15 lb/hr, 0.25 TPY	3745-17-08	3745-17-07

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Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
Permit Allowable Mass Emissions and/or Control/Usage Requirements PM: 5.25 lbs/hr, 8.25 TPY, visible emissions not to exceed 20% opacity as a 3-minute average, Pb: 0.15 lb/hr, 0.25 TPY Exempt, per OAC 3745-17-08(A)(1)	) Exempt, per OAC 3745-17-07 (B) (11) (e) PM: 5.25 lbs/hr, 8.25 TPY, visible emissions not to exceed 20% opacity as a 3-minute average, Pb: 0.15 lb/hr, 0.25 TPY Exempt, per OAC 3745-17-08(A)(1)	average, Pb: 0.15 lb/hr, 0.25 TPY Exempt, per OAC 3745-17-08(A)(1)	Exempt, per OAC 3745-17-08(A)(1)	Exempt, per OAC 3745-17-08(A)(1)

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SUMMARY  
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
PM	33.0 (11.4, net emission (increase))
Pb	1.0 (0.39, net emission (increase))

**WASTE DISPOSAL**

The owner/operator shall comply with any applicable state and federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

**MAINTENANCE OF EQUIPMENT**

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

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### **MALFUNCTION/ABATEMENT**

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the **Ohio EPA, Northeast District Office, 2110 E. Aurora Road, Twinsburg, Ohio 44087.**

Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

### **AIR POLLUTION NUISANCES PROHIBITED**

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

### **ADDITIONAL SPECIAL TERMS AND CONDITIONS**

PTI 02-12455 is for the modification of four electric induction furnaces (emissions units F001-F004) at an iron foundry to increase the maximum melt rate from 2.5 tons per hour to 3.5 tons per hour.

#### **A. Operational Restrictions**

1. The maximum annual production rate for each furnace (emissions units F001, F002, F003 and F004) shall not exceed 11,000 tons of metal, based upon a rolling, 12-month summation of the production rates. As these emissions units having been in operation since 1973 and monthly production records exist, during the first 12 calendar months of operation following the issuance of this permit, compliance with the annual production rate limitations shall be based on the rolling 12-month summation of existing monthly records of production and new monthly records of production. After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual production rate

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limitations shall be based upon a rolling, 12-month summation of the production rates.

**B. Monitoring/Recordkeeping Requirements**

1. The permittee shall maintain monthly records of the following information for each furnace:
  - a. the production rate for each month; and,
  - b. the rolling, 12-month summation of the production rates.

**C. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month production rate limitation for each furnace. These reports shall be submitted to the Ohio EPA, Northeast District Office, within 30 days after the exceedance occurs. These reports shall include any corrective action or corrective measures taken.

**D. Testing Requirements**

1. Emission Limitation: 5.25 lbs PM per hour

Applicable Compliance Method: To determine the actual worst case emission rate for particulate matter, the following equation shall be used:

$$E = \text{maximum iron produced (tons per hour)} \times 1.5 \text{ (lbs/ton)}$$

where:

E = particulate matter emissions (lbs/hr)

1.5 = emission factor in lbs particulate matter per ton iron produced (from Ohio EPA's document "Reasonably Available Control Measures for Fugitive Dust Sources", Table 2.7-1 for electric induction furnace melting, charging and tapping)

2. Emission Limitation: 8.25 tons PM per year

Applicable Compliance Method: To determine the actual emission rate for particulate matter, the following equation shall be used:

$$E = \text{iron produced (tons per year)} \times 1.5 \text{ (lbs/ton)} \times 1/2000 \text{ (ton/lbs)}$$

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where:

E = particulate matter emissions (tons/month)  
1.5 = emission factor in lbs particulate matter per ton iron produced (from Ohio EPA's document "Reasonably Available Control Measures for Fugitive Dust Sources", Table 2.7-1 for electric induction furnace melting, charging and tapping)

3. Emission Limitation: Visible emissions not to exceed 20% opacity on a three minute average

Applicable Compliance Method: Compliance shall be determined in accordance with OAC Rule 3745-17-03(B) (3).

4. Emission Limitation: 0.15 lbs Pb per hour

Applicable Compliance Method: To determine the actual worst cast emission rate for lead, the following equation shall be used:

$E = \text{maximum iron produced (tons per hour)} \times 0.0425$   
(lb/ton)

where:

E - lead emissions (lb/hr)  
0.0425 - emission factor in lb lead per ton iron produced (from SCC emission factor 30400303 for electric induction furnaces at gray iron foundries)

5. Emission Limitation: 0.25 ton Pb per year

Applicable Compliance Method: To determine the actual emission rate for lead, the following equation shall be used:

$E = \text{iron produced (tons per year)} \times 0.0425$  (lb/ton) X  
1/2000 (ton/lbs)

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where:

E = lead emission (ton/year)

0.0425 = emission factor in lb lead per ton iron produced (from SCC emission factor 30400303 for electric induction furnaces at gray iron foundries)