

Facility ID: 0546000001 Issuance type: Final State Permit To Operate

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part II" and before "A. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

- [Go to Part II for Emissions Unit F006](#)
- [Go to Part II for Emissions Unit P010](#)
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Facility ID: 0546000001 Emissions Unit ID: F006 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

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.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
F006 - 6-ton, coreless, electric induction melting furnace including the pour-over magnesium treatment	OAC rule 3745-31-05(A)(3) PTI 05-11062	Particulate emissions (PE) shall not exceed 3.9 pounds per hour (see Section A.2.a.). Particulate matter with an aerodynamic diameter equal or less than 10 microns (PM10) shall not exceed 3.78 pounds per hour (see Section A.2.a.). Lead emissions shall not exceed 0.3 pound per hour (see Section A.2.a.). PE shall not exceed 7.56 tons as a rolling, 12-month summation for emissions unit F002 and F006, combined (see Section F.) Visible particulate emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average.
	OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B)	None (See Section A.2.b.)
	OAC rule 3745-17-11(B)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-35-07(B)	PM10 emissions shall not exceed 7.28 tons as a rolling, 12-month summation for emissions units F002 and F006, combined (see Section F.) Lead emissions shall not exceed 0.7 tons as a rolling, 12-month summation for emissions unit F002 and F006 combined

2. Additional Terms and Conditions

- (a) The 3.9 lbs PE/hr, the 3.78 lbs PM10/hr and the 0.3 lb Lead/hr limitations are based upon potential-to-emit for this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with these limitations. This emissions unit is not located in an "Appendix A" area as indicated in OAC rule 3745-17-08. Therefore, the emissions unit is not subject to the RACM requirements established in OAC rule 3745-17-08(B) and the visible emission limitations specified in OAC rule 3745-17-07(B).

B. Operational Restrictions

1. The maximum amount of metal melted for emissions units F002 and F006, combined, shall not exceed 14,000 tons, based upon a rolling, 12-month summation.

The permittee has sufficient existing records to demonstrate compliance with this limit during the first twelve months after issuance of this permit.

2. The maximum amount of metal that receives magnesium treatment for emissions unit F002 and F006, combined, shall not exceed 6,300 tons, based upon a rolling, 12-month summation.

The permittee has sufficient existing records to demonstrate compliance with this limit during the first twelve months after issuance of this permit.

C. Monitoring and/or Record Keeping Requirements

1. The maximum amount of metal that receives magnesium treatment for emissions unit F002 and F006, combined, shall not exceed 6,300 tons, based upon a rolling, 12-month summation.

The permittee has sufficient existing records to demonstrate compliance with this limit during the first twelve months after issuance of this permit.

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible fugitive 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following:

a.the rolling, 12-month limitation for metal melted of 14,000 tons;

b.the rolling, 12-month limitation for metal that receives magnesium treatment of 6,300 tons;

c.the rolling, 12-month PE limitation of 7.56 tons;

d.the rolling, 12-month PM10 emission limitation of 7.28 tons; and

e.the rolling, 12-month lead emission limitation of 0.7 tons.

These reports are due by the date described in Part I - General Terms and Conditions A.2. of this permit.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

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

3.9 pounds particulate emissions (PE) per hour

Applicable Compliance Method:

Compliance with the hourly PE limitation shall be determined as follows:

$$E1 = (Pm \times M) + (Pt \times Et)$$

where:

E1 = the hourly PE rate, in pounds;

Pm = the maximum amount of metal melted per hour, 3.0 tons;

M = the PE factor for melting metal, 0.9 lb/ton (1/1995. Section 12.10, Gray Iron Foundries. Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, AP-42.);

Pt = the maximum amount of metal that can receive magnesium treatment per hour, 3.0 tons; and

Et = the PE factor for magnesium treatment, 0.4 lb/ton (1/1995. Section 12.10, Gray Iron Foundries.

Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, AP-42.)

Emission Limitation:

3.78 pounds PM10 per hour

Applicable Compliance Method:

Compliance with the hourly PM10 limitation shall be determined as follows:

$$E2 = (Pm \times T) + (Pt \times Et)$$

where:

E2 = the hourly PM10 emission rate, in pounds;

Pm = the maximum amount of metal melted per hour, 3.0 tons;

T = the PM10 emission factor for melting metal, 0.86 lb/ton ((9/85) Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fourth Edition with supplements A, B, and C, AP-42.);

Pt = the maximum amount of metal that can receive magnesium treatment per hour, 3.0 tons; and

Et = the PM10 emission factor for magnesium treatment, 0.4 lb/ton ((1/1995) Section 12.10, Gray Iron Foundries. Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, AP-42.).

Emission Limitation:

0.3 pound lead emissions per hour

Applicable Compliance Method:

Compliance with the hourly lead emission limitation shall be determined as follows:

$$Epb = (Pm \times Pb)$$

where:

Epb = the hourly lead emission rate, in pounds;

Pm = the maximum amount of metal melted per hour, 3.0 tons; and

M = the lead emission factor for melting metal, 0.1 lb/ton (1/1995) Section 12.10, Gray Iron Foundries. Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, AP-42.).

Emission Limitation :

7.56 tons PE per rolling, 12-month summation for emissions unit F002 and F006, combined

7.28 tons PM10 emissions as a rolling, 12-month summation for emissions units F002 and F006, combined

0.7 ton lead emissions as a rolling, 12-month summation for emissions unit F002 and F006, combined

Applicable Compliance Method:

Compliance with the rolling, 12-month emission limitations shall be determined by the record keeping in Section C.1. of this permit.

Emission Limitation:

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

Applicable Compliance Method;

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(3).

F. Miscellaneous Requirements

1. The installation of emissions unit F006 is not intended to increase production. Rather, the purpose of the new furnace is to backup the existing electric induction melting furnace (emissions unit F002), eliminate the use of the Cupola furnace, and allow the facility to operate during non-peak hours for electricity demand. As a result, the installation of emissions unit F006 will not cause a substantial increase in facility-wide emissions. In addition, the permittee has requested synthetic minor limitations for PM10 emissions. For the aforementioned reasons, the annual PE, PM10 and lead emission limitations are combined for the new and the old electric induction furnaces, and include the emissions from the pour-over magnesium treatment.

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Facility ID: 054600001 Emissions Unit ID: P010 Issuance type: Final State Permit To Operate

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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.

A. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P010- Wheelabrator Shotblast	OAC rule 3745-31-05(A)(3) (PTI 05-00956) OAC rule 3745-17-11(B)(2) OAC rule 3745-17-07(A)	1.21 lbs of particulate emissions per hour The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3). The visible particulate emissions from any stack may exceed twenty percent opacity, as a six-minute average, for not more than six consecutive minutes in any sixty minutes, but shall not exceed sixty per cent opacity, as a six minute average, at any time.

2. Additional Terms and Conditions

- (a) None

B. Operational Restrictions

- 1. This emissions unit shall be equipped with a capture and control system that reduces or eliminates the release particulate emissions.

C. Monitoring and/or Record Keeping Requirements

- 1. None

D. Reporting Requirements

- 1. None

E. Testing Requirements

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

1.21 lb of particulate emissions per hour.

Applicable Compliance Method:

The hourly emission limitation was established by the following equation:

$$HER = [(C_e \times C_v \times ACFM) \times 60 \text{ mins/hr}] \times (1 \text{ lb}/7000 \text{ gr})$$

where:

HER = Hourly Emission rate, lbs/hr;
C_e = Design emission rate of control, gr/ft³, (0.03 gr/dscf, from PTI);
C_v = Conversion Factor for actual cf to dscf, (0.92, from PTI); and
ACFM = air flow, actual cubic feet per minute, (5,100 acfm, from PTI).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

Emission Limitation:

20% Opacity, as a six minute average, from the stack.

Applicable Compliance Method:

If required, 40 CFR Part 60, Method 9, with opacity readings taken from the stack.

F. Miscellaneous Requirements

- 1. None

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Facility ID: 054600001 Emissions Unit ID: P012 Issuance type: Final State Permit To Operate

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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.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P012- Panghorn shot blast machine	OAC rule 3745-31-05(A)(3) (PTI 05-03691) OAC rule 3745-17-11 OAC rule 3745-17-07(A)	1.0 lbs of particulate per hour. The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3). The visible PE from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

2. **Additional Terms and Conditions**
 - (a) None

B. Operational Restrictions

1. The materials collected in the baghouse shall be collected, transferred, stored, and disposed of in such manner as to prevent any visible emissions or reintrainment of the collected material into the atmosphere.
2. At no time shall the materials captured in the baghouse be collected, transferred, stored, or disposed of in open containers or on the ground.

C. Monitoring and/or Record Keeping Requirements

1. None

D. Reporting Requirements

1. None

E. Testing Requirements

1. Compliance with the emission limitations in section A.1.1 of these terms and conditions shall be determined in accordance with the following methods:
Emission Limitation:

1 lb of particulate emissions per hour.

Applicable Compliance Method:

The combined hourly and annual emission limitation was established by the following equation:

$$HER = (Pr \times EF) \times (1 - Ce)$$

where:

HER = Hourly Emission rate, lbs/hr;

Pr = Production rate, 2.5 tons per hour;

EF = Emission Factor, lbs emitted per tons produced, (1.7, from Fire 3-04-003-40); and

Ce = Control efficiency, percent efficiency, (Assumed 80%).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

Emission Limitation:

20% Opacity, as a six minute average, from the stack.

Applicable Compliance Method:

If required, 40 CFR Part 60, Method 9, with opacity readings taken from the stack.

F. Miscellaneous Requirements

1. None

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Facility ID: 054600001 Emissions Unit ID: P901 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

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.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
P901- Grinding Area w/ capture and control	OAC rule 3745-31-05(A)(3) (PTI 05-01334)	8.5 lbs of particulate emissions per hour
	OAC rule 3745-17-11(B)(2) Figure II Curve P-2	The PE limitation specified by this rule is less stringent or equal to the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)	The visible PE from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

2. **Additional Terms and Conditions**
 - (a) None

B. Operational Restrictions

1. This emissions unit shall be equipped with a capture and control system that reduces the particulate emissions from this operation by at least 80% overall.
2. The materials collected in the baghouse shall be collected, transferred, stored, and disposed of in such manner as to prevent any visible emissions or reintrainment of the collected material into the atmosphere.
3. At no time shall the materials captured in the baghouse be collected, transferred, stored, or disposed of in open containers or on the ground.

C. Monitoring and/or Record Keeping 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 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 daily basis as shall take corrective actions when the pressure falls outside the range of 2 to 8 inches of water column at all times while the emissions unit is in operation.

D. Reporting Requirements

1. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the daily pressure reading drop across the baghouse fell outside the range of 2 to 8 inches of water column at all times while the emissions unit is in operation. The report shall include what correctives steps were taken to bring the baghouse back into accordance with manufacturer's recommendations, instructions, and operating manual(s).

The quarterly deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

E. Testing Requirements

1. Compliance with the emission limitations in section A.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:
Emission Limitation:

8.5 lb of particulate emissions per hour.

Applicable Compliance Method:

The hourly BAT emission limitation was established by the following equation:

$$\text{HER} = (\text{Pr} \times \text{EF}) \times (1 - \text{Ce})$$

where:

HER = Hourly Emission rate, lbs/hr;

Pr = Production rate, 2.5 tons per hour;

EF = Emission Factor, lbs emitted per tons produced, (17.0, from Fire 3-04-003-40); and

Ce = Control efficiency, percent efficiency, (Required 80% overall).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

Emission Limitation:

8.5 lb of particulate emissions per hour.

Applicable Compliance Method:

The OAC rule 3745-17-11(B)(2) Figure II curve P-2 hourly limitation was established by the following equation:

$$A = 0.2 \times (U)$$

where:

A = Allowable Mass Emission Rate, lbs/hr;

U = Uncontrolled Mass Emission Rate, lbs/hr, (the summation of: (17.0 lbs/ton processed x 2.5 tons per hour)).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

Emission Limitation:

20% Opacity, as a six minute average, from the stack.

Applicable Compliance Method:

If required, 40 CFR Part 60, Method 9, with opacity readings taken from the stack.

F. **Miscellaneous Requirements**

1. None