

Facility ID: 1677020149 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.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1677020149 Emissions Unit ID: P904 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>
natural gas fired aluminum melting furnace	OAC rule 3745-31-05 (PTI #16-1608)	0.88 lb/hr of particulate emissions (PE)
		0.01 tpy of sulfur dioxide (SO2)
		0.04 tpy of organic compounds (OC)
		0.02 tpy of carbon monoxide (CO)
		0.88 tpy of nitrogen oxides (NOx)
		0.61 tpy of hydrogen fluoride
		10% opacity, as a three-minute average, for the fugitive emissions
OAC rule 3745-17-07(A)		20% opacity, as a six-minute average, from the stack
		See A.2.a below.
OAC rule 3745-17-07(B)		See B.2 below.
OAC rule 3745-17-08		See A.2.a below.
OAC rule 3745-17-11		

2. Additional Terms and Conditions

- (a) The emissions limit based on this applicable rule is equivalent to or less stringent than the limit established pursuant to OAC rule 3745-31-05.

B. Operational Restrictions

1. The permittee shall only fire natural gas in this emissions unit.
2. Only clean raw materials (i.e., aluminum pigs, clean foundry returns) shall be charged in this emissions unit. Contaminated foundry returns shall not be employed.
3. Degassing operations shall be performed with inert gas or inert gas mixtures (i.e., argon).

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 these terms and conditions shall be determined in accordance with the following methods:

Emission Limitation:

0.88 lb/hr of PE

Applicable Compliance Method:

 $(1.1)(X)+(0.017)(Y)=\text{maximum pound(s) of PE per hour}$

X = the maximum hourly rate of metal melted

Y = the maximum million Btu per hour

The particulate matter emission factors of 1.1 pounds of particulate emissions per ton of metal melted and 0.017 pound of particulate emissions per million BTU are listed in the Air Quality Permits - A Handbook For Regulators and Industry: Tables 11-1 and 11-2.

Emission Limitation:

0.88 tpy of NO_x

Applicable Compliance Method:

Multiply the nitrogen oxides emission factor of 0.15 pound of nitrogen oxides emissions per million Btu by the maximum million Btu per hour and by the maximum hours of operation per year, then divide by 2000. The emission factor is listed in the Air Quality Permits - A Handbook For Regulators and Industry: Table 11-1.

Emission Limitation:

0.01 tpy of SO₂

Applicable Compliance Method:

Multiply the sulfur dioxide emission factor of 0.001 pound of sulfur dioxide emissions per million Btu by the maximum million Btu per hour and by the maximum hours of operation per year, then divide by 2000. The emission factor is listed in the Air Quality Permits - A Handbook For Regulators and Industry: Table 11-1.

Emission Limitation:

0.02 tpy of CO

Applicable Compliance Method:

Multiply the carbon monoxide emission factor of 0.004 pound of carbon monoxide emissions per million Btu by the maximum million Btu per hour and by the maximum hours of operation per year, then divide by 2000. The emission factor is listed in the Air Quality Permits - A Handbook For Regulators and Industry: Table 11-1.

Emission Limitation:

0.04 tpy of OC

Applicable Compliance Method:

Multiply the organic compounds emission factor of 0.007 pound of organic compounds emissions per million Btu by the maximum million Btu per hour and by the maximum hours of operation per year, then divide by 2000. The emission factor is listed in the Air Quality Permits - A Handbook For Regulators and Industry: Table 11-1.

Emission Limitation:

0.61 tpy of hydrogen fluoride

Applicable Compliance Method:

The following equation shall be employed:

$$[(F)(\text{weight percent AlF}_3)/(\text{MW of AlF}_3)] \times [(6 \text{ lbmol HF})/(2 \text{ lbmol AlF}_3)] \times [\text{MW of HF}]$$

$$(F) \times (0.2)/(83.98) \times (3) \times (20.01) = \text{pounds/year} \times 1/2000 = \text{tons per year}$$

F = pounds of flux per year.

The equation was developed by the Akron RAQMD using a material balance approach.

Emission Limitation:

10% opacity as a three-minute average

Applicable Compliance Method:

OAC rule 3745-17-03(B)(3)

Emission Limitation:

20% opacity as a six-minute average

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

F. **Miscellaneous Requirements**

1. None