Facility ID: 1677020133 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: 1677020133 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Reverbatory aluminum remelt furnace	OAC rule 3745-31-05 (PTI 16-01632)	0.4 lb/hr of nitrogen oxides 0.1 lb/hr of ammonia 0.2 lb/hr of hydrogen chloride See A.2, B.1, and B.2 below.
	OAC rule 3745-17-11	0.6 lb/hr particulate matter
	OAC rule 3745-17-07	20% opacity as a three-minute average

2. **Additional Terms and Conditions**

   (a) The reverbatory re-melt furnace shall be charged with pure bar stock and dry sawed-off pieces of solid aluminum or aluminum alloy.
   Aluminum or aluminum alloy chips or turnings from machining shall not be used.
   Only clean aluminum or aluminum alloy metal will be used for re-melt.

B. **Operational Restrictions**

1. The reverbatory re-melt furnace shall be limited to the utilization of natural gas as fuel.

2. A maximum of 0.3 lb/hr of ammonium chloride (NH4Cl) shall be allowed for mold casting of the molten metal.

   Note the following explanation:

   Molten metal temperatures will cause decomposition of the normally solid NH4Cl into gaseous ammonia (NH3) and gaseous hydrogen chloride (HCl), according to the following chemical equation (shown at maximum allowable operational conditions):

   0.3 lb/hr NH4Cl (s) = 0.1 lb/hr NH3 (g) + 0.2 lb/hr HCl (g)

   where s = solid; and
   g = gaseous.

C. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall keep a log of hourly ammonium chloride use during mold casting operations. Each mold casting operation shall be recorded in the log book with its own identification, which shall include date and times of operation.

D. **Reporting Requirements**

1. The permittee shall submit a deviation (excursion) report each month during which an exceedance(s) of the maximum allowable hourly ammonium chloride use, as stated above, has occurred. The excursion report will identify the exceedance(s) along with the cause of the exceedance(s) and an explanation of any corrective actions taken to prevent future exceedances.

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:

0.6 lb/hr particulate matter

Applicable Compliance Method:

Multiply the particulate emissions factor of 1.1 lb/ton of metal processed (from Stappa Alapco, Table 11-2) by the maximum hourly rate of metal processed.
Emission Limitation:

0.4 lb/hr nitrogen oxides

Applicable Compliance Method:

Multiply the nitrogen oxides emission factor of 0.150 lb/MMBtu of fuel input (from Stappa Alapco, Table 11-1) by the rated input of 2.4 MMBtu/hr of fuel input.
Emission Limitations:

0.1 lb/hr ammonia

0.2 lb/hr hydrogen chloride

Applicable Compliance Method:

Given the hourly mass usage rate of ammonium chloride (NH_4Cl), represented by the symbol "X", the corresponding hourly mass emission rates of gaseous ammonia (NH_3) and gaseous hydrogen chloride (HCl), represented respectively by the fractional values "1/3 X" and "2/3 X", obey the following chemical equation:

X lb/hr NH_4Cl (s) = 1/3 X lb/hr NH_3 (g) + 2/3 X lb/hr HCl (g)

where s = solid; and
g = gaseous.

The mass emission rates of gaseous NH_3 and gaseous HCl are always of the respective ratios of one-to-three (i.e., 1/3) and two-to-three (i.e., 2/3) of the NH_4Cl mass usage rate.

F. **Miscellaneous Requirements**

1. None