

Facility ID: 0812080451 Issuance type: Final State Permit To Operate

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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: 0812080451 Emissions Unit ID: P025 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>
Aluminum Melting Furnace (YI-DC-15) with venturi wet scrubber	OAC rule 3745-31-05(A)(3) PTI 08-04549	The particulate emissions (PE) from this emissions unit shall not exceed 3.78 pounds per hour (lbs/hr) and 6.61 tons per year (TPY).
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions shall not exceed 10% opacity, as a six minute average.
	OAC rule 3745-17-11(B)(1)	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 emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- (a) The 3.78 pounds per hour (lbs/hr) limitation was established to reflect the potential to emit for this emission unit. Therefore, it is not necessary to develop hourly record keeping and/or reporting requirements to ensure compliance with the short term limit.  
The particulate emissions control device is common to emissions unit P022 and P025.

**B. Operational Restrictions**

1. The permittee shall melt only aluminum in this emissions unit.
2. The static pressure drop across the wet scrubber shall be continuously maintained at a value not less than 20 inches of water at all times while the emissions unit is in operation.
3. The scrubber water flow rate shall be continuously maintained at a value of not less than 600 gallons per minute at all times while the emissions unit is in operation.
4. The fan speed for the exhaust hood located over the charge inlet to the furnace shall be continuously maintained at a value of not less than 2000 cubic feet per minute (cfm) at all times while the emissions unit is in operation.

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

1. The permittee shall keep monthly records of the tons of in house scrap aluminum processed.
2. The permittee shall keep monthly records of the tons of virgin aluminum processed.
3. For each day which the permittee melted a metal other than aluminum, the permittee shall maintain a record of the type and quantity of metal melted in this emissions unit.
4. The permittee shall properly install, operate and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.
5. The permittee shall collect and record the following information:
  - a. The pressure drop across the scrubber, in inches of water, on an hourly basis.

- b. The scrubber water flow rate, in gallons per minute, on an hourly basis.
- c. The operating times for the capture (collection) system, control device, monitoring equipment and the associated emissions unit on a daily basis.
- 6. The permittee shall collect and record the fan speed of the exhaust hood, in cubic feet per minute, when the emission unit is in operation on a daily basis.
- 7. 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 operation log. If visible emissions are observed, the permittee shall also note the following in the operation 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.
  - e. Any corrective action taken to minimize or eliminate any abnormal visible emissions.

If visible emissions are present at greater than 10% opacity, a visible incident has occurred. The observer does not have to document the exact start and end time 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 emissions 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 deviation (excursion) reports that identify each day when a metal other than aluminum was melted in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- 2. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:
  - a. All periods of time during which the static pressure drop across the scrubber did not comply with the static pressure drop requirements specified above.
  - b. All periods of time during which the scrubber water flow rate did not comply with the water flow rate requirements specified above.
  - c. All periods of downtime for the capture (collection), control device, and monitoring equipment when the associated emissions unit was in operation.
  - d. All periods of time during which the fan speed did not comply with the fan speed requirements specified above.

The reports shall be sent to the Regional Air Pollution Control Agency within 30 days after the deviation occurred.
- 3. The permittee shall submit semiannual reports that (a) identify all days during which any visible particulate emissions were observed in excess of the allowable opacity limit specified above from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the abnormal 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.
- 4. The permittee shall submit semiannual reports which identify any exceedance of the annual allowable particulate emission limitation, in tons. The reports shall be submitted to RAPCA 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 limitation(s) in section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - Emission Limitation -  
The particulate emissions (PE) from this emissions unit shall not exceed 3.78 pounds per hour (lbs/hr).
  - Applicable Compliance Method -  
Compliance shall be determined by summing the maximum hourly production rate of in house scrap aluminum (0.75 tons scrap Al./hr) multiplied by the AP-42, Section 12.8 Secondary Aluminum operations, Table 12.8.2 (English Units) (10/86) emission factor of 4.3 lb PE / ton of scrap aluminum and the maximum hourly production rate of virgin aluminum (0.50 tons virgin Al./hr) multiplied by the STAPPA.ALAPCO's "Air Quality Permits: A Handbook for Regulators and Industry", Volume II, Section 11 Aluminum-Melting Reverberatory Furnaces, Table 11-2 (5/30/91) emission factor of 1.1 lb PE / tons of virgin [i.e., (0.75 tons Al. scrap/hr \* 4.3 lb PE / ton Al. scrap)+(0.50 tons virgin Al./hr \* 1.1 lb PE/ton virgin Al.)].
  - Emission Limitation -  
The particulate emissions (PE) from this emissions unit shall not exceed 6.61 tons per year (TPY).
  - Applicable Compliance Method -  
Compliance with the annual emission rate shall be determined as follows:
    - i. Multiply the monthly in-house scrap aluminum processed, in tons, from term C.1. by the AP-42, Section 12.8

Secondary Aluminum operations, Table 12.8.2 (English Units) (10/86) emission factor of 4.3 lb PE / ton of aluminum, to get lbs PE per month.

ii. Multiply the monthly virgin aluminum processed, in tons, from term C.2. by the STAPPA.ALAPCO's "Air Quality Permits: A Handbook for Regulators and Industry", Volume II, Section 11 Aluminum-Melting Reverberatory Furnaces, Table 11-2 (5/30/91) emission factor of 1.1 lb PE / tons of virgin, to get lbs PE per month.

iii. Sum the 12 monthly PE emissions from E.1.b.i and E.1.b.ii above, to get lbs PE per year and divide by 2000 lbs/ton, to get tons per year PE.

Emission Limitation -

The visible particulate emissions shall not exceed 10% opacity, as a 6 minute average.

Applicable Compliance Method -

Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9.

F. **Miscellaneous Requirements**

1. None