

Facility ID: 0812100588 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: 0812100588 Emissions Unit ID: P001 Issuance type: Final State Permit To Operate

[Go to the top of this document](#)

**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>
P001 - secondary aluminum sweat furnace with afterburner	OAC rule 3745-31-05(A)(3) PTI 08-04739	The particulate emissions (PE) shall not exceed 0.03 lb/hr and 0.14 TPY.  The nitrogen oxides (NOx) emissions shall not exceed 1.93 TPY.  The visible PE shall not exceed 10 percent opacity, as a 6-minute average.  The requirements of this rule also include compliance with the requirements of 40 CFR Part 63, Subparts A and RRR.
	OAC rule 3745-17-07(A)(1)(a) OAC rule 3745-17-11(B)(1)  40 CFR Part 63, Subparts A and RRR	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3). See Section A.2.b.

**2. Additional Terms and Conditions**

- (a) The 0.03 lb/hr and 0.14 TPY PE were developed for PTI purposes to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.  
The permittee is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Aluminum Production 40 CFR Part 63, Subpart RRR promulgated March 23, 2000 and must comply with the provisions of the rule new as an area source.

**B. Operational Restrictions**

1. An afterburner for controlling emissions must be installed and used at all times during operation of the furnace. The after burner shall have a design residence time of 0.8 second or greater, and the average combustion temperature, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1650 degrees Fahrenheit.
2. The furnace and afterburner shall be operated and maintained in accordance with the emissions unit's operation, maintenance and monitoring (OM&M) plan following the manufacturer's recommendations, instructions, and operating manuals.
3. The emissions unit can only operate with metallic charge, any nonmetallic charge shall not be loaded into the furnace. All metallic charge shall be free of ice, water, lead and magnesium.
4. This emissions unit shall burn on-specification used recycled oil, # 2 fuel oil and/or natural gas.
5. All used oil burned in this emissions unit shall be "on-specification" (on-spec) oil and must meet the used oil fuel specifications contained in OAC 3745-279-11, which restricts the used oil to the following limitations:  
  
Contaminant/Property Allowable Specifications

arsenic 5 ppm, maximum  
 cadmium 2 ppm, maximum  
 chromium 10 ppm, maximum  
 lead 100 ppm, maximum  
 total halogens 4,000 ppm, maximum\*  
 flash point 100 degrees F, minimum;

The used oil burned in this emissions unit shall contain less than the quantifiable levels of PCBs as defined in 40 CFR 761.3; and shall also not exceed the following mercury limitation nor fall below the following heating value:

PCB's less than 2 ppm  
 heat content 135,000 Btu/gallon, minimum  
 mercury 1 ppm, maximum

\* Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under paragraph (B)(1) of rule 3745-279-10 of the Administrative Code. The permittee may receive and burn used oil exceeding 1,000 ppm total halogens (but less than 4,000 ppm maximum) only if the permittee has demonstrated that the used oil does not contain any hazardous waste pursuant to OAC rule 3745-279-63.

The burning of used oil not meeting the above limitations in this emissions unit is prohibited. The management and burning of used oil is subject to the Standards for the Management of Used Oil, OAC Chapter 3745-279, and the permittee shall document and assure that used oils burned in this emissions unit meet all of the applicable requirements of this Chapter.

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

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature at the exit of the of the combustion zone for the afterburner, in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The monitoring system shall collect and record the average temperature for 15 minute block averages and determine the average temperature for each 3-hour block of time.

2. 40 CFR Part 63, Subpart RRR requires a calibration and certification of the afterburner temperature monitor be performed every six months. An alternative to performing the calibration and certification for every six months was approved by USEPA for this emissions unit. The alternative requires the procedures as outlined in the USEPA approval letter of February 17, 2006 be implemented in the operation, maintenance and monitoring plan for this emissions unit. These procedures include the following specifications for the continuous temperature monitor and recorder for measuring and recording the temperature at the exit of the of the combustion zone for the afterburner:

- a. The permittee shall utilize three pieces of equipment: a data logger, a dual thermocouple and a digital readout. The data logger shall utilize a software program to allow the operator to arrange data in a spreadsheet file. A spool of very low impedance wire shall also be utilized as part of the package since the currents generated by the thermocouples may be very low.

- b. Dual thermocouples shall be used so that the data logger and the digital read-out each has its own thermocouple. As a result, there will be sufficient current for the digital read-out and the data logger to read properly. Both thermocouples will read the same temperature and report to their own piece of equipment. As part of the standard operating procedure, a second set of thermocouples shall be kept on site to replace a malfunctioning unit immediately.

3. The permittee shall collect and record the following information each day when the emissions unit was in operation:

- a. a log or record of the downtime for the afterburner or monitoring equipment when the associated emissions unit was in operation;

- b. all 3-hour blocks of time during which the average combustion temperature of the afterburner was less than 1650 degrees Fahrenheit; and

- c. the fuel used (i.e., used recycled oil, #2 fuel oil, or natural gas).

4. The permittee shall receive and maintain the chemical analyses from the supplier/marketer for each shipment of used oil burned in this emissions unit, which shall contain the following information:

- a. the date the used oil was received at the facility;

- b. the name, address, and U.S. EPA identification number (if applicable) of the generator, transporter, processor/re-finer, supplier, and/or marketer;

- c. the results of the chemical analyses demonstrating the used oil meets the standards in OAC 3745-279-11, including:

- i. arsenic content, in ppm;
- ii. the cadmium content, in ppm;
- iii. the chromium content, in ppm;
- iv. the lead content, in ppm;
- v. total halogens, in ppm; and

## vi. the flash point

d. the analysis demonstrating that the used oil has a total halogen content below 1,000 ppm, or below 4,000 ppm with the demonstration for the rebuttal of the presumption that the oil is hazardous waste or has been mixed with hazardous waste, as described in OAC rule 3745-279-63 (B); and

e. the results of the analyses demonstrating that the used oil meets the heating value and mercury and PCB limitations contained in this permit.

Each analysis shall be kept in a readily accessible location for a period of not less than 5 years following the receipt of each shipment of used oil and shall be made available to the Ohio EPA Division of Hazardous Waste Management and/or the Division of Air Pollution Control (the appropriate Ohio EPA District Office or local air agency) upon verbal or written request. Any authorized representative of the Ohio EPA may sample or require sampling of any used oil shipments received, stored, or burned by/at this facility for periodic detailed chemical analyses, through an independent laboratory.

5. It is not necessary that the permittee perform chemical analysis specified in C.3 for used oil generated and collected on-site and burned in this emissions unit, so long as the oil consists of only automotive and truck oils.
6. The permittee shall implement the procedures outlined in the USEPA approval letter of February 17, 2006 in the operation, maintenance and monitoring plan for this emissions unit as an alternative to performing a calibration and certification of the afterburner temperature monitor every six months as specified by Subpart RRR.

**D. Reporting Requirements**

1. The permittee shall submit quarterly deviations (excursion) reports that identify all periods of time during which the temperature of the smelting furnace afterburner was not maintained at or above the required temperature as specified in Section B.1 of this permit.
2. The permittee shall notify the Ohio EPA Division of Hazardous Waste Management and the Division of Air Pollution Control (the RAPCA), in writing and within 30 days, of burning any used oil exceeding the limitations found in OAC rule 3745-279-11 and/or any incident or occurrence of non-compliance with any other applicable requirement of OAC Chapter 3745-279; and shall also notify the Ohio EPA Division of Air Pollution Control, within the same amount of time, if any oil is/was burned which exceeds the mercury limitation of 1 ppm and/or is documented as having a heating value of less than 135,000 Btu/gallon.
3. The permittee shall submit quarterly summaries that include a log or record of the downtime for the afterburner and/or monitoring equipment when the associated emissions unit was in operation.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):
 

Emission Limitation -  
The PE shall not exceed 0.03 lb/hr.

Applicable Compliance Method -  
Compliance shall be determined by adding the source manufacturers' supplied test data (0.023 lbs/hour while firing with natural gas) and the hourly emissions for waste oil combustion. The hourly emissions for combustion of waste oil is determined using the emission factor from Table 11.11-1 for atomizing burner, dated 10/96, multiplied by the maximum hourly fuel usage (24.44 gal/hour).

If required, the permittee shall demonstrate compliance with the hourly allowable PE limitation in accordance with Methods 1 - 5 of 40 CFR Part 60, Appendix A.

Emission Limitation -  
The PE shall not exceed 0.14 TPY.

Applicable Compliance Method -  
The annual PE limitation was determined by multiplying the hourly limitation by 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, as long as compliance with the hourly limitation is maintained, compliance with the annual limitation shall be ensured.

Emission Limitation -  
The NOx emissions shall not exceed 1.93 TPY.

Applicable Compliance Method -  
When firing with used recycled oil or #2 fuel oil, compliance shall be determined by multiplying the maximum annual fuel usage (241,133 gal/year) by the emission factor (16 lb-NOx/100 gal) from Table 11.11-1 for combustion of waste oil for atomizing burner, dated 10/96, and then dividing by 2,000 lbs/ton.

When firing with natural gas, compliance with this limitation will be assumed since the annual emissions determination using the source manufacturers' supplied test data (0.41 lb-NOx/hour while firing with natural gas) is less than the annual emissions determined above when firing with waste oil, and the difference is negligible.

Emission Limitation -  
The visible PE shall not exceed 20% opacity, as a 6-minute average.

Applicable Compliance Method -  
Compliance shall be determined by visible emissions evaluations performed in accordance with OAC rule 3475-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9.

**F. Miscellaneous Requirements**

1. None