

## EMISSIONS ACTIVITY CATEGORY FORM SECONDARY ALUMINUM PROCESSING PLANTS

*This form is to be completed for each secondary aluminum processing plant. State/Federal regulations which may apply to secondary aluminum processing plants are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.*

1. Reason this form is being submitted (Check one)

New Permit     
  Renewal or Modification of Air Permit Number(s) (e.g. P901) \_\_\_\_\_

2. Maximum Operating Schedule: \_\_\_\_\_ hours per day; \_\_\_\_\_ days per year

If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. \_\_\_\_\_

3. Identification of emissions units:

<u>Check Equipment Present</u>	<u>Emissions Units</u>	<u>How many?</u>
<input type="checkbox"/>	Sweat furnace	_____
<input type="checkbox"/>	Aluminum scrap shredder	_____
<input type="checkbox"/>	Scrap dryer, Delacquering kiln, or Decoating kiln	_____
<input type="checkbox"/>	Thermal chip dryer	_____
<input type="checkbox"/>	Reverberatory furnace	_____
<input type="checkbox"/>	Crucible furnace	_____
<input type="checkbox"/>	Induction furnace	_____
<input type="checkbox"/>	Rotary furnace	_____
<input type="checkbox"/>	In-Line Fluxer	_____
<input type="checkbox"/>	Other fluxing	_____
<input type="checkbox"/>	Hot dross handling and cooling	_____
<input type="checkbox"/>	Rotary dross cooler	_____

- Pouring hot metal into molds or crucible \_\_\_\_\_
- Slag disposal \_\_\_\_\_
- Other (describe): \_\_\_\_\_  
\_\_\_\_\_

4. Sweat furnace process data:

Emissions Unit ID(s)	Number of identical furnaces	Type of furnace (e.g. reverb)	Fuel(s) used	Capacity of each furnace (tons/hour)	Capacity of each furnace (tons/year)	Cycle time (hours)	Control equipment ID

5. Aluminum scrap shredder process data:

Emissions Unit ID(s)	Number of identical units	Capacity of each unit (tons/hour)	Capacity of each unit (tons/year)	Control equipment ID

6. Scrap dryer, Delacquering kiln, Decoating kiln, or Thermal chip dryer process data:

Emissions Unit ID(s)	Number of identical units	Capacity of each unit (tons/hour)	Capacity of each unit (tons/year)	Control equipment ID

7. Reverbratory, crucible, induction or rotary furnace process data:

Emissions Unit ID(s)	Number of identical furnaces	Charge material	Fuel(s) used	Capacity of each furnace (tons/hour)	Capacity of each furnace (tons/year)	Cycle time (hrs)	Control equipment ID

8. In-Line fluxing and other fluxing process data:

Emissions Unit ID(s)	Fluxing agent	HAPs in flux (e.g. chlorine, fluorine)	Maximum flux used (lb/hr)	Maximum flux used (ton/yr)	Location of fluxing	Control equipment ID

9. Hot dross handling, pouring of metal and slag disposal data:

Emissions Unit ID(s)	Number of identical operations	Capacity of each unit (tons/hour)	Capacity of each unit (tons/year)	Control equipment ID

10. Rotary dross cooler data:

Emissions Unit ID(s)	Number of identical units	Capacity of each unit (tons/hour)	Capacity of each unit (tons/year)	Control equipment ID

11. Control methods to be used for fugitive dust emissions from secondary aluminum processing plants:

	Capture Method	Capture Efficiency	Control Method	Control Efficiency
Sweat furnace				
Aluminum scrap shredder				
Scrap dryer, Delacquering kiln, or Decoating kiln				
Thermal chip dryer				
Reverberatory furnace				
Crucible furnace				
Induction furnace				
Rotary furnace				
In-Line Fluxer				
Other fluxing				
Hot dross handling and cooling				
Rotary dross cooler				
Pouring hot metal into molds or crucible				
Slag disposal				
Other				

# INSTRUCTIONS FOR COMPLETION OF THE EMISSIONS ACTIVITY CATEGORY FORM FOR SECONDARY ALUMINUM PROCESSING FACILITIES

## **GENERAL INSTRUCTIONS:**

Provide complete responses to all applicable questions. If an item does not apply to the emissions unit, write in "Not Applicable" or "NA." If the answer is not known, write in "Not Known" or "NK." If you need assistance in understanding a question after reading the instructions below, contact your Ohio EPA District Office or Local Air Agency for assistance. Submittal of an incomplete application will delay application review and processing. In addition, the application may be returned as incomplete if all applicable questions are not answered appropriately.

## **APPLICABLE REGULATIONS:**

*The following State and Federal Regulations may be applicable to secondary aluminum processing facilities. Note that there may be other regulations which apply to this emissions unit which are not included in this list.*

Federal: 40 CFR 63, (MACT) Subpart RRR, (Secondary Aluminum Production)

State: OAC rule 3745-31-02 (Permit to Install)  
OAC rule 3745-31-05 (Best Available Technology)  
OAC rule 3745-35-02 (Permit to Operate)  
OAC rule 3745-17-07 (Visible Particulate Emissions)  
OAC rule 3745-17-11 (Particulate Emissions)  
OAC rule 3745-18-06 (Sulfur Dioxide Emissions)

If you would like a copy of these regulations, contact your Ohio EPA District Office or Local Air Agency. State regulations may also be viewed and downloaded from the Ohio EPA website at <http://www.epa.state.oh.us/dapc/regs/regs.html>. Federal regulations may be viewed and downloaded at <http://www.epa.gov/docs/epacfr40/chapt-I.info/subch-C.htm>.

## **CALCULATING EMISSIONS:**

Manufacturers of some types of emissions units and most types of control equipment develop emissions estimates or have stack test data which you can request. Stack testing of the emissions may be done. Emissions unit sampling test data may be either for this emissions unit or a similar one located at the facility or elsewhere. You may develop your own emission factors by mass balance or other knowledge of your process, if you can quantify inputs and outputs accurately. You may be able to do this on a small scale or over a short period of time, if it is not practical during regular production. If you have control equipment, you may be able to quantify the amount of pollutants collected over a known time period or production amount. Any emission factor calculation should include a reference to the origin of the emission factor or control efficiency.

The emissions from secondary aluminum processes may be estimated using the information from section 12.8 of AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I, available from the following website: <http://www.epa.gov/ttn/chief/ap42/index.html>.

## **SPECIFIC INSTRUCTIONS:**

This emissions activity category (EAC) form is to be used for certain operations at secondary aluminum processing facilities which emit fugitive dust. Typical emissions units to be included on this form are listed in item #1. Please use the specific EAC forms for roadways and parking areas and storage piles for these fugitive dust emissions units. Any other fugitive dust emissions unit that does not have a specific EAC form should be entered on this form under "other (describe)."

Paragraph (B)(6) of OAC Rule 3745-17-01 defines "fugitive dust" as "...particulate matter which is, or was prior to the installation of control equipment, emitted from any source by means other than a stack." Several emissions units at secondary aluminum processing facilities emit particulate matter in such fashion, and the requirements of OAC Rules 3745-17-07(B) (Visible particulate emission limitations for fugitive dust) and 3745-17-08 (Restriction of emissions of fugitive dust) may be applicable.

1. Identify the fugitive dust emissions units at the facility by placing a check mark in the appropriate block adjacent to the respective emissions unit type. If there are other fugitive dust emissions units at the facility which were not specifically listed in item #1 and do not have other applicable EAC forms, please identify such emissions unit(s) in the section marked "Other (describe)". The "OEPA Emissions Unit ID" column may be left blank if such information is not known.
2. If sweating furnaces are used at this facility, please complete the requested information in items (a) through (h) of the sweating furnace process data section. If there is more than one such furnace at the facility, use one of the three separate columns for each furnace in answering each item. If there are more than three sweating furnaces at the facility, please make a duplicate copy of the necessary page(s) of the form or obtain an additional form from the OEPA.
3. Identify the emissions units at the facility by placing a check mark in the appropriate block adjacent to the respective emissions unit type. Please do not include on this form fugitive dust emissions units such as roadways and parking areas and storage piles, which have other EAC forms prepared for them. If there are other emissions units at the facility which are not specifically listed in item # 3 and do not have other applicable emission activity category forms, please identify such emissions unit(s) in the section marked "Other (describe)". The "OEPA Emissions Unit ID" column may be left blank if such information is not known.
4. Please complete the table for all sweat furnaces at the facility. "Number of identical furnaces" will identify the number of furnaces for which all information in the row is the same. "Control equipment ID" should be used to identify which control equipment, detailed in the permit application form, is used to control emissions from this furnace.
5. Please complete the table for all scrap shredders at the facility. "Number of identical furnaces" will identify the number of furnaces for which all information in the row is the same. "Control equipment ID" should be used to identify which control equipment, detailed in the permit application form, is used to control emissions from this scrap shredder.
6. Please complete the table for all scrap dryers, delacquering kilns, decoating kilns and chip dryers at the facility. "Number of identical furnaces" will identify the number of furnaces for which all information in the row is the same. "Control equipment ID" should be used to identify which control equipment, detailed in the permit application form, is used to control emissions from this dryer or kiln.
7. Please complete the table for all reverb, crucible, induction and rotary furnaces at the facility. "Number of identical furnaces" will identify the number of furnaces for which all information in the row is the same. "Control equipment ID" should be used to identify which control equipment, detailed in the permit application form, is used to control emissions from this furnace.

8. Please complete the table for all fluxing at the facility. "Number of identical furnaces" will identify the number of furnaces for which all information in the row is the same. "Control equipment ID" should be used to identify which control equipment, detailed in the permit application form, is used to control emissions from this fluxing operation.
9. Please complete the table for all hot dross handling, metal pouring, and slag disposal operations at the facility. "Number of identical furnaces" will identify the number of furnaces for which all information in the row is the same. "Control equipment ID" should be used to identify which control equipment, detailed in the permit application form, is used to control emissions from this activity.
10. Please complete the table for all rotary dross coolers at the facility. "Number of identical furnaces" will identify the number of furnaces for which all information in the row is the same. "Control equipment ID" should be used to identify which control equipment, detailed in the permit application form, is used to control emissions from this dross cooler.
11. For each operation identified elsewhere in this form, describe how the emissions are captured and estimate the percentage of emissions which are captured. Also describe how the emissions are controlled and estimate the percentage of reduction attained. Efficiencies may be determined, in order of preference, by testing, design, published estimation methods or best engineering judgement. For multiple methods, enter them in the blank separated by a slash (/) and do the same for the efficiency.