

COMMONWEALTH OF VIRGINIA  
STATE AIR POLLUTION CONTROL BOARD  
REGULATIONS FOR THE CONTROL AND ABATEMENT OF AIR POLLUTION

9 VAC 5 CHAPTER 40.  
EXISTING STATIONARY SOURCES.

PART II.  
Emission Standards.

ARTICLE 18.  
Emission Standards For  
Primary And Secondary Metal Operations (Rule 4-18).

- 9 VAC 5-40-2390. Applicability and designation of affected facility.
- 9 VAC 5-40-2400. Definitions.
- 9 VAC 5-40-2410. Standard for particulate matter.
- 9 VAC 5-40-2420. Standard for sulfur oxides.
- 9 VAC 5-40-2430. Standard for visible emissions.
- 9 VAC 5-40-2440. Standard for fugitive dust/emissions.
  
- 9 VAC 5-40-2470. Compliance.
- 9 VAC 5-40-2480. Test methods and procedures.
- 9 VAC 5-40-2490. Monitoring.
- 9 VAC 5-40-2500. Notification, records and reporting.
- 9 VAC 5-40-2510. Registration.
- 9 VAC 5-40-2520. Facility and control equipment maintenance or malfunction.
- 9 VAC 5-40-2530. Permits.

9 VAC 5-40-2390. Applicability and designation of affected facility.

A. The affected facility to which the provisions of this article apply is each primary metal operation and each secondary metal operation.

B. The provisions of this article apply throughout the Commonwealth of Virginia.

9 VAC 5-40-2400. Definitions.

A. For the purpose of these regulations and subsequent amendments or any orders issued by the board, the words or terms shall have the meaning given them in subsection C of this section.

B. As used in this article, all terms not defined here shall have the meaning given them in 9 VAC 5 Chapter 10 (9 VAC 5-10-10 et seq.), unless otherwise required by context.

C. Terms defined.

"Aluminum production operation" means the production of aluminum or aluminum alloys from aluminum pigs, foundry returns or scrap material by smelting or melting to the metallic form. Includes fluxing, alloying, degassing, and demagging operations.

"Brass or bronze" means any metal alloy containing copper as its predominant constituent and lesser amounts of zinc, tin, lead or other metals.

"Brass or bronze production" means the production of brass or bronze ingots from

scrap material by, or through a combination of, melting, smelting, refining or alloying.

"Ferroalloy production operation" means the production of any ferroalloy by use of a smelting furnace.

"Gray iron foundry operation" means the production of gray iron castings by use of a melting furnace.

"Lead" means elemental lead or alloys in which the predominant component is lead.

"Magnesium production operation" means the production of magnesium from scrap material by use of a furnace.

"Melt time" means the time in which the metal is melting and available at the spout or tap hole, excluding any time the equipment is idle, preheating or preparing for shutdown.

"Primary copper smelter" means any installation or any intermediate process engaged in the production of copper from copper sulfide ore concentrates through the use of pyrometallurgical techniques.

"Primary lead smelter" means any installation or any intermediate process engaged in the production of lead from lead sulfide ore concentrates through the use of pyrometallurgical techniques.

"Primary metal operation" means any operation which involves the production of a metal from metal ore concentrates through the use of pyrometallurgical techniques.

"Primary zinc smelter" means any installation or any intermediate process engaged in the production of zinc or zinc oxide from zinc sulfide ore concentrates through the use of pyrometallurgical techniques.

"Process operation" means any method, form, action, operation or treatment of manufacturing or processing, including any storage or handling of materials or products before, during or after manufacturing or processing.

"Process unit" means any step in a manufacturing or process operation which results in the emission of pollutants to the atmosphere.

"Process weight" means the total weight of all materials introduced into any process unit which may cause any emission of pollutants. Process weight includes solid fuels charged, but does not include liquid and gaseous fuels charged or combustion air for all fuels.

"Process weight rate" means a rate established as follows:

a. For continuous or long-run steady-state process operations, the total process weight for the entire period of continuous operation or for a typical portion of it, divided by the number of hours of such period or portion of it.

b. For cyclical or batch process operations, the total weight for a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period.

"Secondary lead production operation" means the production of lead from lead bearing scrap material by smelting to the metallic form.

"Secondary metal operation" means any aluminum production operation, brass or bronze production operation, ferroalloy production operation, gray iron foundry operation, secondary lead production operation, magnesium production operation, steel foundry operation or zinc process operation.

"Steel foundry operation" means the production of steel castings by use of a melting furnace.

"Zinc process operation" means zinc reclaiming, zinc oxide manufacturing and zinc galvanizing.

9 VAC 5-40-2410. Standard for particulate matter.

A. No owner or other person shall cause or permit to be discharged into the atmosphere from any secondary metal operation any particulate emissions in excess of the limits in Table 4-18.

TABLE 4-18

Process Weight Rate Lb/Hr	Maximum Allowable Emission Rate Lb/Hr
1,000 or less	3.05
2,000	4.70
3,000	6.35
4,000	8.00
5,000	9.05
6,000	11.30
7,000	12.90
8,000	14.30
9,000	15.50
10,000	16.65
12,000	18.70
16,000	21.60
18,000	22.80
20,000	24.00
30,000	30.00
40,000	36.00
50,000 or more	42.00

B. Interpretation of the emission standard in subsection A of this section shall be in accordance with 9 VAC 5-40-22.

C. The permissible emission rates as shown in Table 4-18 shall apply during the melt time but shall not apply during the time of preheat or preparing for shutdown. The exemption for preheating and shutdown shall be limited to two 20-minute periods in a given eight-hour period for each furnace unit.

D. The provisions of this section shall not apply to affected facilities identified in subsection A of this section and located in AQCR 7; however, the provisions of 9 VAC 5-40-270 shall apply to the facilities.

9 VAC 5-40-2420. Standard for sulfur oxides.

No owner or other person shall cause or permit to be discharged into the atmosphere from any primary metal operation any sulfur oxide emissions in excess of the following limits:

Copper Smelters :  $Y = 0.2X$

Zinc Smelters :  $Y = 0.564X^{0.85}$

Lead Smelters :  $Y = 0.98X^{0.77}$

where:

X = total sulfur fed to the smelter in lb/hr.

Y = allowable sulfur oxide emissions in lb/hr.

Note: This provision in effect requires removal of about 90 percent of the input-sulfur to the smelter.

9 VAC 5-40-2430. Standard for visible emissions.

The provisions of Article 1 (9 VAC 5-40-60 et seq.) of 9 VAC 5 Chapter 40 (Emission Standards for Visible Emissions and Fugitive Dust/Emissions, Rule 4-1) apply.

9 VAC 5-40-2440. Standard for fugitive dust/emissions.

The provisions of Article 1 (9 VAC 5-40-60 et seq.) of 9 VAC 5 Chapter 40 (Emission Standards for Visible Emissions and Fugitive Dust/Emissions, Rule 4-1) apply.

9 VAC 5-40-2450. **[Not in SIP]**

9 VAC 5-40-2460. **[Not in SIP]**

9 VAC 5-40-2470. Compliance.

The provisions of 9 VAC 5-40-20 (Compliance) apply.

9 VAC 5-40-2480. Test methods and procedures.

The provisions of 9 VAC 5-40-30 (Emission Testing) apply.

9 VAC 5-40-2490. Monitoring.

The provisions of 9 VAC 5-40-40 (Monitoring) apply.

9 VAC 5-40-2500. Notification, records and reporting.

The provisions of 9 VAC 5-40-50 (Notification, Records and Reporting) apply.

9 VAC 5-40-2510. Registration.

The provisions of 9 VAC 5-20-160 (Registration) apply.

9 VAC 5-40-2520. Facility and control equipment maintenance or malfunction.

The provisions of 9 VAC 5-20-180 (Facility and Control Equipment Maintenance or Malfunction) apply.

9 VAC 5-40-2530. Permits.

A permit may be required prior to beginning any of the activities specified below and the provisions of 9 VAC 5 Chapter 50 (9 VAC 5-50-10 et seq.) and 9 VAC 5 Chapter 80 (9 VAC 5-80-10 et seq.) may apply. Owners contemplating such action should contact the appropriate regional office for guidance.

1. Construction of a facility.
2. Reconstruction (replacement of more than half) of a facility.
3. Modification (any physical change to equipment) of a facility.
4. Relocation of a facility.
5. Reactivation (restart-up) of a facility.