

**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 13.
Emission Standards for Pulp and Paper Mills (Rule 4-13).**

- 9 VAC 5-40-1660. Applicability and designation of affected facilities.
- 9 VAC 5-40-1670. Definitions.
- 9 VAC 5-40-1680. Standard for particulate matter.
- 9 VAC 5-40-1700. Control technology guidelines.
- 9 VAC 5-40-1710. Standard for visible emissions.
- 9 VAC 5-40-1720. Standard for fugitive dust/emissions.
- 9 VAC 5-40-1750. Compliance.
- 9 VAC 5-40-1760. Test methods and procedures.
- 9 VAC 5-40-1770. Monitoring.
- 9 VAC 5-40-1780. Notification, records, and reporting.
- 9 VAC 5-40-1790. Registration.
- 9 VAC 5-40-1800. Facility and control equipment maintenance or malfunction.
- 9 VAC 5-40-1810. Permits.

9 VAC 5-40-1660. Applicability and designation of affected facilities.

A. The affected facilities in pulp and paper mills to which the provisions of this article apply are: each recovery furnace, each smelt dissolving tank, each lime kiln, each slaker tank, and each kraft wood pulping operation. For the purpose of this article, a kraft wood pulping operation is comprised only of any combination of the following units: recovery furnaces, lime kilns, digester systems, multiple-effect evaporator systems, condensate stripper systems and smelt dissolving tanks.

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

C. The provisions of this article do not apply to affected facilities subject to Article 5 (9 VAC 5-50-400 et seq.) of 9 VAC 5 Chapter 50, except to the extent such pollutants are emitted which are not subject to standards of performance in Article 5 (9 VAC 5-50-400 et seq.) of 9 VAC 5 Chapter 50.

9 VAC 5-40-1670. 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.

"Black liquor solids" means the dry weight of the solids which enter the recovery furnace in the black liquor.

"Cross recovery furnace" means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains more than 7.0% by weight of the total pulp solids from the neutral sulfite or other semichemical process and has a green liquor sulfidity of more than 28%.

"Green liquor sulfidity" means the sulfidity of the liquor which leaves the smelt dissolving tank.

"Kraft pulp mill" means any facility which produces pulp from wood by cooking (digesting) wood chips in a water solution of sodium hydroxide and sodium sulfide (white liquor) at high temperature and pressure. Regeneration of the cooking chemicals through a recovery process is also considered part of the kraft pulp mill.

"Lime kiln" means a unit used to calcine lime mud, which consists primarily of calcium carbonate, into quicklime, which is calcium oxide.

"Neutral sulfite semichemical pulping operation" means any operation in which pulp is produced from wood by cooking (digesting) wood chips in a solution of sodium sulfite and sodium bicarbonate, followed by mechanical defibrating (grinding).

"New design recovery furnace" means a straight kraft recovery furnace that has both membrane wall or welded wall construction and emission control designed air systems. A new design furnace shall have stated in its contract a TRS performance guarantee or that it was designed with air pollution control as an objective.

"Pulp and paper mill" means any kraft pulp mill or any paper mill using a semichemical pulping process.

"Recovery furnace" means either a straight kraft recovery furnace or a cross recovery furnace, and includes the direct-contact evaporator for a direct-contact furnace.

"Semichemical pulping process" means any pulp manufacturing process in which the active chemicals of the liquor used in cooking (digesting) wood chips to their component parts in a pressurized vessel (digester) are primarily a liquor of sodium hydroxide and sodium carbonate. The major difference between all semichemical techniques and those of kraft and acid sulfite processes is that only a portion of the lignin is removed during the cooking (digesting), after which the pulp is further reduced by mechanical disintegration.

"Smelt dissolving tank" means a vessel used for dissolving the smelt collected from the recovery furnace.

"Straight kraft recovery furnace" means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains 7.0% by weight or less of the total pulp solids from the neutral sulfite or other semichemical process or has green liquor sulfidity of 28% or less.

9 VAC 5-40-1680. Standard for particulate matter.

No owner or other person shall cause or permit to be discharged into the atmosphere from any group of similar affected facilities specified below any particulate emissions in excess of the following limits:

Affected Facility	Maximum Allowable Emission of Particulate in Lb/Equivalent Ton of Air Dried Pulp
All Recovery Furnace Units	3.00
All Smelt Dissolving Tank Units	0.75
All Lime Kiln Units	1.00
All Slaker Tank Units	0.30

9 VAC 5-40-1690. Standard for total reduced sulfur.

[Not in SIP– This provision is Federally-enforceable under the Section 111(d) plan for total reduced sulfur.]

9 VAC 5-40-1700. Control technology guidelines.

The control method should consist of one of the following:

1. Combustion of gases in a lime kiln or recovery furnace subject to the provisions of this article.

2. Combustion of gases in equipment or a device which is not subject to the provisions of this article and which is subjected to a minimum temperature of 1200°F for at least 0.5 seconds.

3. Any control method of equal or greater efficiency to the method in subsection B of this section, provided such method is approved by the board.

9 VAC 5-40-1710. Standard for visible emissions.

A. The provisions of Article 1 (9 VAC 5-40-60 et seq.) of this chapter (Emission Standards for Visible Emissions and Fugitive Dust/Emissions, Rule 4-1) apply except with regard to recovery furnaces; for such facilities the provisions in subsection B of this section apply instead of 9 VAC 5-40-80 A.

B. No owner or other person shall cause or permit to be discharged into the atmosphere from any recovery furnace any visible emissions which exhibit greater than 35% opacity. Failure to meet the requirements of this section because of the presence of water vapor shall not be a violation of this section.

9 VAC 5-40-1720. Standard for fugitive dust/emissions.

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

9 VAC 5-40-1730. [Not in SIP]

9 VAC 5-40-1740. [Not in SIP]

9 VAC 5-40-1750. Compliance.

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

9 VAC 5-40-1760. Test methods and procedures.

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

9 VAC 5-40-1770. Monitoring.

A. The provisions of 9 VAC 5-40-40 (Monitoring) apply, with any addition or modification deemed appropriate to meet the needs of subsection B of this section.

B. [Not in SIP– This provision is Federally-enforceable under the Section 111(d) plan for total reduced sulfur.]

9 VAC 5-40-1780. Notification, records, and reporting.

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

B. [Not in SIP– This provision is Federally-enforceable under the Section 111(d) plan for total reduced sulfur.]

9 VAC 5-40-1790. Registration.

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

9 VAC 5-40-1800. 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 5-40-1810. Permits.

A permit may be required prior to beginning any of the activities specified below if 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.) apply. Owners contemplating such action should review those provisions and contact the appropriate regional office for guidance on whether those provisions apply.

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.
6. Operation of a facility.

[Sections 5-40-1660, 5-40-1670, 5-40-1750 (replacing 5-40-1750A), 5-40-1810 and the Article title are revised. The SIP effective date is November 19, 2007].