

Attachment 4

Air



Kraft Pulping

Control of TRS Emissions from Existing Mills

EPA-450/2-78-003b

Kraft Pulping Control of TRS Emissions from Existing Mills

Emission Standards and Engineering Division

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**U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air, Noise, and Radiation
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711**

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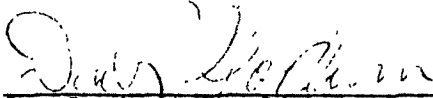
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Background Information and Final
Environmental Impact Statement

For Existing Kraft Pulp Mills

Type of Action: Administrative

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1.4 EMISSION GUIDELINES

1.4.1 Recommended TRS Emission Limitations for the States

Emission guidelines for control of TRS emissions that may be achieved by application of best adequately demonstrated technology to existing facilities are listed in Table 1-1. These emission guidelines are less stringent in some cases than the standards proposed for new sources since the application of the best adequately demonstrated technology for new sources could result in excessive control costs at existing sources. However, emission guidelines do require the same type of control as judged to be best adequately demonstrated technology for new sources for the three major TRS sources (recovery furnace, digester system, and multiple-effect evaporator system). The justification for these emission guidelines are discussed more completely in Chapters 8 and 9.

Adoption of these guidelines would result in an overall nationwide TRS emission reduction of about 82 percent.

Table 1-1. TRS EMISSION GUIDELINES FOR EXISTING
KRAFT PULP MILLS

| Affected Facility | Emission Guidelines ¹ |
|-----------------------------------|----------------------------------|
| Recovery Furnace ² | |
| Old Design Furnaces ³ | 20 ppm |
| New Design Furnaces ⁴ | 5 ppm |
| Cross Recovery Furnaces | 25 ppm |
| Digester System | 5 ppm |
| Multiple-Effect Evaporator System | 5 ppm |
| Lime Kiln | 20 ppm ⁵ |
| Brown Stock Washer System | No Control |
| Black Liquor Oxidation System | No Control |
| Condensate Stripper System | 5 ppm |
| Smelt Dissolving Tank | 0.0084 g/kg BLS |

¹Guidelines given are in terms of twelve-hour averages, e.g., from midnight to noon. These are not "running" averages, but are instead for discrete contiguous twelve-hour periods of time.

²One percent of all twelve-hour TRS averages per quarter year above the specified level, under conditions of proper operation and maintenance, in the absence of start-ups, shutdowns and malfunctions, are not considered to be excess emissions.

³Furnaces not constructed with air pollution control as an objective (see definitions on pages 6-7 and 10-3).

⁴Furnaces designed for low TRS emissions and having stated in their contracts that they were constructed with air pollution control as an objective (see definitions on pages 6-7 and 10-3).

⁵Two percent of all twelve-hour TRS averages per quarter year above 20 ppm, under conditions of proper operation and maintenance, in the absence of start-ups, shutdowns and malfunctions, are not considered to be excess emissions.