

NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES

CHAPTER Env-A 2600 PULP AND PAPER INDUSTRY: TOTAL REDUCED SULFUR EMISSIONS FROM KRAFT MILLS

Statutory Authority: RSA 125-C:4, I(a)

PART Env-A 2601 PURPOSE

Env-A 2601.01 Purpose. The purpose of this chapter is to establish total reduced sulfur (TRS) emission standards for kraft mills.

Source. #6724-B, eff 3-28-98 (formerly Env-A 1208); ss by #8225, eff 12-9-04

PART Env-A 2602 APPLICABILITY AND DEFINITIONS

Env-A 2602.01 Applicability.

(a) This chapter shall apply to the following existing processes in kraft mills:

- (1) Digester system;
- (2) Lime kiln; and
- (3) Multiple-effect evaporator system.

(b) An existing process shall be any of the processes listed in (a), above, that commenced construction or modification on or before September 24, 1976 and which is not subject to New Source Performance Standards (NSPS) for kraft mills specified at 40 CFR 60, Subpart BB.

Source. #6724-B, eff 3-28-98 (formerly Env-A 1208); ss by #8225, eff 12-9-04

Env-A 2602.02 Definitions.

(a) "Digester system" means "digester system" as defined in 40 CFR §60.281(d), namely "each continuous digester or each batch digester used for the cooking of wood in white liquor, and associated flash tank(s), blow tank(s), chip steaming vessel(s), and condenser(s)."

(b) "Multiple-effect evaporator system" means "multiple-effect evaporator system" as defined in 40 CFR §60.281(f), namely "the multiple-effect evaporators and associated condenser(s) and hotwell(s) used to concentrate the spent cooking liquid that is separated from the pulp."

Source. #8225, eff 12-9-04

PART Env-A 2603 EMISSION STANDARDS FOR TOTAL REDUCED SULFUR (TRS)

Env-A 2603.01 Emission Standards for Total Reduced Sulfur (TRS). The owner or operator subject to the provisions of this chapter shall not cause to be discharged into the atmosphere:

(a) From any digester system or multiple-effect evaporator system, any gases which contain TRS in excess of 5 parts per million (ppm) by volume 12-hour average on a dry basis, corrected to 10 percent (%) oxygen (O₂), except this standard shall not apply if:

- (1) The gases are combusted in a lime kiln subject to the provisions of (b), below or the requirements of 40 CFR §60.283(a)(5); or

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(2) The gases are combusted in a boiler or thermal oxidizer, at a minimum temperature of 1200 degrees Fahrenheit (°F) for at least 0.5 seconds; and

(b) From any lime kiln, any gases which contain TRS in excess of 20 ppm by volume 12-hour average on a dry basis, corrected to 10% O₂.

Source. #6724-B, eff 3-28-98 (formerly Env-A 1208); ss by #8225, eff 12-9-04

PART Env-A 2604 MONITORING OF EMISSIONS AND OPERATIONS

Env-A 2604.01 Monitoring of Emissions.

(a) Any owner or operator subject to the provisions of this chapter shall install, calibrate, maintain, and operate continuous emissions monitoring systems (CEMS) to monitor and record the concentration of TRS emissions on a dry basis and the percent of O₂ by volume on a dry basis in the gases discharged into the atmosphere from the lime kiln.

(b) All CEMS required in (a), above, shall be located downstream from the control device(s) and shall also be subject to the requirements of Env-A 808.

(c) The span value of a CEMS installed pursuant to this section shall be set:

(1) For TRS, such that the CEMS is capable of measuring TRS concentrations during normal process operation and during periods of startup, shutdown, and malfunction; and

(2) For O₂, at 25% O₂ by volume on a dry basis.

(d) All CEMS installed pursuant to this section to monitor the concentration of TRS emissions and the percent O₂ shall meet the sampling and performance criteria of 40 CFR §60.13, and Performance Specifications 3 and 5, respectively, of 40 CFR 60, Appendix B.

Source. #6724-B, eff 3-28-98 (formerly Env-A 1208); ss by #8225, eff 12-9-04

Env-A 2604.02 Monitoring of Operations. Any owner or operator subject to the provisions of this chapter shall install, calibrate, maintain, and operate the following continuous monitoring devices:

(a) For any thermal oxidizer, a monitoring device which measures and records the combustion temperature at the point of incineration of effluent gases which are emitted from any digester system or multiple-effect evaporator system, where the provisions of Env-A 2603.01(a)(2) apply, and which shall be accurate within plus or minus (+/-) 1% of the temperature being measured;

(b) For any lime kiln using a scrubber emission control device:

(1) A monitoring device that monitors and records the pressure loss of the gas stream through the control equipment, and which shall be certified by the manufacturer to be accurate to within a gauge pressure of +/- 500 pascals or +/- 2 inches water gauge pressure; and

(2) A monitoring device that monitors and records the scrubbing liquid supply pressure to the control equipment, which shall:

a. Be certified by the manufacturer to be accurate within 15% of design scrubbing liquid supply pressure; and

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- b. Have the pressure sensor or tap located within 50 feet of the scrubber liquid discharge point.

Source. #6724-B, eff 3-28-98 (formerly Env-A 1208); ss by #8225, eff 12-9-04

PART Env-A 2605 RECORDKEEPING AND REPORTING REQUIREMENTS

Env-A 2605.01 Recordkeeping Requirements. Except where the provisions of Env-A 2603.01(a)(2) apply, any owner or operator subject to the provisions of this chapter shall:

- (a) Calculate and record on a daily basis the 12-hour average TRS concentrations for the 2 periods of each operating day for the lime kiln;
- (b) Calculate each 12-hour average required by (a), above as the arithmetic mean of the appropriate 12 contiguous 1-hour average TRS concentrations provided by each CEMS installed under Env-A 2604.01(a);
- (c) Calculate and record on a daily basis 12-hour average O₂ concentrations for the 2 consecutive periods of each operating day for the lime kiln, which 12-hour averages shall correspond to the 12-hour average TRS concentrations pursuant to (a), above; and
- (d) Calculate each 12-hour average required by (c), above as an arithmetic mean of the appropriate 12 contiguous 1-hour average O₂ concentrations provided by each CEMS installed under Env-A 2604.01(a).

Source. #6724-B, eff 3-28-98 (formerly Env-A 1208); ss by #8225, eff 12-9-04

Env-A 2605.02 Calculation of Oxygen Concentration Correction Factor.

(a) To correct all 12-hour average TRS concentrations from a lime kiln to 10% O₂ by volume for the purposes of (b), below, the following shall apply:

- (1) “C_{corr}” means the TRS concentration dry basis corrected for O₂;
- (2) “C_{meas}” means the TRS concentration dry basis uncorrected for O₂;
- (3) “X” means the volumetric O₂ concentration dry basis in percentage, which shall be 10% for lime kilns; and
- (4) “Y” means the measured 12-hour average volumetric O₂ concentration on a dry basis.

(b) To correct all 12-hour average TRS concentrations from a lime kiln to 10% O₂ by volume, the owner or operator subject to the provisions of this chapter shall calculate the difference between 21 and X, divide the difference by the difference between 21 and Y, and then multiply the result by C_{meas}, as in the formula below:

$$C_{\text{corr}} = C_{\text{meas}} \times (21 - X)/(21 - Y)$$

Source. #6724-B, eff 3-28-98 (formerly Env-A 1208); ss by #8225, eff 12-9-04

Env-A 2605.03 Reporting Requirements.

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(a) Any owner or operator subject to the provisions of this chapter shall submit to the department an excess emissions report as specified in (b) and (c), below, for each calendar quarter, postmarked by the 30th day following the end of each calendar quarter.

(b) For TRS emissions from any lime kiln, excess emissions shall be any 12-hour average TRS concentrations above 20 ppm by volume on a dry basis corrected to 10% O₂ except for excess emissions that occur for not longer than 2% of the normal operating time in a calendar quarter, excluding periods of startup, shutdown, and periods when the facility is not operating.

(c) For all gaseous CEMS, daily averages of TRS concentrations ppm by volume on a dry basis, including corrected and uncorrected values, and percent O₂ by volume on a dry basis shall be presented in the excess emission report for each day of the reporting period whether or not excess emissions have occurred.

Source. #6724-B, eff 3-28-98 (formerly Env-A 1208); ss by #8225, eff 12-9-04

PART Env-A 2606 TEST METHODS

Env-A 2606.01 Test Methods.

(a) For the purpose of determining compliance with Env-A 2603.01, the following EPA Reference Methods from Appendix A of 40 CFR 60 shall be used:

- (1) Method 16, Method 16A, or Method 16B for the concentration of TRS; and
- (2) Methods 1, 2, 3 or 3A, and 4, as applicable.

(b) All concentrations of TRS required to be measured by Env-A 2604.01 from the lime kiln shall be corrected to 10% O₂ by volume, which corrections shall be made in the manner specified in Env-A 2605.02.

(c) The department, with the approval of the EPA, shall approve different test methods, in accordance with Env-A 809, from those specified in (a) and (b), above.

Source. #6724-B, eff 3-28-98 (formerly Env-A 1208); ss by #8225, eff 12-9-04

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Appendix

Provision of the Rule	Specific State or Federal Statutes or Regulations which the Rule is Intended to Implement
Env-A 2601	RSA 125-C:4, I(a); RSA 125-C:6, II
Env-A 2602	RSA 125-C:4, I(a); RSA 125-C:6, II; 40 CFR §§60.280 and 60.281
Env-A 2603	RSA 125-C:4, I(a); RSA 125-C:6, II; 40 CFR §60.283
Env-A 2604 and 2605	RSA 125-C:4, I(a); RSA 125-C:6, II; 40 CFR §60.284
Env-A 2606	RSA 125-C:4, I(a); RSA 125-C:6, II; 40 CFR §60.285