

**§ 60.283a**

**40 CFR Ch. I (7-1-14 Edition)**

(3) From any modified or reconstructed smelt dissolving tank, or from any new smelt dissolving tank that is not associated with a new or reconstructed recovery furnace subject to the provisions of paragraph (a)(2) of this section, any gases which contain filterable particulate matter in excess of 0.1 gram per kilogram (g/kg) (0.2 pound per ton (lb/ton)) of black liquor solids (dry weight).

(4) From any new smelt dissolving tank associated with a new or reconstructed recovery furnace subject to the provisions of paragraph (a)(2) of this section, any gases which contain filterable particulate matter in excess of 0.060 g/kg (0.12 lb/ton) black liquor solids (dry weight).

(5) From any modified lime kiln any gases which:

(i) Contain filterable particulate matter in excess of 0.15 g/dscm (0.064 gr/dscf) corrected to 10-percent oxygen.

(ii) Exhibit 20-percent opacity or greater, where an ESP emission control device is used, except where it is used in combination with a wet scrubber.

(6) From any new or reconstructed lime kiln any gases which:

(i) Contain filterable particulate matter in excess of 0.023 g/dscm (0.010 gr/dscf) corrected to 10-percent oxygen.

(ii) Exhibit 20-percent opacity or greater, where an ESP emission control device is used, except where it is used in combination with a wet scrubber.

(b) These standards apply at all times as specified in §§ 60.284a and 60.285a.

(c) The exemptions to opacity standards under 40 CFR 60.11(c) do not apply to subpart BBa.

**§ 60.283a Standard for total reduced sulfur (TRS).**

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart must cause to be discharged into the atmosphere:

(1) From any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system any gases which contain TRS in excess of 5 parts per million (ppm) by volume on a dry basis,

corrected to 10-percent oxygen, unless one of the following conditions are met:

(i) The gases are collected in an LVHC or HVLC closed-vent system meeting the requirements of § 63.450 and combusted in a lime kiln subject to the provisions of either paragraph (a)(5) of this section or § 60.283(a)(5); or

(ii) The gases are collected in an LVHC or HVLC closed-vent system meeting the requirements of § 63.450 and combusted in a recovery furnace subject to the provisions of either paragraphs (a)(2) or (3) of this section or § 60.283(a)(2) or (3); or

(iii) The gases are collected in an LVHC or HVLC closed-vent system meeting the requirements of § 63.450 and combusted with other waste gases in an incinerator or other device, or combusted in a lime kiln or recovery furnace not subject to the provisions of this subpart (or subpart BB of this part), and are subjected to a minimum temperature of 650 °C (1200 °F) for at least 0.5 second; or

(iv) It has been demonstrated to the Administrator's satisfaction by the owner or operator that incinerating the exhaust gases from a new, modified, or reconstructed brown stock washer system is technologically or economically unfeasible. Any exempt system will become subject to the provisions of this subpart if the facility is changed so that the gases can be incinerated.

(v) The gases from the digester system, brown stock washer system, or condensate stripper system are collected in an LVHC or HVLC closed-vent system meeting the requirements of § 63.450 and controlled by a means other than combustion. In this case, this system must not discharge any gases to the atmosphere which contain TRS in excess of 5 ppm by volume on a dry basis, uncorrected for oxygen content.

(vi) The uncontrolled exhaust gases from a new, modified, or reconstructed digester system contain TRS less than 0.005 g/kg (0.01 lb/ton) air dried pulp (ADP).

(2) From any straight kraft recovery furnace any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 8-percent oxygen.

(3) From any cross recovery furnace any gases which contain TRS in excess of 25 ppm by volume on a dry basis, corrected to 8-percent oxygen.

(4) From any smelt dissolving tank any gases which contain TRS in excess of 0.016 g/kg (0.033 lb/ton) of black liquor solids as hydrogen sulfide (H<sub>2</sub>S).

(5) From any lime kiln any gases which contain TRS in excess of 8 ppm by volume on a dry basis, corrected to 10-percent oxygen.

(b) These standards apply at all times as specified in §§ 60.284a and 60.285a.

**§ 60.284a Monitoring of emissions and operations.**

(a) Any owner or operator subject to the provisions of this subpart must install, calibrate, maintain, and operate the continuous monitoring systems specified in paragraphs (a)(1) and (2) of this section:

(1) A continuous monitoring system to monitor and record the opacity of the gases discharged into the atmosphere from any recovery furnace or lime kiln using an ESP emission control device, except as specified in paragraph (b)(4) of this section. The span of this system must be set at 70-percent opacity. You must install, certify, and operate the continuous opacity monitoring system in accordance with Performance Specification (PS) 1 in Appendix B to 40 CFR part 60.

(2) Continuous monitoring systems to monitor and record the concentration of TRS emissions on a dry basis and the percent of oxygen by volume on a dry basis in the gases discharged into the atmosphere from any lime kiln, recovery furnace, digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system, except where the provisions of § 60.283a(a)(1)(iii) or (iv) apply. You must install, certify, and operate the continuous TRS monitoring system in accordance with Performance Specification (PS) 5 in Appendix B to 40 CFR part 60. You must install, certify, and operate the continuous oxygen monitoring system in accordance with Performance Specification (PS) 3 in Appendix B to 40 CFR part 60. These systems must be located downstream of the control device(s). The range of the continuous monitoring

system must encompass all expected concentration values, including the zero and span values used for calibration. The spans of these continuous monitoring system(s) must be set:

(i) At a TRS concentration of 30 ppm for the TRS continuous monitoring system, except that for any cross recovery furnace the span must be set at 50 ppm.

(ii) At 21-percent oxygen for the continuous oxygen monitoring system.

(b) Any owner or operator subject to the provisions of this subpart must install, calibrate, maintain, and operate the following continuous parameter monitoring devices specified in paragraphs (b)(1) through (4) of this section.

(1) For any incinerator, a monitoring device for the continuous measurement of the combustion temperature at the point of incineration of effluent gases which are emitted from any digester system, brown stock washer system, multiple effect evaporator system, or condensate stripper system where the provisions of § 60.283a(a)(1)(iii) apply. The monitoring device is to be certified by the manufacturer to be accurate within ±1 percent of the temperature being measured.

(2) For any recovery furnace, lime kiln, or smelt dissolving tank using a wet scrubber emission control device:

(i) A monitoring device for the continuous measurement of the pressure drop of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate to within a gage pressure of ±500 Pascals (±2 inches water gage pressure).

(ii) A monitoring device for the continuous measurement of the scrubbing liquid flow rate. The monitoring device used for continuous measurement of the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within ±5 percent of the design scrubbing liquid flow rate.

(iii) As an alternative to pressure drop measurement under paragraph (b)(2)(i) of this section, a monitoring device for measurement of fan amperage may be used for smelt dissolving tank dynamic scrubbers that operate at ambient pressure or for low-energy entrainment scrubbers where the fan speed does not vary.