

(e) *Optional backup monitor requirements.* If the owner or operator chooses to use two or more continuous emission monitoring systems, each of which is capable of monitoring the same stack or duct at a specific affected unit, or group of units using a common stack, then the owner or operator shall designate one monitoring system as the primary monitoring system, and shall record this information in the monitoring plan, as provided for in § 75.53. The owner or operator shall designate the other monitoring system(s) as backup monitoring system(s) in the monitoring plan. The backup monitoring system(s) shall be designated as redundant backup monitoring system(s), non-redundant backup monitoring system(s), or reference method backup system(s), as described in § 75.20(d). When the certified primary monitoring system is operating and not out-of-control as defined in § 75.24, only data from the certified primary monitoring system shall be reported as valid, quality-assured data. Thus, data from the backup monitoring system may be reported as valid, quality-assured data only when the backup is operating and not out-of-control as defined in § 75.24 (or in the applicable reference method in appendix A of part 60 of this chapter) and when the certified primary monitoring system is not operating (or is operating but out-of-control). A particular monitor may be designated both as a certified primary monitor for one unit and as a certified redundant backup monitor for another unit.

(f) *Minimum measurement capability requirement.* The owner or operator shall ensure that each continuous emission monitoring system is capable of accurately measuring, recording, and reporting data, and shall not incur an exceedance of the full scale range, except as provided in sections 2.1.1.5, 2.1.2.5, and 2.1.4.3 of appendix A to this part.

(g) *Minimum recording and record-keeping requirements.* The owner or operator shall record and the designated representative shall report the hourly, daily, quarterly, and annual information collected under the requirements

of this part as specified in subparts F and G of this part.

[58 FR 3701, Jan. 11, 1993, as amended at 60 FR 26519, May 17, 1995; 64 FR 28590, May 26, 1999; 67 FR 40422, June 12, 2002]

**§ 75.11 Specific provisions for monitoring SO<sub>2</sub> emissions (SO<sub>2</sub> and flow monitors).**

(a) *Coal-fired units.* The owner or operator shall meet the general operating requirements in § 75.10 for an SO<sub>2</sub> continuous emission monitoring system and a flow monitoring system for each affected coal-fired unit while the unit is combusting coal and/or any other fuel, except as provided in paragraph (e) of this section, in § 75.16, and in subpart E of this part. During hours in which only gaseous fuel is combusted in the unit, the owner or operator shall comply with the applicable provisions of paragraph (e)(1), (e)(2), or (e)(3) of this section.

(b) *Moisture correction.* Where SO<sub>2</sub> concentration is measured on a dry basis, the owner or operator shall either:

(1) Report the appropriate fuel-specific default moisture value for each unit operating hour, selected from among the following: 3.0%, for anthracite coal; 6.0% for bituminous coal; 8.0% for sub-bituminous coal; 11.0% for lignite coal; 13.0% for wood; or

(2) Install, operate, maintain, and quality assure a continuous moisture monitoring system for measuring and recording the moisture content of the flue gases, in order to correct the measured hourly volumetric flow rates for moisture when calculating SO<sub>2</sub> mass emissions (in lb/hr) using the procedures in appendix F to this part. The following continuous moisture monitoring systems are acceptable: a continuous moisture sensor; an oxygen analyzer (or analyzers) capable of measuring O<sub>2</sub> both on a wet basis and on a dry basis; or a stack temperature sensor and a moisture look-up table, i.e., a psychrometric chart (for saturated gas streams following wet scrubbers or other demonstrably saturated gas streams, only). The moisture monitoring system shall include as a component the automated data acquisition and handling system (DAHS) for recording and reporting both the raw

data (e.g., hourly average wet-and dry-basis O<sub>2</sub> values) and the hourly average values of the stack gas moisture content derived from those data. When a moisture look-up table is used, the moisture monitoring system shall be represented as a single component, the certified DAHS, in the monitoring plan for the unit or common stack.

(c) *Unit with no location for a flow monitor meeting siting requirements.* Where no location exists that satisfies the minimum physical siting criteria in appendix A to this part for installation of a flow monitor in either the stack or the ducts serving an affected unit or installation of a flow monitor in either the stack or ducts is demonstrated to the satisfaction of the Administrator to be technically infeasible, either:

(1) The designated representative shall petition the Administrator for an alternative method for monitoring volumetric flow in accordance with § 75.66; or

(2) The owner or operator shall construct a new stack or modify existing ductwork to accommodate the installation of a flow monitor, and the designated representative shall petition the Administrator for an extension of the required certification date given in § 75.4 and approval of an interim alternative flow monitoring methodology in accordance with § 75.66. The Administrator may grant existing Phase I affected units an extension to January 1, 1995, and existing Phase II affected units an extension to January 1, 1996 for the submission of the certification application for the purpose of constructing a new stack or making substantial modifications to ductwork for installation of a flow monitor; or

(3) The owner or operator shall install a flow monitor in any existing location in the stack or ducts serving the affected unit at which the monitor can achieve the performance specifications of this part.

(d) *Gas-fired and oil-fired units.* The owner or operator of an affected unit that qualifies as a gas-fired or oil-fired unit, as defined in § 72.2 of this chapter, based on information submitted by the designated representative in the monitoring plan, shall measure and record SO<sub>2</sub> emissions:

(1) By meeting the general operating requirements in § 75.10 for an SO<sub>2</sub> continuous emission monitoring system and flow monitoring system. If this option is selected, the owner or operator shall comply with the applicable provisions in paragraph (e)(1), (e)(2), or (e)(3) of this section during hours in which the unit combusts only gaseous fuel;

(2) By providing other information satisfactory to the Administrator using the applicable procedures specified in appendix D to this part for estimating hourly SO<sub>2</sub> mass emissions; or

(3) By using the low mass emissions excepted methodology in § 75.19(c) for estimating hourly SO<sub>2</sub> mass emissions if the affected unit qualifies as a low mass emissions unit under § 75.19(a) and (b).

(e) *Units with SO<sub>2</sub> continuous emission monitoring systems during the combustion of gaseous fuel.* The owner or operator of an affected unit with an SO<sub>2</sub> continuous emission monitoring system shall, during any hour in which the unit combusts only gaseous fuel, determine SO<sub>2</sub> emissions in accordance with paragraph (e)(1), (e)(2) or (e)(3) of this section, as applicable.

(1) If the gaseous fuel meets the definition of "pipeline natural gas" or "natural gas" in § 72.2 of this chapter, the owner or operator may, in lieu of operating and recording data from the SO<sub>2</sub> monitoring system, determine SO<sub>2</sub> emissions by using Equation F-23 in appendix F to this part. Substitute into Equation F-23 the hourly heat input, calculated using a certified flow monitoring system and a certified diluent monitor (according to the applicable equation in section 5.2 of appendix F to this part), in conjunction with the appropriate default SO<sub>2</sub> emission rate from section 2.3.1.1 or 2.3.2.1.1 of appendix D to this part. When this option is chosen, the owner or operator shall perform the necessary data acquisition and handling system tests under § 75.20(c), and shall meet all quality control and quality assurance requirements in appendix B to this part for the flow monitor and the diluent monitor.

(2) The owner or operator may, in lieu of operating and recording data from the SO<sub>2</sub> monitoring system, determine SO<sub>2</sub> emissions by certifying an

excepted monitoring system in accordance with § 75.20 and appendix D to this part, following the applicable fuel sampling and analysis procedures in section 2.3 of appendix D to this part, meeting the recordkeeping requirements of § 75.58, and meeting all quality control and quality assurance requirements for fuel flowmeters in appendix D to this part. If this compliance option is selected, the hourly unit heat input rate reported under § 75.57(b)(5), shall be determined using a certified flow monitoring system and a certified diluent monitor, in accordance with the procedures in section 5.2 of appendix F to this part. The flow monitor and diluent monitor shall meet all of the applicable quality control and quality assurance requirements of appendix B to this part.

(3) The owner or operator may determine SO<sub>2</sub> mass emissions by using a certified SO<sub>2</sub> continuous monitoring system, in conjunction with a certified flow rate monitoring system. However, if the unit burns any gaseous fuel that is very low sulfur fuel (as defined in § 72.2 of this chapter), the SO<sub>2</sub> monitoring system shall meet the following quality assurance provisions when the very low sulfur fuel is combusted:

(i) When conducting the daily calibration error tests of the SO<sub>2</sub> monitoring system, as required by section 2.1.1 in appendix B of this part, the zero-level calibration gas shall have an SO<sub>2</sub> concentration of 0.0 percent of span. This restriction does not apply if gaseous fuel is burned in the affected unit only during unit startup.

(ii) EPA recommends that the calibration response of the SO<sub>2</sub> monitoring system be adjusted, either automatically or manually, in accordance with the procedures for routine calibration adjustments in section 2.1.3 of appendix B to this part, whenever the zero-level calibration response during a required daily calibration error test exceeds the applicable performance specification of the instrument in section 3.1 of appendix A to this part (i.e., ±2.5 percent of the span value or ±5 ppm, whichever is less restrictive).

(iii) Any bias-adjusted hourly average SO<sub>2</sub> concentration of less than 2.0 ppm recorded by the SO<sub>2</sub> monitoring system shall be adjusted to a default

value of 2.0 ppm, for reporting purposes. Such adjusted hourly averages shall be considered to be quality-assured data, provided that the monitoring system is operating and is not out-of-control with respect to any of the quality assurance tests required by appendix B of this part (i.e., daily calibration error, linearity and relative accuracy test audit).

(iv) In accordance with the requirements of section 2.1.1.2 of appendix A to this part, for units that sometimes burn gaseous fuel that is very low sulfur fuel (as defined in § 72.2 of this chapter) and at other times burn higher sulfur fuel(s) such as coal or oil, a second low-scale SO<sub>2</sub> measurement range is not required when the very low sulfur gaseous fuel is combusted. For units that burn only gaseous fuel that is very low sulfur fuel and burn no other type(s) of fuel(s), the owner or operator shall set the span of the SO<sub>2</sub> monitoring system to a value no greater than 200 ppm.

(f) *Other units.* The owner or operator of an affected unit that combusts wood, refuse, or other material in addition to oil or gas shall comply with the monitoring provisions for coal-fired units specified in paragraph (a) of this section.

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#### **§ 75.12 Specific provisions for monitoring NO<sub>x</sub> emission rate (NO<sub>x</sub>-diluent monitoring systems).**

(a) *Coal-fired units, gas-fired nonpeaking units or oil-fired nonpeaking units.* The owner or operator shall meet the general operating requirements in § 75.10 of this part for a NO<sub>x</sub> continuous emission monitoring system (CEMS) for each affected coal-fired unit, gas-fired nonpeaking unit, or oil-fired nonpeaking unit, except as provided in paragraph (d) of this section, § 75.17, and subpart E of this part. The diluent gas monitor in the NO<sub>x</sub>-diluent CEMS may measure either O<sub>2</sub> or CO<sub>2</sub> concentration in the flue gases.

(b) *Moisture correction.* If a correction for the stack gas moisture content is needed to properly calculate the NO<sub>x</sub> emission rate in lb/mmBtu, e.g., if the