

(1) American Petroleum Institute (API) Petroleum Measurement Standards, Chapter 3, Tank Gauging: Section 1A, Standard Practice for the Manual Gauging of Petroleum and Petroleum Products, December 1994; Section 1B, Standard Practice for Level Measurement of Liquid Hydrocarbons in Stationary Tanks by Automatic Tank Gauging, April 1992 (reaffirmed January 1997); Section 2, Standard Practice for Gauging Petroleum and Petroleum Products in Tank Cars, September 1995; Section 3, Standard Practice for Level Measurement of Liquid Hydrocarbons in Stationary Pressurized Storage Tanks by Automatic Tank Gauging, June 1996; Section 4, Standard Practice for Level Measurement of Liquid Hydrocarbons on Marine Vessels by Automatic Tank Gauging, April 1995; and Section 5, Standard Practice for Level Measurement of Light Hydrocarbon Liquids Onboard Marine Vessels by Automatic Tank Gauging, March 1997; for § 75.19.

(2) Shop Testing of Automatic Liquid Level Gages, Bulletin 2509 B, December 1961 (Reaffirmed August 1987, October 1992), for § 75.19.

(3) American Petroleum Institute (API) Section 2, "Conventional Pipe Provers," Section 3, "Small Volume Provers," and Section 5, "Master-Meter Provers," from Chapter 4 of the Manual of Petroleum Measurement Standards, October 1988 (Reaffirmed 1993), for appendix D to this part.

[58 FR 3701, Jan. 11, 1993, as amended at 60 FR 26517, May 17, 1995; 61 FR 59157, Nov. 20, 1996; 63 FR 57499, Oct. 27, 1998; 64 FR 28589, May 26, 1999; 67 FR 40422, June 12, 2002]

#### § 75.7–75.8 [Reserved]

### Subpart B—Monitoring Provisions

#### § 75.10 General operating requirements.

(a) *Primary Measurement Requirement.* The owner or operator shall measure opacity, and all SO<sub>2</sub>, NO<sub>x</sub>, and CO<sub>2</sub> emissions for each affected unit as follows:

(1) To determine SO<sub>2</sub> emissions, the owner or operator shall install, certify, operate, and maintain, in accordance with all the requirements of this part, a SO<sub>2</sub> continuous emission monitoring system and a flow monitoring system

with an automated data acquisition and handling system for measuring and recording SO<sub>2</sub> concentration (in ppm), volumetric gas flow (in scfh), and SO<sub>2</sub> mass emissions (in lb/hr) discharged to the atmosphere, except as provided in §§ 75.11 and 75.16 and subpart E of this part;

(2) To determine NO<sub>x</sub> emissions, the owner or operator shall install, certify, operate, and maintain, in accordance with all the requirements of this part, a NO<sub>x</sub>-diluent continuous emission monitoring system (consisting of a NO<sub>x</sub> pollutant concentration monitor and an O<sub>2</sub> or CO<sub>2</sub> diluent gas monitor) with an automated data acquisition and handling system for measuring and recording NO<sub>x</sub> concentration (in ppm), O<sub>2</sub> or CO<sub>2</sub> concentration (in percent O<sub>2</sub> or CO<sub>2</sub>) and NO<sub>x</sub> emission rate (in lb/mmBtu) discharged to the atmosphere, except as provided in §§ 75.12 and 75.17 and subpart E of this part. The owner or operator shall account for total NO<sub>x</sub> emissions, both NO and NO<sub>2</sub>, either by monitoring for both NO and NO<sub>2</sub> or by monitoring for NO only and adjusting the emissions data to account for NO<sub>2</sub>;

(3) The owner or operator shall determine CO<sub>2</sub> emissions by using one of the following options, except as provided in § 75.13 and subpart E of this part:

(i) The owner or operator shall install, certify, operate, and maintain, in accordance with all the requirements of this part, a CO<sub>2</sub> continuous emission monitoring system and a flow monitoring system with an automated data acquisition and handling system for measuring and recording CO<sub>2</sub> concentration (in ppm or percent), volumetric gas flow (in scfh), and CO<sub>2</sub> mass emissions (in tons/hr) discharged to the atmosphere;

(ii) The owner or operator shall determine CO<sub>2</sub> emissions based on the measured carbon content of the fuel and the procedures in appendix G of this part to estimate CO<sub>2</sub> emissions (in ton/day) discharged to the atmosphere; or

(iii) The owner or operator shall install, certify, operate, and maintain, in accordance with all the requirements of this part, a flow monitoring system and a CO<sub>2</sub> continuous emission monitoring system that uses an O<sub>2</sub> concentration monitor to determine CO<sub>2</sub>

emissions (according to the procedures in appendix F of this part) with an automated data acquisition and handling system for measuring and recording O<sub>2</sub> concentration (in percent), CO<sub>2</sub> concentration (in percent), volumetric gas flow (in scfh), and CO<sub>2</sub> mass emissions (in tons/hr) discharged to the atmosphere;

(4) The owner or operator shall install, certify, operate, and maintain, in accordance with all the requirements in this part, a continuous opacity monitoring system with the automated data acquisition and handling system for measuring and recording the opacity of emissions (in percent opacity) discharged to the atmosphere, except as provided in §§ 75.14 and 75.18; and

(5) A single certified flow monitoring system may be used to meet the requirements of paragraphs (a)(1) and (a)(3) of this section. A single certified diluent monitor may be used to meet the requirements of paragraphs (a)(2) and (a)(3) of this section. A single automated data acquisition and handling system may be used to meet the requirements of paragraphs (a)(1) through (a)(4) of this section.

(b) *Primary Equipment Performance Requirements.* The owner or operator shall ensure that each continuous emission monitoring system required by this part meets the equipment, installation, and performance specifications in appendix A to this part; and is maintained according to the quality assurance and quality control procedures in appendix B to this part; and shall record SO<sub>2</sub> and NO<sub>x</sub> emissions in the appropriate units of measurement (i.e., lb/hr for SO<sub>2</sub> and lb/mmBtu for NO<sub>x</sub>).

(c) *Heat Input Rate Measurement Requirement.* The owner or operator shall determine and record the heat input rate, in units of mmBtu/hr, to each affected unit for every hour or part of an hour any fuel is combusted following the procedures in appendix F to this part.

(d) *Primary equipment hourly operating requirements.* The owner or operator shall ensure that all continuous emission and opacity monitoring systems required by this part are in operation and monitoring unit emissions or opacity at all times that the affected unit combusts any fuel except as provided

in § 75.11(e) and during periods of calibration, quality assurance, or preventive maintenance, performed pursuant to § 75.21 and appendix B of this part, periods of repair, periods of backups of data from the data acquisition and handling system, or recertification performed pursuant to § 75.20. The owner or operator shall also ensure, subject to the exceptions above in this paragraph, that all continuous opacity monitoring systems required by this part are in operation and monitoring opacity during the time following combustion when fans are still operating, unless fan operation is not required to be included under any other applicable Federal, State, or local regulation, or permit. The owner or operator shall ensure that the following requirements are met:

(1) The owner or operator shall ensure that each continuous emission monitoring system is capable of completing a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-min interval. The owner or operator shall reduce all SO<sub>2</sub> concentrations, volumetric flow, SO<sub>2</sub> mass emissions, CO<sub>2</sub> concentration, O<sub>2</sub> concentration, CO<sub>2</sub> mass emissions (if applicable), NO<sub>x</sub> concentration, and NO<sub>x</sub> emission rate data collected by the monitors to hourly averages. Hourly averages shall be computed using at least one data point in each fifteen minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. Notwithstanding this requirement, an hourly average may be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour) if data are unavailable as a result of the performance of calibration, quality assurance, or preventive maintenance activities pursuant to § 75.21 and appendix B of this part, or backups of data from the data acquisition and handling system, or recertification, pursuant to § 75.20. The owner or operator shall use all valid measurements or data points collected during an hour to calculate the hourly averages. All data points collected during an hour shall be, to the extent practicable, evenly spaced over the hour.

(2) The owner or operator shall ensure that each continuous opacity monitoring system is capable of completing a minimum of one cycle of sampling and analyzing for each successive 10-sec period and one cycle of data recording for each successive 6-min period. The owner or operator shall reduce all opacity data to 6-min averages calculated in accordance with the provisions of part 51, appendix M of this chapter, except where the applicable State implementation plan or operating permit requires a different averaging period, in which case the State requirement shall satisfy this Acid Rain Program requirement.

(3) Failure of an SO<sub>2</sub>, CO<sub>2</sub>, or O<sub>2</sub> pollutant concentration monitor, NO<sub>x</sub> concentration monitor, flow monitor, moisture monitor, or NO<sub>x</sub>-diluent continuous emission monitoring system to acquire the minimum number of data points for calculation of an hourly average in paragraph (d)(1) of this section shall result in the failure to obtain a valid hour of data and the loss of such component data for the entire hour. For a NO<sub>x</sub>-diluent monitoring system, an hourly average NO<sub>x</sub> emission rate in lb/mmBtu is valid only if the minimum number of data points is acquired by both the NO<sub>x</sub> pollutant concentration monitor and the diluent monitor (O<sub>2</sub> or CO<sub>2</sub>). For a moisture monitoring system consisting of one or more oxygen analyzers capable of measuring O<sub>2</sub> on a wet-basis and a dry-basis, an hourly average percent moisture value is valid only if the minimum number of data points is acquired for both the wet- and dry-basis measurements. If a valid hour of data is not obtained, the owner or operator shall estimate and record emissions, moisture, or flow data for the missing hour by means of the automated data acquisition and handling system, in accordance with the applicable procedure for missing data substitution in subpart D of this part.

(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