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produce NO_x emission rate data at different heat input conditions; and

(C) Results of all certification tests and quality assurance activities and measurements (including reference method field test sheets, charts, laboratory analyses, example calculations, or other data as appropriate), necessary to substantiate compliance with the requirements of appendix E of this part.

(c) For units with add-on SO₂ and NO_x emission controls following the provisions of § 75.34(a)(1) or (a)(2), the owner or operator shall keep the following records on-site in the quality assurance/quality control plan required by section 1 in appendix B of this part:

(1) A list of operating parameters for the add-on emission controls, including parameters in § 75.55 (b), appropriate to the particular installation of add-on emission controls; and

(2) The range of each operating parameter in the list that indicates the add-on emission controls are properly operating.

[60 FR 26536, 26568, May 17, 1995, as amended at 61 FR 59161, Nov. 20, 1996; 64 FR 28608, May 26, 1999]

§ 75.57 General recordkeeping provisions.

Before April 1, 2000, the owner or operator shall meet the requirements of either this section or § 75.54. However, the provisions of this section which support a regulatory option provided in another section of this part must be followed if that regulatory option is used prior to April 1, 2000. On or after April 1, 2000, the owner or operator shall meet the requirements of this section.

(a) *Recordkeeping requirements for affected sources.* The owner or operator of any affected source subject to the requirements of this part shall maintain for each affected unit a file of all measurements, data, reports, and other information required by this part at the source in a form suitable for inspection for at least three (3) years from the date of each record. Unless otherwise provided, throughout this subpart the phrase "for each affected unit" also applies to each group of affected or non-affected units utilizing a common stack and common monitoring sys-

tems, pursuant to §§ 75.16 through 75.18, or utilizing a common pipe header and common fuel flowmeter, pursuant to section 2.1.2 of appendix D to this part. The file shall contain the following information:

(1) The data and information required in paragraphs (b) through (h) of this section, beginning with the earlier of the date of provisional certification or the deadline in § 75.4(a), (b), or (c);

(2) The supporting data and information used to calculate values required in paragraphs (b) through (g) of this section, excluding the subhourly data points used to compute hourly averages under § 75.10(d), beginning with the earlier of the date of provisional certification or the deadline in § 75.4(a), (b), or (c);

(3) The data and information required in § 75.55 or § 75.58 for specific situations, as applicable, beginning with the earlier of the date of provisional certification or the deadline in § 75.4(a), (b), or (c);

(4) The certification test data and information required in § 75.56 or § 75.59 for tests required under § 75.20, beginning with the date of the first certification test performed, the quality assurance and quality control data and information required in § 75.56 or § 75.59 for tests, and the quality assurance/quality control plan required under § 75.21 and appendix B to this part, beginning with the date of provisional certification;

(5) The current monitoring plan as specified in § 75.53, beginning with the initial submission required by § 75.62; and

(6) The quality control plan as described in section 1 of appendix B to this part, beginning with the date of provisional certification.

(b) *Operating parameter record provisions.* The owner or operator shall record for each hour the following information on unit operating time, heat input rate, and load, separately for each affected unit and also for each group of units utilizing a common stack and a common monitoring system or utilizing a common pipe header and common fuel flowmeter:

(1) Date and hour;

(2) Unit operating time (rounded up to the nearest fraction of an hour (in

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equal increments that can range from one hundredth to one quarter of an hour, at the option of the owner or operator));

(3) Hourly gross unit load (rounded to nearest MWge) (or steam load in 1000 lb/hr at stated temperature and pressure, rounded to the nearest 1000 lb/hr, if elected in the monitoring plan);

(4) Operating load range corresponding to hourly gross load of 1 to 10, except for units using a common stack or common pipe header, which may use up to 20 load ranges for stack or fuel flow, as specified in the monitoring plan;

(5) Hourly heat input rate (mmBtu/hr, rounded to the nearest tenth);

(6) Identification code for formula used for heat input, as provided in § 75.53; and

(7) For CEMS units only, F-factor for heat input calculation and indication of whether the diluent cap was used for heat input calculations for the hour.

(c) *SO₂ emission record provisions.* The owner or operator shall record for each hour the information required by this paragraph for each affected unit or group of units using a common stack and common monitoring systems, except as provided under § 75.11(e) or for a gas-fired or oil-fired unit for which the owner or operator is using the optional protocol in appendix D to this part or for a low mass emissions unit for which the owner or operator is using the optional low mass emissions methodology in § 75.19(c) for estimating SO₂ mass emissions:

(1) For SO₂ concentration during unit operation, as measured and reported from each certified primary monitor, certified back-up monitor, or other approved method of emissions determination:

(i) Component-system identification code, as provided in § 75.53;

(ii) Date and hour;

(iii) Hourly average SO₂ concentration (ppm, rounded to the nearest tenth);

(iv) Hourly average SO₂ concentration (ppm, rounded to the nearest tenth), adjusted for bias if bias adjustment factor is required, as provided in § 75.24(d);

(v) Percent monitor data availability (recorded to the nearest tenth of a per-

cent), calculated pursuant to § 75.32; and

(vi) Method of determination for hourly average SO₂ concentration using Codes 1-55 in Table 4a of this section.

(2) For flow rate during unit operation, as measured and reported from each certified primary monitor, certified back-up monitor, or other approved method of emissions determination:

(i) Component-system identification code, as provided in § 75.53;

(ii) Date and hour;

(iii) Hourly average volumetric flow rate (in scfh, rounded to the nearest thousand);

(iv) Hourly average volumetric flow rate (in scfh, rounded to the nearest thousand), adjusted for bias if bias adjustment factor required, as provided in § 75.24(d);

(v) Percent monitor data availability (recorded to the nearest tenth of a percent) for the flow monitor, calculated pursuant to § 75.32; and

(vi) Method of determination for hourly average flow rate using Codes 1-55 in Table 4a of this section.

(3) For flue gas moisture content during unit operation (where SO₂ concentration is measured on a dry basis), as measured and reported from each certified primary monitor, certified back-up monitor, or other approved method of emissions determination:

(i) Component-system identification code, as provided in § 75.53;

(ii) Date and hour;

(iii) Hourly average moisture content of flue gas (percent, rounded to the nearest tenth). If the continuous moisture monitoring system consists of wet- and dry-basis oxygen analyzers, also record both the wet- and dry-basis oxygen hourly averages (in percent O₂, rounded to the nearest tenth);

(iv) Percent monitor data availability (recorded to the nearest tenth of a percent) for the moisture monitoring system, calculated pursuant to § 75.32; and

(v) Method of determination for hourly average moisture percentage, using Codes 1-55 in Table 4a of this section.

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(4) For SO₂ mass emission rate during unit operation, as measured and reported from the certified primary monitoring system(s), certified redundant or non-redundant back-up monitoring system(s), or other approved method(s) of emissions determination:

- (i) Date and hour;
- (ii) Hourly SO₂ mass emission rate (lb/hr, rounded to the nearest tenth);
- (iii) Hourly SO₂ mass emission rate (lb/hr, rounded to the nearest tenth),

adjusted for bias if bias adjustment factor required, as provided in § 75.24(d); and

- (iv) Identification code for emissions formula used to derive hourly SO₂ mass emission rate from SO₂ concentration and flow and (if applicable) moisture data in paragraphs (c)(1), (c)(2), and (c)(3) of this section, as provided in § 75.53.

TABLE 4A.—CODES FOR METHOD OF EMISSIONS AND FLOW DETERMINATION

Code	Hourly emissions/flow measurement or estimation method
1	Certified primary emission/flow monitoring system.
2	Certified backup emission/flow monitoring system.
3	Approved alternative monitoring system.
4	Reference method: SO ₂ : Method 6C. Flow: Method 2 or its allowable alternatives under appendix A to part 60 of this chapter. NO _x : Method 7E. CO ₂ or O ₂ : Method 3A.
5	For units with add-on SO ₂ and/or NO _x emission controls: SO ₂ concentration or NO _x emission rate estimate from Agency preapproved parametric monitoring method.
6	Average of the hourly SO ₂ concentrations, CO ₂ concentrations, O ₂ concentrations, NO _x concentrations, flow rates, moisture percentages or NO _x emission rates for the hour before and the hour following a missing data period.
7	Hourly average SO ₂ concentration, CO ₂ concentration, O ₂ concentration, NO _x concentration, moisture percentage, flow rate, or NO _x emission rate using initial missing data procedures.
8	90th percentile hourly SO ₂ concentration, CO ₂ concentration, NO _x concentration, flow rate, moisture percentage, or NO _x emission rate or 10th percentile hourly O ₂ concentration or moisture percentage (moisture missing data algorithm depends on which equations are used for emissions and heat input).
9	95th percentile hourly SO ₂ concentration, CO ₂ concentration, NO _x concentration, flow rate, moisture percentage, or NO _x emission rate or 5th percentile hourly O ₂ concentration or moisture percentage (moisture missing data algorithm depends on which equations are used for emissions and heat input).
10	Maximum hourly SO ₂ concentration, CO ₂ concentration, NO _x concentration, flow rate, moisture percentage, or NO _x emission rate or minimum hourly O ₂ concentration or moisture percentage in the applicable lookback period (moisture missing data algorithm depends on which equations are used for emissions and heat input).
11	Average of hourly flow rates, NO _x concentrations or NO _x emission rates in corresponding load range, for the applicable lookback period.
12	Maximum potential concentration of SO ₂ , maximum potential concentration of CO ₂ , maximum potential concentration of NO _x , maximum potential flow rate, maximum potential NO _x emission rate, maximum potential moisture percentage, minimum potential O ₂ concentration or minimum potential moisture percentage, as determined using section 2.1 of appendix A to this part (moisture missing data algorithm depends on which equations are used for emissions and heat input).
13	Fuel analysis data from appendix G to this part for CO ₂ mass emissions. (This code is optional through 12/31/99, and shall not be used after 1/1/00.)
14	Diluent cap value (if the cap is replacing a CO ₂ measurement, use 5.0 percent for boilers and 1.0 percent for turbines; if it is replacing an O ₂ measurement, use 14.0 percent for boilers and 19.0 percent for turbines).
15	Fuel analysis data from appendix G to this part for CO ₂ mass emissions. (This code is optional through 12/31/99, and shall not be used after 1/1/00.)
16	SO ₂ concentration value of 2.0 ppm during hours when only "very low sulfur fuel", as defined in § 72.2 of this chapter, is combusted.
17	Like-kind replacement non-redundant backup monitoring analyzer.
19	200 percent of the MPC; default high range value.
20	200 percent of the full-scale range setting (full-scale exceedance of high range).
25	Maximum potential NO _x emission rate (MER). (Use only when a NO _x concentration full-scale exceedance occurs and the diluent monitor is unavailable.)
54	Other quality assured methodologies approved through petition. These hours are included in missing data lookback and are treated as unavailable hours for percent monitor availability calculations.
55	Other substitute data approved through petition. These hours are not included in missing data lookback and are treated as unavailable hours for percent monitor availability calculations.

(d) *NO_x emission record provisions.* The owner or operator shall record the applicable information required by this paragraph for each affected unit for each hour or partial hour during which the unit operates, except for a gas-fired peaking unit or oil-fired peaking unit for which the owner or operator is using the optional protocol in appendix E to this part or a low mass emissions unit for which the owner or operator is using the optional low mass emissions excepted methodology in § 75.19(c) for estimating NO_x emission rate. For each NO_x emission rate (in lb/mmBtu) measured by a NO_x-diluent monitoring system, or, if applicable, for each NO_x concentration (in ppm) measured by a NO_x concentration monitoring system used to calculate NO_x mass emissions under § 75.71(a)(2), record the following data as measured and reported from the certified primary monitor, certified back-up monitor, or other approved method of emissions determination:

(1) Component-system identification code, as provided in § 75.53 (including identification code for the moisture monitoring system, if applicable);

(2) Date and hour;

(3) Hourly average NO_x concentration (ppm, rounded to the nearest tenth) and hourly average NO_x concentration (ppm, rounded to the nearest tenth) adjusted for bias if bias adjustment factor required, as provided in § 75.24(d);

(4) Hourly average diluent gas concentration (for NO_x-diluent monitoring systems, only, in units of percent O₂ or percent CO₂, rounded to the nearest tenth);

(5) If applicable, the hourly average moisture content of the stack gas (percent H₂O, rounded to the nearest tenth). If the continuous moisture monitoring system consists of wet- and dry-basis oxygen analyzers, also record both the hourly wet- and dry-basis oxygen readings (in percent O₂, rounded to the nearest tenth);

(6) Hourly average NO_x emission rate (for NO_x-diluent monitoring systems only, in units of lb/mmBtu, rounded either to the nearest hundredth or thousandth prior to April 1, 2000 and rounded to the nearest thousandth on and after April 1, 2000);

(7) Hourly average NO_x emission rate (for NO_x-diluent monitoring systems

only, in units of lb/mmBtu, rounded either to the nearest hundredth or thousandth prior to April 1, 2000 and rounded to the nearest thousandth on and after April 1, 2000), adjusted for bias if bias adjustment factor is required, as provided in § 75.24(d). The requirement to report hourly NO_x emission rates to the nearest thousandth shall not affect NO_x compliance determinations under part 76 of this chapter; compliance with each applicable emission limit under part 76 shall be determined to the nearest hundredth pound per million Btu;

(8) Percent monitoring system data availability (recorded to the nearest tenth of a percent), for the NO_x-diluent or NO_x concentration monitoring system, and, if applicable, for the moisture monitoring system, calculated pursuant to § 75.32;

(9) Method of determination for hourly average NO_x emission rate or NO_x concentration and (if applicable) for the hourly average moisture percentage, using Codes 1-55 in Table 4a of this section; and

(10) Identification codes for emissions formulas used to derive hourly average NO_x emission rate and total NO_x mass emissions, as provided in § 75.53, and (if applicable) the F-factor used to convert NO_x concentrations into emission rates.

(e) *CO₂ emission record provisions.* Except for a low mass emissions unit for which the owner or operator is using the optional low mass emissions excepted methodology in § 75.19(c) for estimating CO₂ mass emissions, the owner or operator shall record or calculate CO₂ emissions for each affected unit using one of the following methods specified in this section:

(1) If the owner or operator chooses to use a CO₂ CEMS (including an O₂ monitor and flow monitor, as specified in appendix F to this part), then the owner or operator shall record for each hour or partial hour during which the unit operates the following information for CO₂ mass emissions, as measured and reported from the certified primary monitor, certified back-up monitor, or other approved method of emissions determination:

(i) Component-system identification code, as provided in § 75.53 (including

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identification code for the moisture monitoring system, if applicable);

(ii) Date and hour;

(iii) Hourly average CO₂ concentration (in percent, rounded to the nearest tenth);

(iv) Hourly average volumetric flow rate (scfh, rounded to the nearest thousand scfh);

(v) Hourly average moisture content of flue gas (percent, rounded to the nearest tenth), where CO₂ concentration is measured on a dry basis. If the continuous moisture monitoring system consists of wet- and dry-basis oxygen analyzers, also record both the hourly wet- and dry-basis oxygen readings (in percent O₂, rounded to the nearest tenth);

(vi) Hourly average CO₂ mass emission rate (tons/hr, rounded to the nearest tenth);

(vii) Percent monitor data availability for both the CO₂ monitoring system and, if applicable, the moisture monitoring system (recorded to the nearest tenth of a percent), calculated pursuant to § 75.32;

(viii) Method of determination for hourly average CO₂ mass emission rate and hourly average CO₂ concentration, and, if applicable, for the hourly average moisture percentage, using Codes 1-55 in Table 4a of this section;

(ix) Identification code for emissions formula used to derive hourly average CO₂ mass emission rate, as provided in § 75.53; and

(x) Indication of whether the diluent cap was used for CO₂ calculation for the hour.

(2) As an alternative to paragraph (e)(1) of this section, the owner or operator may use the procedures in § 75.13 and in appendix G to this part, and shall record daily the following information for CO₂ mass emissions:

(i) Date;

(ii) Daily combustion-formed CO₂ mass emissions (tons/day, rounded to the nearest tenth);

(iii) For coal-fired units, flag indicating whether optional procedure to adjust combustion-formed CO₂ mass emissions for carbon retained in flyash has been used and, if so, the adjustment;

(iv) For a unit with a wet flue gas desulfurization system or other con-

trols generating CO₂, daily sorbent-related CO₂ mass emissions (tons/day, rounded to the nearest tenth); and

(v) For a unit with a wet flue gas desulfurization system or other controls generating CO₂, total daily CO₂ mass emissions (tons/day, rounded to the nearest tenth) as the sum of combustion-formed emissions and sorbent-related emissions.

(f) *Opacity records.* The owner or operator shall record opacity data as specified by the State or local air pollution control agency. If the State or local air pollution control agency does not specify recordkeeping requirements for opacity, then record the information required by paragraphs (f) (1) through (5) of this section for each affected unit, except as provided in §§ 75.14(b), (c), and (d). The owner or operator shall also keep records of all incidents of opacity monitor downtime during unit operation, including reason(s) for the monitor outage(s) and any corrective action(s) taken for opacity, as measured and reported by the continuous opacity monitoring system:

(1) Component/system identification code;

(2) Date, hour, and minute;

(3) Average opacity of emissions for each six minute averaging period (in percent opacity);

(4) If the average opacity of emissions exceeds the applicable standard, then a code indicating such an exceedance has occurred; and

(5) Percent monitor data availability (recorded to the nearest tenth of a percent), calculated according to the requirements of the procedure recommended for State Implementation Plans in appendix M to part 51 of this chapter.

(g) *Diluent record provisions.* The owner or operator of a unit using a flow monitor and an O₂ diluent monitor to determine heat input, in accordance with Equation F-17 or F-18 of appendix F to this part, or a unit that accounts for heat input using a flow monitor and a CO₂ diluent monitor (which is used only for heat input determination and is not used as a CO₂ pollutant concentration monitor) shall keep the following records for the O₂ or CO₂ diluent monitor:

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(1) Component-system identification code, as provided in § 75.53;

(2) Date and hour;

(3) Hourly average diluent gas (O₂ or CO₂) concentration (in percent, rounded to the nearest tenth);

(4) Percent monitor data availability for the diluent monitor (recorded to the nearest tenth of a percent), calculated pursuant to § 75.32; and

(5) Method of determination code for diluent gas (O₂ or CO₂) concentration data using Codes 1–55, in Table 4a of this section.

(h) *Missing data records.* The owner or operator shall record the causes of any missing data periods and the actions taken by the owner or operator to correct such causes.

[64 FR 28609, May 26, 1999; 64 FR 37582, July 12, 1999]

§ 75.58 General recordkeeping provisions for specific situations.

Before April 1, 2000, the owner or operator shall meet the requirements of either this section or § 75.55. However, the provisions of this section which support a regulatory option provided in another section of this part must be followed if that regulatory option is exercised prior to April 1, 2000. On or after April 1, 2000, the owner or operator shall meet the requirements of this section.

(a) [Reserved]

(b) *Specific parametric data record provisions for calculating substitute emissions data for units with add-on emission controls.* In accordance with § 75.34, the owner or operator of an affected unit with add-on emission controls shall either record the applicable information in paragraph (b)(3) of this section for each hour of missing SO₂ concentration data or NO_x emission rate (in addition to other information), or shall record the information in paragraph (b)(1) of this section for SO₂ or paragraph (b)(2) of this section for NO_x through an automated data acquisition and handling system, as appropriate to the type of add-on emission controls:

(1) For units with add-on SO₂ emission controls using the optional parametric monitoring procedures in appendix C to this part, for each hour of missing SO₂ concentration or volumetric flow data:

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(i) The information required in § 75.54(c) or § 75.57(c) for SO₂ concentration and volumetric flow, if either one of these monitors is still operating;

(ii) Date and hour;

(iii) Number of operating scrubber modules;

(iv) Total feedrate of slurry to each operating scrubber module (gal/min);

(v) Pressure differential across each operating scrubber module (inches of water column);

(vi) For a unit with a wet flue gas desulfurization system, an in-line measure of absorber pH for each operating scrubber module;

(vii) For a unit with a dry flue gas desulfurization system, the inlet and outlet temperatures across each operating scrubber module;

(viii) For a unit with a wet flue gas desulfurization system, the percent solids in slurry for each scrubber module;

(ix) For a unit with a dry flue gas desulfurization system, the slurry feed rate (gal/min) to the atomizer nozzle;

(x) For a unit with SO₂ add-on emission controls other than wet or dry limestone, corresponding parameters approved by the Administrator;

(xi) Method of determination of SO₂ concentration and volumetric flow using Codes 1–15 in Table 4 of § 75.54 or Codes 1–55 in Table 4a of § 75.57; and

(xii) Inlet and outlet SO₂ concentration values, recorded by an SO₂ continuous emission monitoring system, and the removal efficiency of the add-on emission controls.

(2) For units with add-on NO_x emission controls using the optional parametric monitoring procedures in appendix C to this part, for each hour of missing NO_x emission rate data:

(i) Date and hour;

(ii) Inlet air flow rate (scfh, rounded to the nearest thousand);

(iii) Excess O₂ concentration of flue gas at stack outlet (percent, rounded to the nearest tenth of a percent);

(iv) Carbon monoxide concentration of flue gas at stack outlet (ppm, rounded to the nearest tenth);

(v) Temperature of flue gas at furnace exit or economizer outlet duct (°F);

(vi) Other parameters specific to NO_x emission controls (e.g., average hourly reagent feedrate);