

monitor test only, relative accuracy test results should be recorded at each of three gas velocities. Each of these three gas velocities shall be expressed as a total integrated gross unit load, rounded to the nearest MWe.)

(E) Bias test results as specified in section 7.6.4 in appendix A to this part.

(F) Bias adjustment factor from Equations A-11 and A-12 in appendix A to this part for any monitoring system or component that failed the bias test and 1.0 for any monitoring system or component that passed the bias test. (For flow monitors only, bias adjustment factors should be recorded at each of three gas velocities).

(v) Number of out-of-control hours, if any, following test.

(vi) Description of any adjustment, corrective action, or maintenance following test.

(6) F-factor value(s) used to convert NO_x pollutant concentration and diluent gas (O₂ or CO₂) concentration measurements into NO_x emission rates (in lb/mmBtu), heat input or CO₂ emissions.

(7) Results of all trial runs and certification tests and quality assurance activities and measurements (including all reference method field test sheets, charts, records of combined system responses, laboratory analyses, and example calculations) necessary to substantiate compliance with all relevant appendices in this part.

(b) [Reserved]

[58 FR 3701, Jan. 11, 1993, as amended at 58 FR 40749, July 30, 1993]

§ 75.53 Monitoring plan.

(a) *General provisions.* The owner or operator of an affected unit shall prepare and maintain a monitoring plan. Except as provided in paragraph (d) of this section, a monitoring plan shall contain sufficient information on the continuous emission or opacity monitoring systems or excepted monitoring systems under appendix D or E of this part and the use of data derived from these systems to demonstrate that all unit SO₂ emissions, NO_x emissions, CO₂ emissions, and opacity are monitored and reported.

(b) Whenever the owner or operator makes a replacement, modification, or change, either in the certified continu-

ous emission monitoring system or continuous opacity monitoring system or excepted monitoring systems under appendix D or E of this part, including a change in the automated data acquisition and handling system or in the flue gas handling system, that requires recertification, then the owner or operator shall update the monitoring plan.

(c) *Contents of the monitoring plan.* Each monitoring plan shall contain the following:

(1) Precertification information, including, as applicable, the identification of the test strategy, protocol for the relative accuracy test audit, other relevant test information, span calculations, and apportionment strategies under §§ 75.13 through 75.17 of this part.

(2) *Unit table.* A table identifying ORISPL numbers developed by the Department of Energy and used in the National Allowance Database, for all affected units involved in the monitoring plan, with the following information for each unit:

(i) Short name;

(ii) Classification of unit as one of the following: Phase I (including substitution or compensating units), Phase II, new, or nonaffected;

(iii) Type of boiler (or boilers for a group of units using a common stack);

(iv) Type of fuel(s) fired, by boiler, and if more than one fuel, the fuel classification of the boiler;

(v) Type(s) of emission controls for SO₂, NO_x, and particulates installed or to be installed, including specifications of whether such controls are pre-combustion, post-combustion, or integral to the combustion process; and

(vi) Identification of all units using a common stack.

(3) *Description of monitor site location.* Description of site locations for each monitoring component in the continuous emission or opacity monitoring systems, including schematic diagrams and engineering drawings specified in paragraphs (c)(7) and (c)(8) of this section, and any other documentation that demonstrates each monitor location meets the appropriate siting criteria.

(4) *Monitoring component table.* Identification and description of each monitoring component (including each

monitor and its identifiable components such as analyzer and/or probe) in the continuous emission monitoring systems (i.e., SO₂ pollutant concentration monitor, flow monitor, moisture monitor; NO_x pollutant concentration monitor and diluent gas monitor) the continuous opacity monitoring system, or excepted monitoring system (i.e., fuel flowmeter, data acquisition and handling system), including:

(i) Manufacturer model number and serial number;

(ii) Component/system identification code assigned by the utility to each identifiable monitoring component (such as the analyzer and/or probe). The code shall use a six-digit format, unique to each monitoring component, where the first three digits indicate the number of the component and the second three digits indicate the system to which the component belongs;

(iii) Actual or projected installation date (month and year);

(iv) A brief description of the component type or method of operation, such as in situ pollutant concentration monitor or thermal flow monitor;

(v) A brief description of the flow monitor that is sufficiently detailed to allow a determination of whether the applicable interference check design specification meets the requirements specified in appendix A of this part; and

(vi) A designation of the system as a primary, redundant backup, non-redundant backup or reference method backup system, as provided for in § 75.10(e).

(5) *Data acquisition and handling system table.* Identification and description of all major hardware and software components of the automated data acquisition and handling system, including:

(i) For hardware components, the manufacturer, model number, and actual or projected installation date;

(ii) For software components, identification of the provider and a brief description of features;

(iii) A data flow diagram denoting the complete information handling path from output signals of continuous emission monitoring system components to final reports;

(iv) A copy of the test results verifying the accuracy of the automated data acquisition and handling system (once such results are available).

(6) *Emissions formula table.* A table giving explicit formulas for each reported unit emission parameter, using component/system identification codes to link continuous emission monitoring system or excepted monitoring system observations with reported concentrations, mass emissions, or emission rates, according to the conversions listed in appendix D, E, or F to this part. The formulas must contain all constants and factors required to derive mass emissions or emission rates from component/system code observations, and each emissions formula is identified with a unique three digit code.

(7) *Schematic stack diagrams.* For units monitored by a continuous emission or opacity monitoring system, a schematic diagram identifying entire gas handling system from boiler to stack for all affected units, using identification numbers for units, monitor components, and stacks corresponding to the identification numbers provided in paragraphs (c)(2), (c)(4), (c)(5), and (c)(6) of this section. The schematic diagram must depict stack height and the height of any monitor locations. Comprehensive and/or separate schematic diagrams shall be used to describe groups of units using a common stack.

(8) *Stack and duct engineering diagrams.* For units monitored by a continuous emission or opacity monitoring system, stack and duct engineering diagrams showing the dimensions and location of fans, turning vanes, air preheaters, monitor components, probes, reference method sampling ports and other equipment which affects the monitoring system location, performance or quality control checks.

(9) Inside cross-sectional area (ft²) at flue exit and at flow monitoring location.

(10) *Span and calibration gas.* A table or description identifying maximum potential concentration, maximum expected concentration (if applicable), maximum potential flow rate, maximum potential NO_x emission rate, span value, and full-scale range for each SO₂, NO_x, CO₂, O₂, or flow component

monitor. In addition, the table must identify calibration gas levels for the calibration error test and the linearity check, and calculations made to determine each span value.

(d) *Contents of monitoring plan for specific situations.* The following additional information shall be included in the monitoring plan for gas-fired or oil-fired units or for units with add-on emission controls:

(1) For each gas-fired unit or oil-fired unit for which the owner or operator uses the optional protocol in appendix D of this part for estimating SO₂ mass emissions or appendix E of this part for estimating NO_x emission rate (using a fuel flow meter), the designated representative shall include in the monitoring plan:

(i) A description of the fuel flowmeter (and data demonstrating its flow meter accuracy, when available);

(ii) The installation location of each fuel flowmeter;

(iii) The fuel sampling location(s); and

(iv) Procedures used for calibrating each fuel flowmeter.

(2) For each gas-fired peaking unit and oil-fired peaking unit for which the owner or operator uses the optional procedures in appendix E of this part for estimating NO_x emission rate, the designated representative shall include in the monitoring plan:

(i) A protocol containing methods used to perform the baseline or periodic NO_x emission test, and a copy of initial performance test results (when such results are available);

(ii) Unit operating and capacity factor information demonstrating that the unit qualifies as a peaking unit, as defined in § 72.2 of this chapter; and

(iii) Unit operating parameters related to NO_x formation by the unit.

(3) For each gas-fired unit and diesel-fired unit or unit with a wet flue gas pollution control system for which the designated representative claims an opacity monitoring exemption under § 75.14, the designated representative shall include in the monitoring plan information demonstrating that the unit qualifies for the exemption.

(4) For each unit with add-on emission controls:

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

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

[58 FR 3701, Jan. 11, 1993, as amended at 60 FR 26532, 26568, May 17, 1995]

§ 75.54 General recordkeeping provisions.

(a) *Recordkeeping requirements for affected sources.* On or after January 1, 1996, the owner or operator shall meet the requirements of this section. 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 nonaffected units utilizing a common stack and common monitoring systems, pursuant to §§ 75.13 through 75.18, or utilizing a common pipe header and common fuel flowmeter, pursuant to section 2.1.2 of appendix D of this part. The file shall contain the following information:

(1) The data and information required in paragraphs (b) through (f) 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 (f) 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 of this part 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 for tests

required under § 75.20, beginning with the date of the first certification test performed, and the quality assurance and quality control data and information required in § 75.56 for tests and the quality assurance/quality control plan required under § 75.21 and appendix B of 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 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, 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, except that separate heat input data for each unit shall not be required after January 1, 2000 for any unit, other than an opt-in source, that does not have a NO_x emission limitation under part 76 of this chapter.

(1) Date and hour;

(2) Unit operating time (rounded up to nearest 15 minutes);

(3) Total hourly gross unit load (rounded to nearest MWge) (or steam load in 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 total gross load of 1–10, except for units using a common stack or common pipe header, which may use the number of unit load ranges up to 20 for flow, as specified in the monitoring plan; and

(5) Total heat input (mmBtu, rounded to the nearest tenth).

(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 for estimating SO₂ mass emissions:

(1) For SO₂ concentration, 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 for 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 for in § 75.24(d);

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

(vi) Method of determination for hourly average SO₂ concentration using Codes 1–15 in Table 4 of this section.

(2) For flow 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 for 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 for in § 75.24(d);

(v) Hourly average moisture content of flue gases (percent, rounded to the nearest tenth) where SO₂ concentration is measured on dry basis;

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

(vii) Method of determination for hourly average flow rate using Codes 1–15 in Table 4.

(3) For SO₂ mass emissions 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 emissions (lb/hr, rounded to the nearest tenth);
- (iii) Hourly SO₂ mass emissions (lb/hr, rounded to the nearest tenth) adjusted for bias, if bias adjustment factor required, as provided for in §75.24(d); and
- (iv) Identification code for emissions formula used to derive hourly SO₂ mass emissions from SO₂ concentration and flow data in paragraphs (c)(1) and (c)(2) of this section as provided for in §75.53.

TABLE 4.—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 back-up emission/flow monitoring system.
3	Approved alternative monitoring system.
4	Reference method: SO ₂ : Method 6C. Flow: Method 2. 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, flow, or NO _x emission rate for the hour before and the hour following a missing data period.
7	Hourly average SO ₂ concentration, CO ₂ concentration, flow rate, or NO _x emission rate using initial missing data procedures.
8	90th percentile hourly SO ₂ concentration, flow rate, or NO _x emission rate.
9	95th percentile hourly SO ₂ concentration, flow rate, or NO _x emission rate.
10	Maximum hourly SO ₂ concentration, flow rate, or NO _x emission rate.
11	Hourly average flow rate or NO _x emission rate in corresponding load range.
12	Maximum potential concentration of SO ₂ , maximum potential flow rate, or maximum potential NO _x emission rate, as determined using section 2.1 of appendix A of this part, or maximum CO ₂ concentration.
13	Other data (specify method).
14	Minimum CO ₂ concentration of 5.0 percent CO ₂ or maximum O ₂ concentration of 14.0 percent to be substituted optionally for measured diluent gas concentrations during unit startup, for NO _x emission rate or SO ₂ emission rate in lb/mmBtu or for CO ₂ concentration.
15	Fuel analysis data from appendix G of this part for CO ₂ mass emissions.

(d) *NO_x emission record provisions.* The owner or operator shall record the information required by this paragraph for each affected unit for each hour, 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 for estimating NO_x emission rate. For each NO_x emission rate 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 for in §75.53;
- (2) Date and hour;
- (3) Hourly average NO_x concentration (ppm, rounded to the nearest tenth);
- (4) Hourly average diluent gas concentration (percent O₂ or percent CO₂, rounded to the nearest tenth);
- (5) Hourly average NO_x emission rate (lb/mmBtu, rounded to nearest hundredth);
- (6) Hourly average NO_x emission rate (lb/mmBtu, rounded to nearest hundredth) adjusted for bias, if bias adjustment factor is required as provided for in §75.24(d);
- (7) Percent monitoring system data availability, (recorded to the nearest tenth of a percent), calculated pursuant to §75.32;
- (8) Method of determination for hourly average NO_x emission rate using Codes 1–15 in Table 4; and
- (9) Identification code for emissions formula used to derive hourly average NO_x emission rate, as provided for in §75.53.

(e) *CO₂ emission record provisions.* 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 continuous emission monitoring system (including an O₂ monitor and flow monitor as specified in appendix F of this part), then the owner or operator shall record for each hour 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 for in §75.53;
- (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 CO₂ mass emissions (tons/hr, rounded to the nearest tenth);

(vi) Percent monitor data availability (recorded to the nearest tenth of a percent); calculated pursuant to § 75.32;

(vii) Method of determination for hourly CO₂ mass emissions using Codes 1–15 in Table 4; and

(viii) Identification code for emissions formula used to derive average hourly CO₂ mass emissions, as provided for in § 75.53.

(2) As an alternative to § 75.54(e)(1), 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 controls 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 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 for 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 of part 51 of this chapter.

[60 FR 26533, May 17, 1995]

§ 75.55 General recordkeeping provisions for specific situations.

(a) *Specific SO₂ emission record provisions for units with qualifying Phase I technology.* In addition to the SO₂ emissions information required in § 75.54(c), from January 1, 1997, through December 31, 1999, the owner or operator shall record the applicable information in this paragraph for each affected unit on which SO₂ emission controls have been installed and operated for the purpose of meeting qualifying Phase I technology requirements pursuant to § 72.42 of this chapter and § 75.15.

(1) For units with post-combustion emission controls:

(i) Component/system identification codes for each inlet and outlet SO₂-diluent continuous emission monitoring system;

(ii) Date and hour;

(iii) Hourly average inlet SO₂ emission rate (lb/mmBtu, rounded to nearest hundredth);

(iv) Hourly average outlet SO₂ emission rate (lb/mmBtu, rounded to nearest hundredth);

(v) Percent data availability for both inlet and outlet SO₂-diluent continuous emission monitoring systems (recorded to the nearest tenth of a percent), calculated pursuant to Equation 8 of § 75.32 (for the first 8,760 unit operating hours following initial certification) and Equation 9 of § 75.32, thereafter; and

(vi) Identification code for emissions formula used to derive hourly average inlet and outlet SO₂ mass emissions rates for each affected unit or group of units using a common stack.

(2) For units with combustion and/or pre-combustion emission controls:

(i) Component/system identification codes for each outlet SO₂-diluent continuous emission monitoring system;

(ii) Date and hour;

(iii) Hourly average outlet SO₂ emission rate (lb/mmBtu, rounded to nearest hundredth);

(iv) For units with combustion controls, average daily inlet SO₂ emission rate (lb/mmBtu, rounded to nearest hundredth), determined by coal sampling and analysis procedures in §75.15; and

(v) For units with pre-combustion controls (i.e., fuel pretreatment), fuel analysis demonstrating the weight, sulfur content, and gross calorific value of the product and raw fuel lots.

(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 petitioning to use or using the optional parametric monitoring procedures in appendix C of this part, for each hour of missing SO₂ concentration or volumetric flow data:

(i) The information required in §75.54(b) 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 inline 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 3 of §75.54; 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 petitioning to use or using the optional parametric monitoring procedures in appendix C of this part, for each hour of missing NO_x emission rate data:

(i) Date and hour;

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

(iii) Excess O₂ concentration of flue gas at stack outlet (percent, rounded to 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); and

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

(vii) Method of determination of NO_x emission rate using Codes 1-15 in Table 3 of §75.54; and

(viii) Inlet and outlet NO_x emission rate values recorded by a NO_x continuous emission monitoring system and the removal efficiency of the add-on emission controls.

(3) For units with add-on SO₂ or NO_x emission controls following the provisions of §75.34(a) (1) or (2), for each hour of missing data record:

(i) Parametric data which demonstrate the proper operation of the add-on emission controls, as described in the monitoring plan for the unit (to be maintained on site, and to be submitted upon request from the Administrator or by an EPA Regional office);

(ii) A flag indicating that the add-on emission controls are operating with all parameters within the ranges specified in the monitoring plan or that the add-on emission controls are not operating properly;

(iii) For units petitioning under §75.66 for substituting a representative SO₂ concentration during missing data periods, any available inlet and outlet SO₂ concentration values recorded by an SO₂ continuous emission monitoring system; and

(iv) For units petitioning under §75.66 for substituting a representative NO_x emission rate during missing data periods, any available inlet and outlet NO_x emission rate values recorded by a NO_x continuous emission monitoring system.

(c) *Specific SO₂ emission record provisions for gas-fired or oil-fired units using optional protocol in appendix D of this part.* In lieu of recording the information in §75.54(c) of this section, the owner or operator shall record the applicable information in this paragraph for each affected gas-fired or oil-fired unit for which the owner or operator is using the optional protocol in appendix D of this part for estimating SO₂ mass emissions.

(1) For each hour when the unit is combusting oil:

(i) Date and hour;

(ii) Hourly average flow rate of oil with the units in which oil flow is recorded, (gal/hr, lb/hr, m³/hr, or bbl/hr, rounded to the nearest tenth)(flag value if derived from missing data procedures);

(iii) Sulfur content of oil sample used to determine SO₂ mass emissions, rounded to nearest hundredth for diesel fuel or to the nearest tenth of a percent for other fuel oil (flag value if derived from missing data procedures);

(iv) Method of oil sampling (flow proportional, continuous drip, as delivered or manual);

(v) Mass of oil combusted each hour (lb/hr, rounded to the nearest tenth);

(vi) SO₂ mass emissions from oil (lb/hr, rounded to the nearest tenth);

(vii) For units using volumetric oil flowmeters, density of oil (flag value if derived from missing data procedures);

(viii) Gross calorific value (heat content) of oil, used to determine heat input (Btu/mass unit) (flag value if derived from missing data procedures);

(ix) Hourly heat input rate from oil according to procedures in appendix F of this part (mmBtu/hr, to the nearest tenth); and

(x) Fuel usage time for combustion of oil during the hour, rounded up to the nearest 15 min.

(2) For gas-fired units or oil-fired units using the optional protocol in appendix D of this part of daily manual oil sampling, when the unit is combusting oil, the highest sulfur content recorded from the most recent 30 daily oil samples rounded to nearest tenth of a percent.

(3) For each hour when the unit is combusting gaseous fuel,

(i) Date and hour;

(ii) Hourly heat input rate from gaseous fuel according to procedures in appendix F to this part (mmBtu/hr, rounded to the nearest tenth);

(iii) Sulfur content or SO₂ emission rate, in one of the following formats, in accordance with the appropriate procedure from appendix D of this part:

(A) Sulfur content of gas sample, (rounded to the nearest 0.1 grains/100 scf) (flag value if derived from missing data procedures); or

(B) SO₂ emission rate of 0.0006 lb/mmBtu for pipeline natural gas;

(iv) Hourly flow rate of gaseous fuel, in 100 scfh (flag value if derived from missing data procedures);

(v) Gross calorific value (heat content) of gaseous fuel, used to determine heat input (Btu/scf) (flag value if derived from missing data procedures);

(vi) Heat input rate from gaseous fuel (mmBtu/hr, rounded to the nearest tenth);

(vii) SO₂ mass emissions due to the combustion of gaseous fuels, lb/hr; and