

40 CFR PARTS 72 AND 75
DRAFT Redline/Strikeout Proposed Rule Revisions
Unofficial Version

(Volume I)

U.S. Environmental Protection Agency
Clean Air Markets Division

August 4, 2006

August 4, 2006

40 CFR Parts 72 and 75

NOTICE

This unofficial version of 40 CFR Part 75 (and 40 CFR 72.1 - 72.3) has been produced to assist interested parties in understanding changes that the U.S. Environmental Protection Agency has made to Parts 72 and 75. This unofficial version contains the final rule revisions published on June 12, 2002, and also reflects proposed revisions to be published in a notice of proposed rulemaking. These proposed revisions are reproduced in the text in redline and strikeout. While all reasonable steps have been taken to produce this unofficial version in an accurate manner, the version published by the Office of the Federal Register remains the official version of the applicable rules.

For ease of electronic access, the material is split into two volumes: Volume I contains §§ 72.1 - 72.3, and the regulatory sections of Part 75; Volume II contains the appendices to Part 75.

[This page intentionally left blank.]

40 CFR Parts 72 and 75

Table of Contents

Page

40 CFR Part 72:

| | |
|---|----|
| Subpart A -- Acid Rain Program General Provisions | 1 |
| § 72.1 Purpose and scope. | 1 |
| § 72.2 Definitions. | 1 |
| § 72.3 Measurements, abbreviations, and acronyms..... | 28 |

40 CFR Part 75:

| | |
|---|----|
| Subpart A -- General..... | 30 |
| § 75.1 Purpose and scope. | 30 |
| § 75.2 Applicability..... | 30 |
| § 75.3 General Acid Rain Program provisions. | 31 |
| § 75.4 Compliance dates. | 31 |
| § 75.5 Prohibitions..... | 34 |
| § 75.6 Incorporation by reference. | 35 |
| § 75.7 [Removed and Reserved] | 39 |
| § 75.8 [Removed and Reserved] | 39 |
| Subpart B -- Monitoring Provisions..... | 39 |
| § 75.10 General operating requirements. | 39 |
| § 75.11 Specific provisions for monitoring SO ₂ emissions. | 42 |
| § 75.12 Specific provisions for monitoring NO _x emission rate | 44 |
| § 75.13 Specific provisions for monitoring CO ₂ emissions..... | 45 |
| § 75.14 Specific provisions for monitoring opacity..... | 46 |
| § 75.15 Special provisions for measuring Hg mass emissions using the excepted sorbent trap monitoring methodology..... | 46 |
| § 75.16 Special provisions for monitoring emissions from common, bypass, and multiple stacks for SO ₂ emissions and heat input determinations. | 48 |
| § 75.17 Specific provisions for monitoring emissions from common, bypass, and multiple stacks for NO _x emission rate. | 50 |
| § 75.18 Specific provisions for monitoring emissions from common and by-pass stacks for opacity. | 52 |
| § 75.19 Optional SO ₂ , NO _x , and CO ₂ emissions calculation for low mass emissions units. | 53 |
| Subpart C -- Operation and Maintenance Requirements..... | 70 |
| § 75.20 Initial certification and recertification procedures..... | 70 |
| § 75.21 Quality assurance and quality control requirements..... | 83 |
| § 75.22 Reference test methods. | 84 |

40 CFR Parts 72 and 75

Table of Contents (cont.)

| | <u>Page</u> |
|--|-------------|
| § 75.23 Alternatives to standards incorporated by reference..... | 86 |
| § 75.24 Out-of-control periods and adjustment for system bias..... | 86 |
| Subpart D -- Missing Data Substitution Procedures..... | 87 |
| § 75.30 General provisions..... | 87 |
| § 75.31 Initial missing data procedures..... | 88 |
| § 75.32 Determination of monitor data availability for standard missing data procedures. | 90 |
| § 75.33 Standard missing data procedures for SO ₂ , NO _x , Hg and flow rate..... | 91 |
| § 75.34 Units with add-on emission controls. | 99 |
| § 75.35 Missing data procedures for CO ₂ | 101 |
| § 75.36 Missing data procedures for heat input rate determinations. | 102 |
| § 75.37 Missing data procedures for moisture. | 102 |
| § 75.38 Standard missing data procedures for Hg CEMS. | 103 |
| § 75.39 Missing data procedures for sorbent trap monitoring systems. | 104 |
| Subpart E -- Alternative Monitoring Systems | 105 |
| § 75.40 General demonstration requirements..... | 105 |
| § 75.41 Precision criteria. | 105 |
| § 75.42 Reliability criteria. | 111 |
| § 75.43 Accessibility criteria. | 111 |
| § 75.44 Timeliness criteria. | 111 |
| § 75.45 Daily quality assurance criteria. | 111 |
| § 75.46 Missing data substitution criteria. | 111 |
| § 75.47 Criteria for a class of affected units..... | 111 |
| § 75.48 Petition for an alternative monitoring system. | 112 |
| Subpart F -- Recordkeeping Requirements | 113 |
| § 75.50 - 75.52 [Reserved] | 113 |
| § 75.53 Monitoring plan. | 113 |
| § 75.54 [Reserved] | 123 |
| § 75.55 [Reserved] | 123 |
| § 75.56 [Reserved] | 123 |
| § 75.57 General recordkeeping provisions..... | 123 |
| § 75.58 General recordkeeping provisions for specific situations. | 131 |
| § 75.59 Certification, quality assurance, and quality control record provisions..... | 136 |
| Subpart G -- Reporting Requirements | 149 |
| § 75.60 General provisions..... | 149 |
| § 75.61 Notifications. | 150 |
| § 75.62 Monitoring plan submittals. | 153 |

40 CFR Parts 72 and 75

Table of Contents (cont.)

| | <u>Page</u> |
|--|-------------|
| § 75.63 Initial certification or recertification application. | 153 |
| § 75.64 Quarterly reports. | 155 |
| § 75.65 Opacity reports. | 158 |
| § 75.66 Petitions to the Administrator. | 158 |
| § 75.67 Retired units petitions. | 160 |
| Subpart H -- NO _x Mass Emissions Provisions. | 161 |
| § 75.70 NO _x mass emissions provisions. | 161 |
| § 75.71 Specific provisions for monitoring NO _x and heat input for the purpose of calculating NO _x mass emissions. | 164 |
| § 75.72 Determination of NO _x mass emissions for common stack and multiple stack configurations. | 165 |
| § 75.73 Recordkeeping and reporting. | 168 |
| § 75.74 Annual and ozone season monitoring and reporting requirements. | 172 |
| § 75.75 Additional ozone season calculation procedures for special circumstances. | 181 |
| Subpart I -- Hg Mass Emission Provisions. | 181 |
| § 75.80 General provisions. | 181 |
| § 75.81 Monitoring of Hg mass emissions and heat input at the unit level. | 184 |
| § 75.82 Monitoring of Hg mass emissions and heat input at common and multiple stacks. | 187 |
| § 75.83 Calculation of Hg mass emissions and heat input rate. | 189 |
| § 75.84 Recordkeeping and reporting. | 189 |

[This page intentionally left blank.]

PART 72-PERMITS REGULATION

Authority: 42 U.S.C. 7601 and 7651, et seq.

Subpart A--Acid Rain Program General Provisions

§ 72.1

§ 72.1 Purpose and scope.

§ 72.1(a)

(a) Purpose. The purpose of this part is to establish certain general provisions and the operating permit program requirements for affected sources and affected units under the Acid Rain Program, pursuant to title IV of the Clean Air Act, 42 U.S.C. 7401, et seq., as amended by Public Law 101-549 (November 15, 1990).

§ 72.1(b)

(b) Scope. The regulations under this part set forth certain generally applicable provisions under the Acid Rain Program. The regulations also set forth requirements for obtaining three types of Acid Rain permits, during Phases I and II, for which an affected source may apply: Acid Rain permits issued by the United States Environmental Protection Agency during Phase I; the Acid Rain portion of an operating permit issued by a State permitting authority during Phase II; and the Acid Rain portion of an operating permit issued by EPA when it is the permitting authority during Phase II. The requirements under this part supplement, and in some cases modify, the requirements under parts 70 and 71 of this chapter and other regulations implementing title V for approving and implementing State operating permit programs and for Federal issuance of operating permits under title V, as such requirements apply to affected sources under the Acid Rain Program.

§ 72.2

§ 72.2 Definitions.

The terms used in this part, in parts 73, 74, 75, 76, 77 and 78 of this chapter shall have the meanings set forth in the Act, including sections 302 and 402 of the Act, and in this section as follows:

Account number means the identification number given by the Administrator to each Allowance Tracking System account pursuant to §73.31(d) of this chapter.

Acid Rain compliance option means one of the methods of compliance used by an affected unit under the Acid Rain Program as described in a compliance plan submitted and approved in accordance with subpart D of this part, part 74 of this chapter or part 76 of this chapter.

Acid Rain emissions limitation means:

(1) For purposes of sulfur dioxide emissions:

(i) The tonnage equivalent of the allowances authorized to be allocated to an affected unit for use in a calendar year under section 404(a)(1), (a)(3), and (h) of the Act, or the basic Phase II allowance allocations authorized to be allocated to an affected unit for use in a calendar year, or the allowances authorized to be allocated to an opt-in source under section 410 of the Act for use in a calendar year;

(ii) As adjusted:

(A) By allowances allocated by the Administrator pursuant to section 403, section 405 (a)(2), (a)(3), (b)(2), (c)(4), (d)(3), and (h)(2), and section 406 of the Act;

(B) By allowances allocated by the Administrator pursuant to subpart D of this part; and thereafter

(C) By allowance transfers to or from the compliance subaccount for that unit that were recorded or properly submitted for recordation by the allowance transfer deadline as provided in §73.35 of this chapter, after deductions and other adjustments are made pursuant to §73.34(c) of this chapter; and

(2) For purposes of nitrogen oxides emissions, the applicable limitation under part 76 of this chapter.

Acid Rain emissions reduction requirement means a requirement under the Acid Rain Program to reduce the emissions of sulfur dioxide or nitrogen oxides from a unit to a specified level or by a specified percentage.

Acid Rain permit or permit means the legally binding written document or portion of such document, including any permit revisions, that is issued by a permitting authority under this part and specifies the Acid Rain Program requirements applicable to an affected source and to the owners and operators and the designated representative of the affected source or the affected unit.

Acid Rain Program means the national sulfur dioxide and nitrogen oxides air pollution control and emissions reduction program established in accordance with title IV of the Act, this part, and parts 73, 74, 75, 76, 77, and 78 of this chapter.

Act means the Clean Air Act, 42 U.S.C. 7401, *et seq.* as amended by Public Law No. 101-549 (November 15, 1990).

Actual SO₂ emissions rate means the annual average sulfur dioxide emissions rate for the unit (expressed in lb/mmBtu), for the specified calendar year; *provided* that, if the unit is listed in the NADB, the "1985 actual SO₂ emissions rate" for the unit shall be the rate specified by the Administrator in the NADB under the data field "SO₂RTE."

Add-on control means a pollution reduction control technology that operates independent of the combustion process.

Additional advance auction means the auction of advance allowances that were offered the previous year for sale in an advance sale.

Administrator means the Administrator of the United States Environmental Protection Agency or the Administrator's duly authorized representative.

Advance allowance means an allowance that may be used for purposes of compliance with a unit's Acid Rain sulfur dioxide emissions limitation requirements beginning no earlier than seven years following the year in which the allowance is first offered for sale.

Advance auction means an auction of advance allowances.

Advance sale means a sale of advance allowances.

Affected source means a source that includes one or more affected units.

Affected States means any affected States as defined in part 71 of this chapter.

Affected unit means a unit that is subject to any Acid Rain emissions reduction requirement or Acid Rain emissions limitation under §72.6 or part 74 of this chapter.

Affiliate shall have the meaning set forth in section 2(a)(11) of the Public Utility Holding Company Act of 1935, 15 U.S.C. 79b(a)(11), as of November 15, 1990.

Allocate or allocation means the initial crediting of an allowance by the Administrator to an Allowance Tracking System unit account or general account.

Air Emission Testing Body (AETB) means a company or other entity that conducts Air Emissions Testing as described in ASTM D7036-04.

Allowable SO₂ emissions rate means the most stringent federally enforceable emissions limitation for sulfur dioxide (in lb/mmBtu) applicable to the unit or combustion source for the specified calendar year, or for such subsequent year as determined by the Administrator where such a limitation does not exist for the specified year; provided that, if a Phase I or Phase II unit is listed in the NADB, the “1985 allowable SO₂ emissions rate” for the Phase I or Phase II unit shall be the rate specified by the Administrator in the NADB under the data field “1985 annualized boiler SO₂ emission limit.”

Allowance means an authorization by the Administrator under the Acid Rain Program to emit up to one ton of sulfur dioxide during or after a specified calendar year.

Allowance deduction, or deduct when referring to allowances, means the permanent withdrawal of allowances by the Administrator from an Allowance Tracking System compliance subaccount, or future year subaccount, to account for the number of tons of SO₂ emissions from an affected unit for the calendar year, for tonnage emissions estimates calculated for periods of missing data as provided in part 75 of this chapter, or for any other allowance surrender obligations of the Acid Rain Program.

Allowances held or hold allowances means the allowances recorded by the Administrator, or submitted to the Administrator for recordation in accordance with §73.50 of this chapter, in an Allowance Tracking System account.

Allowance reserve means any bank of allowances established by the Administrator in the Allowance Tracking System pursuant to sections 404(a)(2) (Phase I extension reserve), 404(g) (energy conservation and renewable energy reserve), or 416(b) (special allowance reserve) of the Act, and implemented in accordance with part 73, subpart B of this chapter.

Allowance Tracking System or ATS means the Acid Rain Program system by which the Administrator allocates, records, deducts, and tracks allowances.

Allowance Tracking System account means an account in the Allowance Tracking System established by the Administrator for purposes of allocating, holding, transferring, and using allowances.

Allowance transfer deadline means midnight of March 1 (or February 29 in any leap year) or, if such day is not a business day, midnight of the first business day thereafter and is the deadline by which allowances may be submitted for recordation in an affected unit's compliance subaccount for the purposes of meeting the unit's Acid Rain emissions limitation requirements for sulfur dioxide for the previous calendar year.

Alternative monitoring system means a system or a component of a system designed to provide direct or indirect data of mass emissions per time period, pollutant concentrations, or volumetric flow, that is demonstrated to the Administrator as having the same precision, reliability, accessibility, and timeliness as the data provided by a certified CEMS or certified CEMS component in accordance with part 75 of this chapter.

As-fired means the taking of a fuel sample just prior to its introduction into the unit for combustion.

Auction subaccount means a subaccount in the Special Allowance Reserve, as specified in section 416(b) of the Act, which contains allowances to be sold at auction in the amount of 150,000 per year from calendar year 1995 through 1999, inclusive, and 200,000 per year for each year beginning in calendar year 2000, subject to the adjustments noted in the regulations in part 73, subpart E of this chapter.

Authorized account representative means a responsible natural person who is authorized, in accordance with part 73 of this chapter, to transfer and otherwise dispose of allowances held in an Allowance Tracking System general account; or, in the case of a unit account, the designated representative of the owners and operators of the affected unit.

Automated data acquisition and handling system means that component of the CEMS, COMS, or other emissions monitoring system approved by the Administrator for use in the Acid Rain Program, designed to interpret and convert individual output signals from pollutant concentration monitors, flow monitors, diluent gas monitors, moisture monitors, opacity monitors, and other component parts of the monitoring system to produce a continuous record of the measured parameters in the measurement units required by part 75 of this chapter.

Award means the conditional set-aside by the Administrator, based on the submission of an early ranking application pursuant to subpart D of this part, of an allowance from the Phase I extension reserve, for possible future allocation to a Phase I extension applicant's Allowance Tracking System unit account.

Backup fuel means a fuel for a unit where:

(1) For purposes of the requirements of the monitoring exception of appendix E of part 75 of this chapter, the fuel provides less than 10.0 percent of the heat input to a unit during the three calendar years prior to certification testing for the primary fuel and the fuel provides less than 15.0 percent of the heat input to a unit in each of those three calendar years; or the Administrator approves the fuel as a backup fuel; and

(2) For all other purposes under the Acid Rain Program, a fuel that is not the primary fuel (expressed in mmBtu) consumed by an affected unit for the applicable calendar year.

Baseline means the annual average quantity of fossil fuel consumed by a unit, measured in millions of British Thermal Units (expressed in mmBtu) for calendar years 1985 through 1987; *provided* that in the event that a unit is listed in the NADB, the baseline will be calculated for each unit-generator pair that includes the unit, and the unit's baseline will be the sum of such unit-generator baselines. The unit-generator baseline will be as provided in the NADB under the data field "BASE8587", as adjusted by the outage hours listed in the NADB under the data field "OUTAGEHR" in accordance with the following equation:

$$\text{Baseline} = \text{BASE8587} \times \{26280 / (26280 - \text{OUTAGEHR})\} \times \{36 / (36 - \text{months not on line})\} \times 10^6$$

"Months not on line" is the number of months during January 1985 through December 1987 prior to the commencement of firing for units that commenced firing in that period, i.e., the number of months, in that period, prior to the on-line month listed under the data field "BLRMNONL" and the on-line year listed in the data field "BLRYRONL" in the NADB.

Basic Phase II allowance allocations means:

(1) For calendar years 2000 through 2009 inclusive, allocations of allowances made by the Administrator pursuant to section 403 and section 405 (b)(1), (3), and (4); (c)(1), (2), (3), and (5); (d)(1), (2), (4), and (5); (e); (f); (g)(1), (2), (3), (4), and (5); (h)(1); (i); and (j).

(2) For each calendar year beginning in 2010, allocations of allowances made by the Administrator pursuant to section 403 and section 405 (b)(1), (3), and (4); (c)(1), (2), (3), and (5); (d)(1), (2), (4), and (5); (e); (f); (g)(1), (2), (3), (4), and (5); (h)(1) and (3); (i); and (j).

Bias means systematic error, resulting in measurements that will be either consistently low or high relative to the reference value.

Boiler means an enclosed fossil or other fuel-fired combustion device used to produce heat and to transfer heat to recirculating water, steam, or any other medium.

Bypass operating quarter means a calendar quarter during which emissions pass through a stack, duct or flue that bypasses add-on emission controls.

Bypass stack means any duct, stack, or conduit through which emissions from an affected unit may or do pass to the atmosphere, which either augments or substitutes for the principal stack exhaust system or ductwork during any portion of the unit's operation.

Calibration error means the difference between:

- (1) The response of a gaseous monitor to a calibration gas and the known concentration of the calibration gas;
- (2) The response of a flow monitor to a reference signal and the known value of the reference signal; or
- (3) The response of a continuous opacity monitoring system to an attenuation filter and the known value of the filter after a stated period of operation during which no unscheduled maintenance, repair, or adjustment took place.

Calibration gas means:

- (1) A standard reference material;
- (2) A standard reference material equivalent compressed gas primary reference material;
- (3) A NIST traceable reference material;
- (4) NIST/EPA approved certified reference materials;
- (5) A gas manufacturer's intermediate standard;
- (6) An EPA protocol gas;
- (7) Zero air material; or
- (8) A research gas mixture.

Capacity factor means either: (1) the ratio of a unit's actual annual electric output (expressed in MWe-hr) to the unit's nameplate capacity (or maximum observed hourly gross load (in MWe/hr) if greater than the nameplate capacity) times 8760 hours, or (2) the ratio of a unit's annual heat input (in million British thermal units or equivalent units of measure) to the unit's maximum rated hourly design heat input rate (in million British thermal units per hour or equivalent units of measure) times 8,760 hours.

CEMS precision or precision as applied to the monitoring requirements of part 75 of this chapter, means the closeness of a measurement to the actual measured value expressed as the uncertainty associated with repeated measurements of the same sample or of different samples from the same process (e.g., the random error associated with simultaneous measurements of a process made by more than one instrument). A measurement technique is determined to have increasing "precision" as the variation among the repeated measurements decreases.

Centroidal area means a representational concentric area that is geometrically similar to the stack or duct cross section, and is not greater than 1 percent of the stack or duct cross-sectional area.

Certificate of representation means the completed and signed submission required by §72.20, for certifying the appointment of a designated representative for an affected source or a group of identified affected sources authorized to represent the owners and operators of such source(s) and of the affected units at such source(s) with regard to matters under the Acid Rain Program.

Certifying official, for purposes of part 73 of this chapter, means:

(1) For a corporation, a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation;

(2) For partnership or sole proprietorship, a general partner or the proprietor, respectively; and

(3) For a local government entity or State, Federal, or other public agency, either a principal executive officer or ranking elected official.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society for Testing and Materials Designation ASTM D388-92 "Standard Classification of Coals by Rank" (as incorporated by reference in §72.13).

Coal-derived fuel means any fuel, whether in a solid, liquid, or gaseous state, produced by the mechanical, thermal, or chemical processing of coal (e.g., pulverized coal, coal refuse, liquified or gasified coal, washed coal, chemically cleaned coal, coal-oil mixtures, and coke).

Coal-fired means the combustion of fuel consisting of coal or any coal-derived fuel (except a coal-derived gaseous fuel that meets the definition of "very low sulfur fuel" in this section), alone or in combination with any other fuel, where:

(1) For purposes of the requirements of part 75 of this chapter, a unit is "coal-fired" independent of the percentage of coal or coal-derived fuel consumed in any calendar year (expressed in mmBtu); and

(2) For all other purposes under the Acid Rain Program, except for purposes of applying part 76 of this chapter, a unit is "coal-fired" if it uses coal or coal-derived fuel as its primary fuel (expressed in mmBtu); *provided* that, if the unit is listed in the NADB, the primary fuel is the fuel listed in the NADB under the data field "PRIMEFUEL".

Cogeneration unit means a unit that produces electric energy and useful thermal energy for industrial, commercial, or heating or cooling purposes, through the sequential use of the original fuel energy.

Combustion source means a stationary fossil fuel fired boiler, turbine, or internal combustion engine that has submitted or intends to submit an opt-in permit application under §74.14 of this chapter to enter the Opt-in Program.

Commence commercial operation means to have begun to generate electricity for sale, including the sale of test generation.

Commence construction means that an owner or operator has either undertaken a continuous program of construction or has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction.

Commence operation means to have begun any mechanical, chemical, or electronic process, including start-up of an emissions control technology or emissions monitor or of a unit's combustion chamber.

Common pipe means an oil or gas supply line through which the same type of fuel is distributed to two or more affected units.

Common pipe operating time means the portion of a clock hour during which fuel flows through a common pipe. The common pipe operating time, in hours, is expressed as a decimal fraction, with valid values ranging from 0.00 to 1.00.

Common stack means the exhaust of emissions from two or more units through a single flue.

Compensating unit means an affected unit that is not otherwise subject to Acid Rain emissions limitation or Acid Rain emissions reduction requirements during Phase I and that is designated as a Phase I unit in a reduced utilization plan under §72.43; provided that an opt-in source shall not be a compensating unit.

Compliance certification means a submission to the Administrator or permitting authority, as appropriate, that is required by this part, by part 73, 74, 75, 76, 77, or 78 of this chapter, to report an affected source or an affected unit's compliance or non-compliance with a provision of the Acid Rain Program and that is signed and verified by the designated representative in accordance with subparts B and I of this part and the Acid Rain Program regulations generally.

Compliance plan, for the purposes of the Acid Rain Program, means the document submitted for an affected source in accordance with subpart C of this part or subpart E of part 74 of this chapter, or part 76 of this chapter, specifying the method(s) (including one or more Acid Rain compliance options as provided under subpart D of this part or subpart E of part 74 of this chapter, or part 76 of this chapter) by which each affected unit at the source will meet the applicable Acid Rain emissions limitation and Acid Rain emissions reduction requirements.

Compliance subaccount means the subaccount in an affected unit's Allowance Tracking System account, established pursuant to §73.31 (a) or (b) of this chapter, in which are held, from the date that allowances for the current calendar year are recorded under §73.34(a) until December 31, allowances available for use in the current calendar year and, after December 31 until the date that deductions are made under §73.35(b), allowances available for use by the unit in the preceding calendar year, for the purpose of meeting the Acid Rain emissions limitation for sulfur dioxide.

Compliance use date means the first calendar year for which an allowance may be used for purposes of meeting a unit's Acid Rain emissions limitation for sulfur dioxide.

Conditionally valid data means data from a continuous monitoring system that are not quality-assured, but which may become quality-assured if certain conditions are met. Examples of data that may qualify as conditionally valid are: data recorded by an uncertified monitoring system prior to its initial certification; or data recorded by a certified monitoring system following a significant change to the system that may affect its ability to accurately measure and record emissions. A monitoring system must pass a probationary calibration error test, in accordance with section 2.1.1 of appendix B to part 75 of this chapter, to initiate the conditionally valid data status. In order for conditionally valid emission data to become quality-assured, one or more quality assurance tests or diagnostic tests must be passed within a specified time period in accordance with §75.20(b)(3).

Conservation Verification Protocol means a methodology developed by the Administrator for calculating the kilowatt hour savings from energy conservation measures and improved unit efficiency measures for the purposes of title IV of the Act.

Construction means fabrication, erection, or installation of a unit or any portion of a unit.

Consumer Price Index or CPI means, for purposes of the Acid Rain Program, the U.S. Department of Labor, Bureau of Labor Statistics unadjusted Consumer Price Index for All Urban Consumers for the U.S. city average, for All Items on the latest reference base, or if such index is no longer published, such other index as the Administrator in his or her discretion determines meets the requirements of the Clean Air Act Amendments of 1990.

(1) *CPI (1990)* means the CPI for all urban consumers for the month of August 1989. The “CPI (1990)” is 124.6 (with 1982–1984=100). Beginning in the month for which a new reference base is established, “CPI (1990)” will be the CPI value for August 1989 on the new reference base.

(2) *CPI (year)* means the CPI for all urban consumers for the month of August of the previous year.

Continuous emission monitoring system or CEMS means the equipment required by part 75 of this chapter used to sample, analyze, measure, and provide, by means of readings recorded at least once every 15 minutes (using an automated data acquisition and handling system (DAHS)), a permanent record of SO₂, NO_x, Hg, or CO₂ emissions or stack gas volumetric flow rate. The following are the principal types of continuous emission monitoring systems required under part 75 of this chapter. Sections 75.10 through 75.18, §75.71(a) and 75.81 of this chapter indicate which type(s) of CEMS is required for specific applications:

(1) A sulfur dioxide monitoring system, consisting of an SO₂ pollutant concentration monitor and an automated DAHS. An SO₂ monitoring system provides a permanent, continuous record of SO₂ emissions in units of parts per million (ppm);

(2) A flow monitoring system, consisting of a stack flow rate monitor and an automated DAHS. A flow monitoring system provides a permanent, continuous record of stack gas volumetric flow rate, in units of standard cubic feet per hour (scfh);

(3) A nitrogen oxides (NO_x) emission rate (or NO_x-diluent) monitoring system, consisting of a NO_x pollutant concentration monitor, a diluent gas (CO₂ or O₂) monitor, and an automated DAHS. A NO_x-diluent monitoring system provides a permanent, continuous record of: NO_x concentration in units of parts per million (ppm), diluent gas concentration in units of percent O₂ or CO₂ (% O₂ or CO₂), and NO_x emission rate in units of pounds per million British thermal units (lb/mmBtu);

(4) A nitrogen oxides concentration monitoring system, consisting of a NO_x pollutant concentration monitor and an automated DAHS. A NO_x concentration monitoring system provides a permanent, continuous record of NO_x emissions in units of parts per million (ppm). This type of CEMS is used only in conjunction with a flow monitoring system to determine NO_x mass emissions (in lb/hr) under subpart H of part 75 of this chapter;

(5) A carbon dioxide monitoring system, consisting of a CO₂ pollutant concentration monitor (or an oxygen monitor plus suitable mathematical equations from which the CO₂ concentration is derived) and the automated DAHS. A carbon dioxide monitoring system provides a permanent, continuous record of CO₂ emissions in units of percent CO₂ (% CO₂); and

(6) A moisture monitoring system, as defined in §75.11(b)(2) of this chapter. A moisture monitoring system provides a permanent, continuous record of the stack gas moisture content, in units of percent H₂O (% H₂O)

(7) A Hg concentration monitoring system, consisting of a Hg pollutant concentration monitor and an automated DAHS. A Hg concentration monitoring system provides a permanent, continuous record of Hg emissions in units of micrograms per standard cubic meter (µg/scm).

Continuous opacity monitoring system or COMS means the equipment required by part 75 of this chapter to sample, measure, analyze, and provide, with readings taken at least once every 6 minutes, a permanent record of opacity or transmittance. The following components are included in a continuous opacity monitoring system:

- (1) Opacity monitor; and
- (2) An automated data acquisition and handling system.

Control unit means a unit employing a qualifying Phase I technology in accordance with a Phase I extension plan under §72.42.

Current year subaccount means the subaccount in an Allowance Tracking System general account, established pursuant to §73.31(c) of this chapter, in which are held allowances that may be transferred to a unit's compliance subaccount for use for the purpose of meeting the Acid Rain sulfur dioxide emissions limitation.

Customer means a purchaser of electricity not for the purposes of retransmission or resale. For generating rural electrical cooperatives, the customers of the distribution cooperatives served by the generating cooperative will be considered customers of the generating cooperative.

Decisional body means any EPA employee who is or may reasonably be expected to act in a decision-making role in a proceeding under part 78 of this chapter, including the Administrator, a member of the Environmental Appeals Board, and a Presiding Officer, and any staff of any such person who are participating in the decisional process.

Demand-side measure means a measure:

- (1) To improve the efficiency of consumption of electricity from a utility by customers of the utility; or
- (2) To reduce the amount of consumption of electricity from a utility by customers of the utility without increasing the use by the customer of fuel other than: Biomass (i.e., combustible energy-producing materials from biological sources, which include wood, plant residues, biological wastes, landfill gas, energy crops, and eligible components of municipal solid waste), solar, geothermal, or wind resources; or industrial waste gases where the party making the submission involved certifies that there is no net increase in sulfur dioxide emissions from the use of such gases. "Demand-side measure" includes the measures listed in part 73, appendix A, section 1 of this chapter.

Designated representative means a responsible natural person authorized by the owners and operators of an affected source and of all affected units at the source or by the owners and operators of a combustion source or process source, as evidenced by a certificate of representation submitted in accordance with subpart B of this part, to represent and legally bind each owner and operator, as a matter of Federal law, in matters pertaining to the Acid Rain Program. Whenever the term "responsible official" is used in part 70 of this chapter, in any other regulations implementing title V of the Act, or in a State operating permit program, it shall be deemed to refer to the "designated representative" with regard to all matters under the Acid Rain Program.

Desulfurization refers to various procedures whereby sulfur is removed from petroleum during or apart from the refining process. "Desulfurization" does not include such processes as dilution or blending of low sulfur content diesel fuel with high sulfur content diesel fuel from a diesel refinery not eligible under 40 CFR part 73, subpart G.

Diesel-fired unit means, for the purposes of part 75 of this chapter, an oil-fired unit that combusts diesel fuel as its fuel oil, where the supplementary fuel, if any, shall be limited to natural gas or gaseous fuels containing no more sulfur than natural gas.

Diesel fuel means a low sulfur fuel oil of grades 1-D or 2-D, as defined by the American Society for Testing and Materials standard ASTM D975-91, "Standard Specification for Diesel Fuel Oils," grades 1-GT or 2-GT, as defined by ASTM D2880-90a, "Standard Specification for Gas Turbine Fuel Oils," or grades 1 or 2, as defined by ASTM D396-90a, "Standard Specification for Fuel Oils" (incorporated by reference in §72.13).

Diesel reciprocating engine unit means an internal combustion engine that combusts only diesel fuel and that thereby generates electricity through the operation of pistons, rather than by heating steam or water.

Diluent cap value means a default value of percent CO₂ or O₂ which may be used to calculate the hourly NO_x emission rate, ~~CO₂ mass emission rate, or heat input rate~~, when the measured hourly average percent CO₂ is below the default value or when the measured hourly average percent O₂ is above the default value. The diluent cap values for boilers are 5.0 percent CO₂ and 14.0 percent O₂. For combustion turbines, the diluent cap values are 1.0 percent CO₂ and 19.0 percent O₂.

Diluent gas means a major gaseous constituent in a gaseous pollutant mixture, which in the case of emissions from fossil fuel-fired units are carbon dioxide and oxygen.

Diluent gas monitor means that component of the continuous emission monitoring system that measures the diluent gas concentration in a unit's flue gas.

Direct public utility ownership means direct ownership of equipment and facilities by one or more corporations, the principal business of which is sale of electricity to the public at retail. Percentage ownership of such equipment and facilities shall be measured on the basis of book value.

Direct Sale Subaccount means a subaccount in the Special Allowance Reserve, as specified in section 416(b) of the Act, which contains Phase II allowances to be sold in the amount of 25,000 per year, from calendar year 1993 to 1999, inclusive, and of 50,000 per year for each year beginning in calendar year 2000, subject to the adjustments noted in the regulations at part 73, subpart E of this chapter.

Dispatch means the assignment within a dispatch system of generating levels to specific units and generators to affect the reliable and economical supply of electricity, as customer demand rises or falls, and includes:

- (1) The operation of high-voltage lines, substations, and related equipment; and
- (2) The scheduling of generation for the purpose of supplying electricity to other utilities over interconnecting transmission lines.

Draft Acid Rain permit or draft permit means the version of the Acid Rain permit, or the Acid Rain portion of an operating permit, that a permitting authority offers for public comment.

Dual-fuel reciprocating engine unit means an internal combustion engine that combusts any combination of natural gas and diesel fuel and that thereby generates electricity through the operation of pistons, rather than by heating steam or water.

Eligible Indian tribe means any eligible Indian tribe as defined in part 71 of this chapter.

Emergency fuel means either:

(1) For purposes of the requirements for a fuel flowmeter used in an excepted monitoring system under appendix D or E of part 75 of this chapter, the fuel identified by the designated representative in the unit's monitoring plan as the fuel which is combusted only during emergencies where the primary fuel is not available; or

(2) For purposes of the requirement for stack testing for an excepted monitoring system under appendix E of part 75 of this chapter, the fuel identified in a federally-enforceable permit for a plant and identified by the designated representative in the unit's monitoring plan as the fuel which is combusted only during emergencies where the primary fuel is not available.

Emissions means air pollutants exhausted from a unit or source into the atmosphere, as measured, recorded, and reported to the Administrator by the designated representative and as determined by the Administrator, in accordance with the emissions monitoring requirements of part 75 of this chapter.

Environmental Appeals Board means the three-member board established pursuant to §1.25(e) of this chapter and authorized to hear appeals pursuant to part 78 of this chapter.

EPA means the United States Environmental Protection Agency.

EPA protocol gas means a calibration gas mixture prepared and analyzed according to section 2 of the "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards," September 1997, EPA-600/R-97/121 or such revised procedure as approved by the Administrator. Vendors advertising certification with the EPA Traceability Protocol or distributing gases as "EPA Protocol Gas" must participate in the EPA Protocol Gas Verification Program. Non-participating vendors may not use "EPA" in any form of advertising for these products, unless approved by the Administrator.

EPA Protocol Gas Verification Program means the EPA Protocol Gas audit program described in Section 2.1.10 of the "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards," September 1997, EPA-600/R-97/121 (EPA Protocol Procedure) or such revised procedure as approved by the Administrator.

EPA trial staff means an employee of EPA, whether temporary or permanent, who has been designated by the Administrator to investigate, litigate, and present evidence, arguments, and positions of EPA in any evidentiary hearing under part 78 of this chapter. Any EPA or permitting authority employee, consultant, or contractor who is called as a witness in the evidentiary hearing by EPA trial staff shall be deemed to be "EPA trial staff".

Equivalent diameter means a value, calculated using the Equation 1-1 in section 12.2 of Method 1 in part 60, appendix A of this chapter, and used to determine the upstream and downstream distances for locating CEMS or CEMS components in flues or stacks with rectangular cross sections.

Ex parte communication means any communication, written or oral, relating to the merits of an adjudicatory proceeding under part 78 of this chapter, that was not originally included or stated in the administrative record, in a pleading, or in an evidentiary hearing or oral argument under part 78 of this chapter, between the decisional body and any interested person outside EPA or any EPA trial staff. Ex parte communication shall not include:

(1) Communication between EPA employees other than between EPA trial staff and a member of the decisional body; or

(2) Communication between the decisional body and interested persons outside the

Agency, or EPA trial staff, where all parties to the proceeding have received prior written notice of the proposed communication and are given an opportunity to be present and to participate therein.

Excepted monitoring system means a monitoring system that follows the procedures and requirements of [§75.15 of this chapter](#), §75.19 of this chapter, [§75.81\(b\) of this chapter](#), or of appendix D or E to part 75 for approved exceptions to the use of continuous emission monitoring systems.

Excess emissions means:

(1) Any tonnage of sulfur dioxide emitted by an affected unit during a calendar year that exceeds the Acid Rain emissions limitation for sulfur dioxide for the unit; and

(2) Any tonnage of nitrogen oxide emitted by an affected unit during a calendar year that exceeds the annual tonnage equivalent of the Acid Rain emissions limitation for nitrogen oxides applicable to the affected unit taking into account the unit's heat input for the year.

Existing unit means a unit (including a unit subject to section 111 of the Act) that commenced commercial operation before November 15, 1990 and that on or after November 15, 1990 served a generator with nameplate capacity of greater than 25 MWe. "Existing unit" does not include simple combustion turbines or any unit that on or after November 15, 1990 served only generators with a nameplate capacity of 25 MWe or less. Any "existing unit" that is modified, reconstructed, or repowered after November 15, 1990 shall continue to be an "existing unit."

Facility means any institutional, commercial, or industrial structure, installation, plant, source, or building.

File means to send or transmit a document, information, or correspondence to the official custody of the person specified to take possession in accordance with the applicable regulation. Compliance with any "filing" deadline shall be determined by the date that person receives the document, information, or correspondence.

Flow meter accuracy means the closeness of the measurement made by a flow meter to the reference value of the fuel flow being measured, expressed as the difference between the measurement and the reference value.

Flow monitor means a component of the continuous emission monitoring system that measures the volumetric flow of exhaust gas.

Flue means a conduit or duct through which gases or other matter are exhausted to the atmosphere.

Flue gas desulfurization system means a type of add-on emission control used to remove sulfur dioxide from flue gas, commonly referred to as a "scrubber."

Forced outage means the removal of a unit from service due to an unplanned component failure or other unplanned condition that requires such removal immediately or within 7 days from the onset of the unplanned component failure or condition. For purposes of §§72.43, 72.91, and 72.92, "forced outage" also includes a partial reduction in the heat input or electrical output due to an unplanned component failure or other unplanned condition that requires such reduction immediately or within 7 days from the onset of the unplanned component failure or condition.

Fossil fuel means natural gas, petroleum, coal, or any form of solid, liquid, or gaseous fuel

derived from such material.

Fossil fuel-fired means the combustion of fossil fuel or any derivative of fossil fuel, alone or in combination with any other fuel, independent of the percentage of fossil fuel consumed in any calendar year (expressed in mmBtu).

Fuel flowmeter QA operating quarter means a unit operating quarter in which the unit combusts the fuel measured by the fuel flowmeter for at least 168 unit operating hours (as defined in this section).

Fuel flowmeter system means an excepted monitoring system (as defined in this section) which provides a continuous record of the flow rate of fuel oil or gaseous fuel, in accordance with appendix D to part 75 of this chapter. A fuel flowmeter system consists of one or more fuel flowmeter components, all necessary auxiliary components (e.g., transmitters, transducers, etc.), and a data acquisition and handling system (DAHS).

Fuel oil means any petroleum-based fuel (including diesel fuel or petroleum derivatives such as oil tar) as defined by the American Society for Testing and Materials in ASTM D396-90a, "Standard Specification for Fuel Oils" (incorporated by reference in §72.13), and any recycled or blended petroleum products or petroleum by-products used as a fuel whether in a liquid, solid or gaseous state; *provided* that for purposes of the monitoring requirements of part 75 of this chapter, "fuel oil" shall be limited to the petroleum-based fuels for which applicable ASTM methods are specified in Appendices D, E, or F of part 75 of this chapter.

Fuel supply agreement means a legally binding agreement between a new IPP or a firm associated with a new IPP and a fuel supplier that establishes the terms and conditions under which the fuel supplier commits to provide fuel to be delivered to the new IPP.

Fuel usage time means the portion of a clock hour during which a unit combusts a particular type of fuel. The fuel usage time, in hours, is expressed as a decimal fraction, with valid values ranging from 0.00 to 1.00.

Future year subaccount means a subaccount in an Allowance Tracking System account, established by the Administrator pursuant to §73.31 of this chapter, in which allowances are held for one of the 30 years following the later of 1995 or a current calendar year following 1995.

Gas-fired means:

(1) For all purposes under the Acid Rain Program, except for part 75 of this chapter, the combustion of:

(i) Natural gas or other gaseous fuel (including coal-derived gaseous fuel), for at least 90.0 percent of the unit's average annual heat input during the previous three calendar years and for at least 85.0 percent of the annual heat input in each of those calendar years; and

(ii) Any fuel, except coal or solid or liquid coal-derived fuel, for the remaining heat input, if any.

(2) For purposes of part 75 of this chapter, the combustion of:

(i) Natural gas or other gaseous fuel (including coal-derived gaseous fuel) for at least 90.0 percent of the unit's average annual heat input during the previous three calendar years and for at least 85.0 percent of the annual heat input in each of those calendar years; and

(ii) Fuel oil, for the remaining heat input, if any.

(3) For purposes of part 75 of this chapter, a unit may initially qualify as gas-fired if the designated representative demonstrates to the satisfaction of the Administrator that the requirements of paragraph (2) of this definition are met, or will in the future be met, through

one of the following submissions:

(i) For a unit for which a monitoring plan has not been submitted under §75.62 of this chapter, the designated representative submits either:

(A) Fuel usage data for the unit for the three calendar years immediately preceding the date of initial submission of the monitoring plan for the unit under §75.62; or

(B) If a unit does not have fuel usage data for one or more of the three calendar years immediately preceding the date of initial submission of the monitoring plan for the unit under §75.62, the unit's designated fuel usage; all available fuel usage data (including the percentage of the unit's heat input derived from the combustion of gaseous fuels), beginning with the date on which the unit commenced commercial operation; and the unit's projected fuel usage.

(ii) For a unit for which a monitoring plan has already been submitted under §75.62, that has not qualified as gas-fired under paragraph (3)(i) of this definition, and whose fuel usage changes, the designated representative submits either:

(A) Three calendar years of data following the change in the unit's fuel usage, showing that no less than 90.0 percent of the unit's average annual heat input during the previous three calendar years, and no less than 85.0 percent of the unit's annual heat input during any one of the previous three calendar years, is from the combustion of gaseous fuels and the remaining heat input is from the combustion of fuel oil; or

(B) A minimum of 720 hours of unit operating data following the change in the unit's fuel usage, showing that no less than 90.0 percent of the unit's heat input is from the combustion of gaseous fuels and the remaining heat input is from the combustion of fuel oil, and a statement that this changed pattern of fuel usage is considered permanent and is projected to continue for the foreseeable future.

(iii) If a unit qualifies as gas-fired under paragraph (3)(i) or (ii) of this definition, the unit is classified as gas-fired as of the date of the submission under such paragraph.

(4) For purposes of part 75 of this chapter, a unit that initially qualifies as gas-fired under paragraph (3)(i) or (ii) of this definition must meet the criteria in paragraph (2) of this definition each year in order to continue to qualify as gas-fired. If such a unit combusts only gaseous fuel and fuel oil but fails to meet such criteria for a given year, the unit no longer qualifies as gas-fired starting January 1 of the year after the first year for which the criteria are not met. If such a unit combusts fuel other than gaseous fuel or fuel oil and fails to meet such criteria in a given year, the unit no longer qualifies as gas-fired starting the day after the first day for which the criteria are not met. If a unit failing to meet the criteria in paragraph (2) of this definition initially qualified as a gas-fired unit under paragraph (3) of this definition, the unit may qualify as a gas-fired unit for a subsequent year only if the designated representative submits the data specified in paragraph (3)(ii)(A) of this definition.

Gas manufacturer's intermediate standard (GMIS) means a compressed gas calibration standard that has been assayed and certified by direct comparison to a standard reference material (SRM), an SRM equivalent PRM, a NIST/EPA approved certified reference material (CRM), or a NIST traceable reference material (NTRM), in accordance with section 2.1.2.1 of the "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards," September 1997, EPA-600/R-97/121.

Gaseous fuel means a material that is in the gaseous state at standard atmospheric temperature and pressure conditions and that is combusted to produce heat.

General account means an Allowance Tracking System account that is not a unit account.

Generator means a device that produces electricity and was or would have been required to be reported as a generating unit pursuant to the United States Department of Energy Form 860 (1990 edition).

Generator Output capacity means the full-load continuous rating of a generator under specific

conditions as designed by the manufacturer.

Hearing clerk means an EPA employee designated by the Administrator to establish a repository for all books, records, documents, and other materials relating to proceedings under part 78 of this chapter.

Heat input rate means the product (expressed in mmBtu/hr) of the gross calorific value of the fuel (expressed in mmBtu/mass of fuel) and the fuel feed rate into the combustion device (expressed in mass of fuel/hr) and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust from other sources.

Hour before and hour after means, for purposes of the missing data substitution procedures of part 75 of this chapter, the quality-assured hourly SO₂ or CO₂ concentration, hourly flow rate, hourly NO_x concentration, hourly moisture, hourly O₂ concentration, or hourly NO_x emission rate (as applicable) recorded by a certified monitor during the unit or stack operating hour immediately before and the unit or stack operating hour immediately after a missing data period.

Hybrid generation facility means a plant that generates electrical energy derived from a combination of qualified renewable energy (wind, solar, biomass, or geothermal) and one or more other energy resources.

Independent auditor means a professional engineer who is not an employee or agent of the source being audited.

Independent Power Production Facility (IPP) means a source that:

(1) Is nonrecourse project financed, as defined by the Secretary of Energy at 10 CFR part 715;

(2) Is used for the generation of electricity, eighty percent or more of which is sold at wholesale; and

(3) Is a new unit required to hold allowances under Title IV of the Clean Air Act; but only if direct public utility ownership of the equipment comprising the facility does not exceed 50 percent.

Interested person means any person who submitted written comments or testified at a public hearing on the draft permit or other matter subject to notice and comment under the Acid Rain Program or any person who submitted his or her name to the Administrator or the permitting authority, as appropriate, to be placed on a list of persons interested in such matter. The Administrator or the permitting authority may update the list of interested persons from time to time by requesting additional written indication of continued interest from the persons listed and may delete from the list the name of any person failing to respond as requested.

Investor-owned utility means a utility that is organized as a tax-paying for-profit business.

Kilowatthour saved or savings means the net savings in electricity use (expressed in Kwh) that result directly from a utility's energy conservation measures or programs.

Least-cost plan or least-cost planning process means an energy conservation and electric power planning methodology meeting the requirements of §73.82(a)(4) of this chapter.

Life-of-the-unit, firm power contractual arrangement means a unit participation power sales agreement under which a utility or industrial customer reserves, or is entitled to receive, a specified amount or percentage of nameplate capacity and associated energy generated by any

specified generating unit and pays its proportional amount of such unit's total costs, pursuant to a contract:

- (1) For the life of the unit;
- (2) For a cumulative term of no less than 30 years, including contracts that permit an election for early termination; or
- (3) For a period equal to or greater than 25 years or 70 percent of the economic useful life of the unit determined as of the time the unit was built, with option rights to purchase or release some portion of the nameplate capacity and associated energy generated by the unit at the end of the period.

Long-term cold storage means the complete shut down of a unit intended to last for an extended period of time (at least two calendar years) where notice from long-term cold storage is provided under §75.61(a)(7).

Low mass emissions unit means an affected unit that is “gas-fired” or “oil-fired” (as defined in this section), and that qualifies to use the low mass emissions excepted methodology in §75.19 of this chapter.

Mail or serve by mail means to submit or serve by means other than personal service.

Maximum potential hourly heat input means an hourly heat input used for reporting purposes when a unit lacks certified monitors to report heat input. If the unit intends to use appendix D of part 75 of this chapter to report heat input, this value should be calculated, in accordance with part 75 of this chapter, using the maximum fuel flow rate and the maximum gross calorific value. If the unit intends to use a flow monitor and a diluent gas monitor, this value should be reported, in accordance with part 75 of this chapter, using the maximum potential flow rate and either the maximum carbon dioxide concentration (in percent CO₂) or the minimum oxygen concentration (in percent O₂).

Maximum potential NOX emission rate or MER means the emission rate of nitrogen oxides (in lb/mmBtu) calculated in accordance with section 3 of appendix F to part 75 of this chapter, using the maximum potential nitrogen oxides concentration (MPC), as defined in section 2.1.2.1 of appendix A to part 75 of this chapter, and either the maximum oxygen concentration (in percent O₂) or the minimum carbon dioxide concentration (in percent CO₂) under all operating conditions of the unit except for unit start-up, shutdown, and upsets. The diluent cap value, as defined in this section, may be used in lieu of the maximum O₂ or minimum CO₂ concentration to calculate the MER. As a second alternative, when the NO_x MPC is determined from emission test results or from historical CEM data, as described in section 2.1.2.1 of appendix A to part 75 of this chapter, quality-assured diluent gas (*i.e.*, O₂ or CO₂) data recorded concurrently with the MPC may be used to calculate the MER. For the purposes of §§75.4(f), 75.19(b)(3), and 75.33(c)(7) in part 75 of this chapter and section 2.5 in appendix E to part 75 of this chapter, the MER is specific to the type of fuel combusted in the unit.

Maximum rated hourly heat input rate means a unit-specific maximum hourly heat input rate (mmBtu/hr) which is the higher of the manufacturer's maximum rated hourly heat input rate or the highest observed hourly heat input rate.

Missing data period means the total number of consecutive hours during which any certified CEMS or approved alternative monitoring system is not providing quality-assured data, regardless of the reason.

Monitor accuracy means the closeness of the measurement made by a CEMS to the reference value of the emissions or volumetric flow being measured, expressed as the difference between the measurement and the reference value.

Monitor operating hour means any unit operating hour or portion thereof over which a CEMS, or other monitoring system approved by the Administrator under part 75 of this chapter is operating, regardless of the number of measurements (i.e., data points) collected during the hour or portion of an hour.

Most stringent federally enforceable emissions limitation means the most stringent emissions limitation for a given pollutant applicable to the unit, which has been approved by the Administrator under the Act, whether in a State implementation plan approved pursuant to title I of the Act, a new source performance standard, or otherwise. To determine the most stringent emissions limitation for sulfur dioxide, each limitation shall be converted to lbs/mmBtu, using the appropriate conversion factors in appendix B of this part; *provided* that for determining the most stringent emissions limitation for sulfur dioxide for 1985, each limitation shall also be annualized, using the appropriate annualization factors in appendix A of this part.

Multi-header generator means a generator served by ductwork from more than one unit.

Multi-header unit means a unit with ductwork serving more than one generator.

Multiple stack configuration refers to an exhaust configuration in which the flue gases from a particular unit discharge to the atmosphere through two or more stacks. The term also refers to a unit for which emissions are monitored in two or more ducts leading to the exhaust stack, in lieu of monitoring at the stack.

Nameplate capacity means the maximum electrical generating output (expressed in MWe) that a generator can sustain over a specified period of time when not restricted by seasonal or other deratings, as listed in the NADB under the data field "NAMECAP" if the generator is listed in the NADB or as measured in accordance with the United States Department of Energy standards if the generator is not listed in the NADB.

National Allowance Data Base or NADB means the data base established by the Administrator under section 402(4)(C) of the Act.

Natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 Btu per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

NERC region means the North American Electric Reliability Council region or, if any, subregion.

Net income neutrality means, in the case of energy conservation measures undertaken by an investor-owned utility whose rates are regulated by a State utility regulatory authority, rates and charges established by the State utility regulatory authority that ensure that the net income earned by the utility on its State-jurisdictional equity investment will be *no lower* as a consequence of its expenditures on cost-effective qualified energy conservation measures and any associated lost sales than it would have been had the utility not made such expenditures, or that the State utility regulatory authority has implemented a ratemaking approach designed to meet this objective.

New independent power production facility or new IPP means a unit that:

- (1) Commences commercial operation on or after November 15, 1990;
- (2) Is nonrecourse project-financed, as defined in 10 CFR part 715;
- (3) Sells 80% of electricity generated at wholesale; and
- (4) Does not sell electricity to any affiliate or, if it does, demonstrates it cannot obtain the required allowances from such an affiliate.

New unit means a unit that commences commercial operation on or after November 15, 1990, including any such unit that serves a generator with a nameplate capacity of 25 MWe or less or that is a simple combustion turbine.

Ninetieth (90th) percentile means a value that would divide an ordered set of increasing values so that at least 90 percent are less than or equal to the value and at least 10 percent are greater than or equal to the value.

Ninety-fifth (95th) percentile means a value that would divide an ordered set of increasing values so that at least 95 percent of the set are less than or equal to the value and at least 5 percent are greater than or equal to the value.

~~*NIST/EPA approved certified reference material or NIST/EPA approved CRM* means a calibration gas mixture that has been approved by EPA and the National Institutes of Standards and Technologies (NIST) as having specific known chemical or physical property values certified by a technically valid procedure as evidenced by a certificate or other documentation issued by a certifying standard setting body.~~

~~*NIST traceable reference material (NTRM)* means a calibration gas mixture tested by and certified by the National Institutes of Standards and Technologies (NIST) to have a certain specified concentration of gases. NTRMs may have different concentrations from those of standard reference materials.~~

Offset plan means a plan pursuant to part 77 of this chapter for offsetting excess emissions of sulfur dioxide that have occurred at an affected unit in any calendar year.

Oil-fired means:

- (1) For all purposes under the Acid Rain Program, except part 75 of this chapter, the combustion of:
 - (i) Fuel oil for more than 10.0 percent of the average annual heat input during the previous three calendar years or for more than 15.0 percent of the annual heat input during any one of those calendar years; and
 - (ii) Any solid, liquid or gaseous fuel (including coal-derived gaseous fuel), other than coal or any other coal-derived solid or liquid fuel, for the remaining heat input, if any.
- (2) For purposes of part 75 of this chapter, combustion of only fuel oil and gaseous fuels, provided that the unit involved does not meet the definition of gas-fired.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Operating when referring to a combustion or process source seeking entry into the Opt-in Program, means that the source had documented consumption of fuel input for more than 876 hours in the 6 months immediately preceding the submission of a combustion source's opt-in application under §74.16(a) of this chapter.

Operating permit means a permit issued under part 70 of this chapter and any other regulations implementing title V of the Act.

Opt in or opt into means to elect to become an affected unit under the Acid Rain Program through the issuance of the final effective opt-in permit under §74.14 of this chapter.

Opt-in permit means the legally binding written document that is contained within the Acid Rain permit and sets forth the requirements under part 74 of this chapter for a combustion source or a process source that opts into the Acid Rain Program.

Opt-in source means a combustion source or process source that has elected to become an affected unit under the Acid Rain Program and whose opt-in permit has been issued and is in effect.

Out-of-control period means any period:

- (1) Beginning with the hour corresponding to the completion of a daily calibration error, linearity check, or quality assurance audit that indicates that the instrument is not measuring and recording within the applicable performance specifications; and
- (2) Ending with the hour corresponding to the completion of an additional calibration error, linearity check, or quality assurance audit following corrective action that demonstrates that the instrument is measuring and recording within the applicable performance specifications.

Oversubscription payment deadline means 30 calendar days prior to the allowance transfer deadline.

Owner means any of the following persons:

- (1) Any holder of any portion of the legal or equitable title in an affected unit or in a combustion source or process source; or
- (2) Any holder of a leasehold interest in an affected unit or in a combustion source or process source; or
- (3) Any purchaser of power from an affected unit or from a combustion source or process source under a life-of-the-unit, firm power contractual arrangement as the term is defined herein and used in section 408(i) of the Act. However, unless expressly provided for in a leasehold agreement, owner shall not include a passive lessor, or a person who has an equitable interest through such lessor, whose rental payments are not based, either directly or indirectly, upon the revenues or income from the affected unit; or
- (4) With respect to any Allowance Tracking System general account, any person identified in the submission required by §73.31(c) of this chapter that is subject to the binding agreement for the authorized account representative to represent that person's ownership interest with respect to allowances.

Owner or operator means any person who is an owner or who operates, controls, or supervises an affected unit, affected source, combustion source, or process source and shall include, but not be limited to, any holding company, utility system, or plant manager of an affected unit, affected source, combustion source, or process source.

Ozone nonattainment area means an area designated as a nonattainment area for ozone under subpart C of part 81 of this chapter.

Ozone season means the period of time beginning May 1 of a year and ending on September 30 of the same year, inclusive.

Ozone transport region means the ozone transport region designated under Section 184 of the Act.

Peaking unit means:

- (1) A unit that has:
 - (i) An average capacity factor of no more than 10.0 percent during the previous three calendar years and
 - (ii) A capacity factor of no more than 20.0 percent in each of those calendar years.
- (2) For purposes of part 75 of this chapter, a unit may initially qualify as a peaking unit if the designated representative demonstrates to the satisfaction of the Administrator that the requirements of paragraph (1) of this definition are met, or will in the future be met, through one of the following submissions:
 - (i) For a unit for which a monitoring plan has not been submitted under §75.62, the designated representative submits either:
 - (A) Capacity factor data for the unit for the three calendar years immediately preceding the date of initial submission of the monitoring plan for the unit under §75.62; or
 - (B) If a unit does not have capacity factor data for one or more of the three calendar years immediately preceding the date of initial submission of the monitoring plan for the unit under §75.62, all available capacity factor data, beginning with the date on which the unit commenced commercial operation; and projected capacity factor data.
 - (ii) For a unit for which a monitoring plan has already been submitted under §75.62, that has not qualified as a peaking unit under paragraph (2)(i) of this definition, and where capacity factor changes, the designated representative submits either:
 - (A) Three calendar years of data following the change in the unit's capacity factor showing an average capacity factor of no more than 10.0 percent during the three previous calendar years and a capacity factor of no more than 20.0 percent in each of those calendar years; or
 - (B) One calendar year of data following the change in the unit's capacity factor showing a capacity factor of no more than 10.0 percent and a statement that this changed pattern of operation resulting in a capacity factor less than 10.0 percent is considered permanent and is projected to continue for the foreseeable future.
- (3) For purposes of part 75 of this chapter, a unit that initially qualifies as a peaking unit must meet the criteria in paragraph (1) of this definition each year in order to continue to qualify as a peaking unit. If such a unit fails to meet such criteria for a given year, the unit no longer qualifies as a peaking unit starting January 1 of the year after the year for which the criteria are not met. If a unit failing to meet the criteria in paragraph (1) of this definition initially qualified as a peaking unit under paragraph (2) of this definition, the unit may qualify as a peaking unit for a subsequent year only if the designated representative submits the data specified in paragraph (2)(ii)(A) of this definition.
- (4) A unit required to comply with the provisions of subpart H of part 75 of this chapter, under a State or Federal NO_x mass emissions reduction program, may, pursuant to §75.74(c)(11) in part 75 of this chapter, qualify as a peaking unit on an ozone season basis rather than an annual basis, if the owner or operator reports NO_x mass emissions and heat input data only during the ozone season.

Permit revision means a permit modification, fast track modification, administrative permit amendment, or automatic permit amendment, as provided in subpart H of this part.

Permitting authority means either:

- (1) When the Administrator is responsible for administering Acid Rain permits under subpart G of this part, the Administrator or a delegatee agency authorized by the

Administrator; or

(2) The State air pollution control agency, local agency, other State agency, or other agency authorized by the Administrator to administer Acid Rain permits under subpart G of this part and part 70 of this chapter.

Person includes an individual, corporation, partnership, association, State, municipality, political subdivision of a State, any agency, department, or instrumentality of the United States, and any officer, agent, or employee thereof.

Phase I means the Acid Rain Program period beginning January 1, 1995 and ending December 31, 1999.

Phase I unit means any affected unit, except an affected unit under part 74 of this chapter, that is subject to an Acid Rain emissions reduction requirement or Acid Rain emissions limitation beginning in Phase I; or any unit exempt under §72.8 that, but for such exemption, would be subject to an Acid Rain emissions reduction requirement or Acid Rain emissions limitation beginning in Phase I.

Phase II means the Acid Rain Program period beginning January 1, 2000, and continuing into the future thereafter.

Phase II unit means any affected unit, except an affected unit under part 74 of this chapter, that is subject to an Acid Rain emissions reduction requirement or Acid Rain emissions limitation during Phase II only.

Pipeline natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions, and which is provided by a supplier through a pipeline. Pipeline natural gas contains 0.5 grains or less of total sulfur per 100 standard cubic feet. Additionally, pipeline natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 Btu per standard cubic foot.

Pollutant concentration monitor means that component of the continuous emission monitoring system that measures the concentration of a pollutant in a unit's flue gas.

Potential electrical output capacity means the MWe capacity rating for the units which shall be equal to 33 percent of the maximum design heat input capacity of the steam generating unit, as calculated according to appendix D of part 72.

Power distribution system means the portion of an electricity grid owned or operated by a utility that is dedicated to delivering electric energy to customers.

Power purchase commitment means a commitment or obligation of a utility to purchase electric power from a facility pursuant to:

- (1) A power sales agreement;
- (2) A state regulatory authority order requiring a utility to:
 - (i) Enter into a power sales agreement with the facility;
 - (ii) Purchase from the facility; or
 - (iii) Enter into arbitration concerning the facility for the purpose of establishing terms and conditions of the utility's purchase of power;
- (3) A letter of intent or similar instrument committing to purchase power (actual

electrical output or generator output capacity) from the source at a previously offered or lower price and a power sales agreement applicable to the source is executed within the time frame established by the terms of the letter of intent but no later than November 15, 1993 or, where the letter of intent does not specify a time frame, a power sale agreement applicable to the source is executed on or before November 15, 1993; or

(4) A utility competitive bid solicitation that has resulted in the selection of the qualifying facility or independent power production facility as the winning bidder.

Power sales agreement is a legally binding agreement between a QF, IPP, new IPP, or firm associated with such facility and a regulated electric utility that establishes the terms and conditions for the sale of power from the facility to the utility.

Presiding Officer means an Administrative Law Judge appointed under 5 U.S.C. 3105 and designated to preside at a hearing in an appeal under part 78 of this chapter or an EPA lawyer designated to preside at any such hearing under §78.6(b)(3)(ii) of this chapter.

Primary fuel or primary fuel supply means the main fuel type (expressed in mmBtu) consumed by an affected unit for the applicable calendar year.

Probationary calibration error test means an on-line calibration error test performed in accordance with section 2.1.1 of appendix B to part 75 of this chapter that is used to initiate a conditionally valid data period.

Proposed Acid Rain permit or proposed permit means, in the case of a State operating permit program, the version of an Acid Rain permit that the permitting authority submits to the Administrator after the public comment period, but prior to completion of the EPA permit review period, as provided for in part 70 of this chapter.

QA operating quarter means a calendar quarter in which there are at least 168 unit operating hours (as defined in this section) or, for a common stack or bypass stack, a calendar quarter in which there are at least 168 stack operating hours (as defined in this section).

Qualified Individual means an individual who meets the requirements as described in ASTM D7036-04.

Qualifying facility (QF) means a “qualifying small power production facility” within the meaning of section 3(17)(C) of the Federal Power Act or a “qualifying cogeneration facility” within the meaning of section 3(18)(B) of the Federal Power Act.

Qualifying Phase I technology means a technological system of continuous emission reduction that is demonstrated to achieve a ninety (90) percent (or greater) reduction in emissions of sulfur dioxide from the emissions that would have resulted from the use of fossil fuels that were not subject to treatment prior to combustion, as provided in §72.42.

Qualifying power purchase commitment means a power purchase commitment in effect as of November 15, 1990 without regard to changes to that commitment so long as:

- (1) The identity of the electric output purchaser; or
- (2) The identity of the steam purchaser and the location of the facility, remain unchanged as of the date the facility commences commercial operation; and
- (3) The terms and conditions of the power purchase commitment are not changed in such a way as to allow the costs of compliance with the Acid Rain Program to be shifted to the purchaser.

Qualifying repowering technology means:

(1) Replacement of an existing coal-fired boiler with one of the following clean coal technologies: Atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of the date of enactment of the Clean Air Act Amendments of 1990; or

(2) Any oil- or gas-fired unit that has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

Quality-assured monitor operating hour means any unit operating hour or portion thereof over which a certified CEMS, or other monitoring system approved by the Administrator under part 75 of this chapter, is operating:

(1) Within the performance specifications set forth in part 75, appendix A of this chapter and the quality assurance/quality control procedures set forth in part 75, appendix B of this chapter, without unscheduled maintenance, repair, or adjustment; and

(2) In accordance with §75.10(d), (e), and (f) of this chapter.

Receive or receipt of means the date the Administrator or a permitting authority comes into possession of information or correspondence (whether sent in writing or by authorized electronic transmission), as indicated in an official correspondence log, or by a notation made on the information or correspondence, by the Administrator or the permitting authority in the regular course of business.

Recordation, record, or recorded means, with regard to allowances, the transfer of allowances by the Administrator from one Allowance Tracking System account or subaccount to another.

Reduced utilization means a reduction, during any calendar year in Phase I, in the heat input (expressed in mmBtu for the calendar year) at a Phase I unit below the unit's baseline, where such reduction subjects the unit to the requirement to submit a reduced utilization plan under §72.43; or, in the case of an opt-in source, means a reduction in the average utilization, as specified in §74.44 of this chapter, of an opt-in source below the opt-in source's baseline.

Reference method means any direct test method of sampling and analyzing for an air pollutant as specified in part 60, appendix A of this chapter.

Reference value or reference signal means the known concentration of a calibration gas, the known value of an electronic calibration signal, or the known value of any other measurement standard approved by the Administrator, assumed to be the true value for the pollutant or diluent concentration or volumetric flow being measured.

Relative accuracy means a statistic designed to provide a measure of the systematic and random errors associated with data from continuous emission monitoring systems, and is expressed as the absolute mean difference between the pollutant or moisture concentration or volumetric flow measured by the pollutant concentration or flow monitor or moisture monitor and the value determined by the applicable reference method(s) plus the 2.5 percent error confidence coefficient of a series of tests divided by the mean of the reference method tests in accordance with part 75 of this chapter.

Replacement unit means an affected unit replacing the thermal energy provided by an opt-in source, where both the affected unit and the opt-in source are governed by a thermal energy plan.

Research gas material (RGM) means a calibration gas mixture developed by agreement of a requestor and the National Institutes for Standards and Technologies (NIST) that NIST analyzes and certifies as "NIST traceable." RGMs may have concentrations different from those of standard reference materials.

Research gas mixture (RGM) means a calibration gas mixture developed by agreement of a requestor and NIST that NIST analyzes and certifies as "NIST traceable." RGMs may have concentrations different from those of standard reference materials.

Schedule of compliance means an enforceable sequence of actions, measures, or operations designed to achieve or maintain compliance, or correct non-compliance, with an applicable requirement of the Acid Rain Program, including any applicable Acid Rain permit requirement.

Secretary of Energy means the Secretary of the United States Department of Energy or the Secretary's duly authorized representative.

Serial number means, when referring to allowances, the unique identification number assigned to each allowance by the Administrator, pursuant to §73.34(d) of this chapter.

Simple combustion turbine means a unit that is a rotary engine driven by a gas under pressure that is created by the combustion of any fuel. This term includes combined cycle units without auxiliary firing. This term excludes combined cycle units with auxiliary firing, unless the unit did not use the auxiliary firing from 1985 through 1987 and does not use auxiliary firing at any time after November 15, 1990.

Site lease, as used in part 73, subpart E of this chapter, means a legally-binding agreement signed between a new IPP or a firm associated with a new IPP and a site owner that establishes the terms and conditions under which the new IPP or the firm associated with the new IPP has the binding right to utilize a specific site for the purposes of operating or constructing the new IPP.

Small diesel refinery means a domestic motor diesel fuel refinery or portion of a refinery that, as an annual average of calendar years 1988 through 1990 and as reported to the Department of Energy on Form 810, had bona fide crude oil throughput less than 18,250,000 barrels per year, and the refinery or portion of a refinery is owned or controlled by a refiner with a total combined bona fide crude oil throughput of less than 50,187,500 barrels per year.

Solid waste incinerator means a source as defined in section 129(g)(1) of the Act.

Sorbent trap monitoring system means the equipment required by part 75 of this chapter for the continuous monitoring of Hg emissions, using paired sorbent traps containing iodinated charcoal (IC) or other suitable reagent(s). This excepted monitoring system consists of a probe, the paired sorbent traps, a heated umbilical line, moisture removal components, an air-tight sample pump, a dry gas meter, and an automated data acquisition and handling system. The monitoring system samples the stack gas at a rate proportional to the stack gas volumetric flow rate. The sampling is a batch process. Using the sample volume measured by the dry gas meter and the results of the analyses of the sorbent traps, the average Hg concentration in the stack gas for the sampling period is determined, in units of micrograms per dry standard cubic meter (µg/dscm). Mercury mass emissions for each hour in the sampling period are calculated using the average Hg concentration for that period, in conjunction with contemporaneous hourly measurements of the stack gas flow rate, corrected for the stack gas moisture content.

Source means any governmental, institutional, commercial, or industrial structure, installation,

plant, building, or facility that emits or has the potential to emit any regulated air pollutant under the Act. For purposes of section 502(c) of the Act, a “source”, including a “source” with multiple units, shall be considered a single “facility.”

Span means the highest pollutant or diluent concentration or flow rate that a monitor component is required to be capable of measuring under part 75 of this chapter.

Specialty gas producer means an organization that prepares and analyzes compressed gas mixtures for use as calibration gases and that offers the mixtures for sale to end users or to third-party vendors for resale to end users.

Spot allowance means an allowance that may be used for purposes of compliance with a unit's Acid Rain sulfur dioxide emissions limitation requirements beginning in the year in which the allowance is offered for sale.

Spot auction means an auction of a spot allowance.

Spot sale means a sale of a spot allowance.

Stack means a structure that includes one or more flues and the housing for the flues.

Stack operating hour means a clock hour during which flue gases flow through a particular stack or duct (either for the entire hour or for part of the hour) while the associated unit(s) are combusting fuel.

Stack operating time means the portion of a clock hour during which flue gases flow through a particular stack or duct while the associated unit(s) are combusting fuel. The stack operating time, in hours, is expressed as a decimal fraction, with valid values ranging from 0.00 to 1.00.

Standard conditions means 68 °F at 1 atm (29.92 in. of mercury).

~~*Standard reference material or SRM means a calibration gas mixture issued and certified by NIST as having specific known chemical or physical property values.*~~

~~*Standard reference material equivalent compressed gas primary reference material (SRM equivalent PRM) means those gas mixtures listed in a declaration of equivalence in accordance with section 2.1.2 of the “EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards,” September 1997, EPA-600/R-97/121.*~~

State means one of the 48 contiguous States and the District of Columbia, any non-federal authorities in or including such States or the District of Columbia (including local agencies, interstate associations, and State-wide agencies), and any eligible Indian tribe in an area in such State or the District of Columbia. The term “State” shall have its conventional meaning where such meaning is clear from the context.

State operating permit program means an operating permit program that the Administrator has approved under part 70 of this chapter.

Stationary gas turbine means a turbine that is not self-propelled and that combusts natural gas, other gaseous fuel with a total sulfur content no greater than the total sulfur content of natural gas, or fuel oil in order to heat inlet combustion air and thereby turn a turbine in addition to or instead of producing steam or heating water.

Steam sales agreement is a legally binding agreement between a QF, IPP, new IPP, or firm associated with such facility and an industrial or commercial establishment requiring steam that establishes the terms and conditions under which the facility will supply steam to the establishment.

Submit or serve means to send or transmit a document, information, or correspondence to the person specified in accordance with the applicable regulation:

- (1) In person;
- (2) By United States Postal Service; or
- (3) By other equivalent means of dispatch, or transmission, and delivery. Compliance with any “submission”, “service”, or “mailing” deadline shall be determined by the date of dispatch, transmission, or mailing and not the date of receipt.

Substitute data means emissions or volumetric flow data provided to assure 100 percent recording and reporting of emissions when all or part of the continuous emission monitoring system is not functional or is operating outside applicable performance specifications.

Substitution unit means an affected unit, other than a unit under section 410 of the Act, that is designated as a Phase I unit in a substitution plan under §72.41.

Sulfur-free generation means the generation of electricity by a process that does not have any emissions of sulfur dioxide, including hydroelectric, nuclear, solar, or wind generation. A “sulfur-free generator” is a generator that is located in one of the 48 contiguous States or the District of Columbia and produces “sulfur-free generation.”

Supply-side measure means a measure to improve the efficiency of the generation, transmission, or distribution of electricity, implemented by a utility in connection with its operations or facilities to provide electricity to its customers, and includes the measures set forth in part 73, appendix A, section 2 of this chapter.

Thermal energy means the thermal output produced by a combustion source used directly as part of a manufacturing process but not used to produce electricity.

Ton or tonnage means any “short ton” (i.e., 2,000 pounds). For the purpose of determining compliance with the Acid Rain emissions limitations and reduction requirements, total tons for a year shall be calculated as the sum of all recorded hourly emissions (or the tonnage equivalent of the recorded hourly emissions rates) in accordance with part 75 of this chapter, with any remaining fraction of a ton equal to or greater than 0.50 ton deemed to equal one ton and any fraction of a ton less than 0.50 ton deemed not to equal any ton.

Total planned net output capacity means the planned generator output capacity, excluding that portion of the electrical power which is designed to be used at the power production facility, as specified under one or more qualifying power purchase commitments or contemporaneous documents as of November 15, 1990; “Total installed net output capacity” shall be the generator output capacity, excluding that portion of the electrical power actually used at the power production facility, as installed.

Transfer unit means a Phase I unit that transfers all or part of its Phase I emission reduction obligations to a control unit designated pursuant to a Phase I extension plan under §72.42.

Underutilization means a reduction, during any calendar year in Phase I, of the heat input (expressed in mmBtu for the calendar year) at a Phase I unit below the unit's baseline.

Unit means a fossil fuel-fired combustion device.

Unit account means an Allowance Tracking System account, established by the Administrator for an affected unit pursuant to §73.31 (a) or (b) of this chapter.

Unit load means the total (i.e., gross) output of a unit or source in any calendar year (or other specified time period) produced by combusting a given heat input of fuel, expressed in terms of:

- (1) The total electrical generation (MWe) for use within the plant and for sale; or
- (2) In the case of a unit or source that uses part of its heat input for purposes other than electrical generation, the total steam pressure (psia) produced by the unit or source.

Unit operating day means a calendar day in which a unit combusts any fuel.

Unit operating hour means a clock hour during which a unit combusts any fuel, either for part of the hour or for the entire hour.

Unit operating quarter means a calendar quarter in which a unit combusts any fuel.

Unit operating time means the portion of a clock hour during which a unit combusts any fuel. The unit operating time, in hours, is expressed as a decimal fraction, with valid values ranging from 0.00 to 1.00.

Utility means any person that sells electricity.

Utility competitive bid solicitation is a public request from a regulated utility for offers to the utility for meeting future generating needs. A qualifying facility, independent power production facility, or new IPP may be regarded as having been "selected" in such solicitation if the utility has named the facility as a project with which the utility intends to negotiate a power sales agreement.

Utility regulatory authority means an authority, board, commission, or other entity (limited to the local-, State-, or federal-level, whenever so specified) responsible for overseeing the business operations of utilities located within its jurisdiction, including, but not limited to, utility rates and charges to customers.

Utility system means all interconnected units and generators operated by the same utility operating company.

Utility unit means a unit owned or operated by a utility:

- (1) That serves a generator in any State that produces electricity for sale, or
- (2) That during 1985, served a generator in any State that produced electricity for sale.
- (3) Notwithstanding paragraphs (1) and (2) of this definition, a unit that was in operation during 1985, but did not serve a generator that produced electricity for sale during 1985, and did not commence commercial operation on or after November 15, 1990 is not a utility unit for purposes of the Acid Rain Program.
- (4) Notwithstanding paragraphs (1) and (2) of this definition, a unit that cogenerates steam and electricity is not a utility unit for purposes of the Acid Rain Program, unless the unit is constructed for the purpose of supplying, or commences construction after November 15, 1990 and supplies, more than one-third of its potential electrical output capacity and more than 25 MWe output to any power distribution system for sale.

Utilization means the heat input (expressed in mmBtu/time) for a unit.

Very low sulfur fuel means either:

- (1) A fuel with a total sulfur content no greater than 0.05 percent sulfur by weight;
- (2) Natural gas or pipeline natural gas, as defined in this section; or
- (3) Any gaseous fuel with a total sulfur content no greater than 20 grains of sulfur per 100 standard cubic feet.

Volumetric flow means the rate of movement of a specified volume of gas past a cross-sectional area (e.g., cubic feet per hour).

~~*Zero air material* means either:~~

- ~~(1) A calibration gas certified by the gas vendor not to contain concentrations of SO₂, NO_x, or total hydrocarbons above 0.1 parts per million (ppm), a concentration of CO above 1 ppm, or a concentration of CO₂ above 400 ppm;~~
- ~~(2) Ambient air conditioned and purified by a CEMS for which the CEMS manufacturer or vendor certifies that the particular CEMS model produces conditioned gas that does not contain concentrations of SO₂, NO_x, or total hydrocarbons above 0.1 ppm, a concentration of CO above 1 ppm, or a concentration of CO₂ above 400 ppm;~~
- ~~(3) For dilution type CEMS, conditioned and purified ambient air provided by a conditioning system concurrently supplying dilution air to the CEMS; or~~
- ~~(4) A multicomponent mixture certified by the supplier of the mixture that the concentration of the component being zeroed is less than or equal to the applicable concentration specified in paragraph (1) of this definition, and that the mixture's other components do not interfere with the CEM readings.~~

§ 72.3

§ 72.3 Measurements, abbreviations, and acronyms.

Measurements, abbreviations, and acronyms used in this part are defined as follows:

acfh - actual cubic feet per hour.

atm - atmosphere.

bbl - barrel.

Btu - British thermal unit.

°C - degree Celsius (centigrade).

CEMS - continuous emission monitoring system.

cfm - cubic feet per minute.

cm - centimeter.

dcf - dry cubic feet.

DOE - Department of Energy.

dscf - dry cubic feet at standard conditions.

dscfh - dry cubic feet per hour at standard conditions.

EIA - Energy Information Administration.

eq - equivalent.

°F - degree Fahrenheit.

fps - feet per second.

gal - gallon.

hr - hour.

in - inch.

°K - degree Kelvin.

kacfm - thousands of cubic feet per minute at actual conditions.

kscfh - thousands of cubic feet per hour at standard conditions.

Kwh - kilowatt hour.

lb - pounds.

m - meter.

mmBtu - million Btu.

min - minute.
mol. wt. - molecular weight.
MWe - megawatt electrical.
MWge - gross megawatt electrical.
NIST--National Institute of Standards and Technology
ppm - parts per million.
psi - pounds per square inch.
°R - degree Rankine.
RATA - relative accuracy test audit.
scf - cubic feet at standard conditions.
scfh - cubic feet per hour at standard conditions.
sec - second.
std - at standard conditions.
CO₂ - carbon dioxide.
NO_x - nitrogen oxides.
O₂ - oxygen.
THC - total hydrocarbon content.
SO₂ - sulfur dioxide.

PART 75-CONTINUOUS EMISSION MONITORING

Authority: 42 U.S.C. 7601, 7651k, and 7651k note.

Subpart A -- General

§ 75.1

§ 75.1 Purpose and scope.

§ 75.1(a)

(a) *Purpose.* The purpose of this part is to establish requirements for the monitoring, recordkeeping, and reporting of sulfur dioxide (SO₂), nitrogen oxides (NO_x), and carbon dioxide (CO₂) emissions, volumetric flow, and opacity data from affected units under the Acid Rain Program pursuant to Sections 412 and 821 of the CAA, 42 U.S.C. 7401-7671q as amended by Public Law 101-549 (November 15, 1990) [the Act]. In addition, this part sets forth provisions for the monitoring, recordkeeping, and reporting of NO_x mass emissions with which EPA, individual States, or groups of States may require sources to comply in order to demonstrate compliance with a NO_x mass emission reduction program, to the extent these provisions are adopted as requirements under such a program.

§ 75.1(b)

(b) *Scope.*

(1) The regulations established under this part include general requirements for the installation, certification, operation, and maintenance of continuous emission or opacity monitoring systems and specific requirements for the monitoring of SO₂ emissions, volumetric flow, NO_x emissions, opacity, CO₂ emissions and SO₂ emissions removal by qualifying Phase I technologies. Specifications for the installation and performance of continuous emission monitoring systems, certification tests and procedures, and quality assurance tests and procedures are included in appendices A and B to this part. Criteria for alternative monitoring systems and provisions to account for missing data from certified continuous emission monitoring systems or approved alternative monitoring systems are also included in the regulation.

(2) Statistical estimation procedures for missing data are included in appendix C to this part. Optional protocols for estimating SO₂ mass emissions from gas-fired or oil-fired units and NO_x emissions from gas-fired peaking or oil-fired peaking units are included in appendices D and E, respectively, to this part. Requirements for recording and recordkeeping of monitoring data and for quarterly electronic reporting also are specified. Procedures for conversion of monitoring data into units of the standard are included in appendix F to this part. Procedures for the monitoring and calculation of CO₂ emissions are included in appendix G of this part.

§ 75.2

§ 75.2 Applicability.

§ 75.2(a)

(a) Except as provided in paragraphs (b) and (c) of this section, the provisions of this part apply to each affected unit subject to Acid Rain emission limitations or reduction requirements for SO₂ or NO_x.

§ 75.2(b)

(b) The provisions of this part do not apply to:

(1) A new unit for which a written exemption has been issued under § 72.7 of this chapter (any new unit that serves one or more generators with total nameplate capacity of 25 MWe or less and burns only fuels with a sulfur content of 0.05 percent or less by weight may apply to the Administrator for an exemption); or

(2) Any unit not subject to the requirements of the Acid Rain Program due to operation of any paragraph of § 72.6(b) of this chapter; or

(3) An affected unit for which a written exemption has been issued under § 72.8 of this chapter and an exception granted under § 75.67 of this part.

§ 75.2(c)

(c) The provisions of this part apply to sources subject to a State or federal NO_x mass emission reduction program, to the extent these provisions are adopted as requirements under such a program.

(d) The provisions of this part apply to sources subject to a State or Federal mercury (Hg) mass emission reduction program, to the extent that these provisions are adopted as requirements

under such a program.

§ 75.3

§ 75.3 General Acid Rain Program provisions.

The provisions of part 72, including the following, shall apply to this part:

- (a) § 72.2 (Definitions);
- (b) § 72.3 (Measurements, Abbreviations, and Acronyms);
- (c) § 72.4 (Federal Authority);
- (d) § 72.5 (State Authority);
- (e) § 72.6 (Applicability);
- (f) § 72.7 (New Unit Exemption);
- (g) § 72.8 (Retired Units Exemption);
- (h) § 72.9 (Standard Requirements);
- (i) § 72.10 (Availability of Information); and
- (j) § 72.11 (Computation of Time).

In addition, the procedures for appeals of decisions of the Administrator under this part are contained in part 78 of this chapter.

§ 75.4

§ 75.4 Compliance dates.

§ 75.4(a)

(a) The provisions of this part apply to each existing Phase I and Phase II unit on February 10, 1993. For substitution or compensating units that are so designated under the Acid Rain permit which governs that unit and contains the approved substitution or reduced utilization plan, pursuant to § 72.41 or § 72.43 of this chapter, the provisions of this part become applicable upon the issuance date of the Acid Rain permit. For combustion sources seeking to enter the Opt-in Program in accordance with part 74 of this chapter, the provisions of this part become applicable upon the submission of an opt-in permit application in accordance with § 74.14 of this chapter. The provisions of this part for the monitoring, recording, and reporting of NO_x mass emissions become applicable on the deadlines specified in the applicable State or federal NO_x mass emission reduction program, to the extent these provisions are adopted as requirements under such a program. In accordance with § 75.20, the owner or operator of each existing affected unit shall ensure that all monitoring systems required by this part for monitoring SO₂, NO_x, CO₂, opacity, moisture and volumetric flow are installed and that all certification tests are completed no later than the following dates (except as provided in paragraphs (d) through (i) of this section):

§ 75.4(a)(1)

(1) For a unit listed in table 1 of § 73.10(a) of this chapter, November 15, 1993.

§ 75.4(a)(2)

(2) For a substitution or a compensating unit that is designated under an approved substitution plan or reduced utilization plan pursuant to § 72.41 or § 72.43 of this chapter, or for a unit that is designated an early election unit under an approved NO_x compliance plan pursuant to part 76 of this chapter, that is not conditionally approved and that is effective for 1995, the earlier of the following dates:

- (i) January 1, 1995; or
- (ii) 90 days after the issuance date of the Acid Rain permit (or date of approval of permit revision) that governs the unit and contains the approved substitution plan, reduced utilization plan, or NO_x compliance plan.

§ 75.4(a)(3)

(3) For either a Phase II unit, other than a gas-fired unit or an oil-fired unit, or a substitution or compensating unit that is not a substitution or compensating unit under paragraph (a)(2) of this section: January 1, 1995.

§ 75.4(a)(4)

(4) For a gas-fired Phase II unit or an oil-fired Phase II unit, January 1, 1995, except that installation and certification tests for continuous emission monitoring systems for NO_x and CO₂ or excepted monitoring systems for NO_x under appendix E or CO₂ estimation under appendix G of this part shall be completed as follows:

- (i) For an oil-fired Phase II unit or a gas-fired Phase II unit located in an ozone nonattainment area or the ozone transport region, not later than July 1, 1995; or

(ii) For an oil-fired Phase II unit or a gas-fired Phase II unit not located in an ozone nonattainment area or the ozone transport region, not later than January 1, 1996.

§ 75.4(a)(5)

(5) For combustion sources seeking to enter the Opt-in Program in accordance with part 74 of this chapter, the expiration date of a combustion source's opt-in permit under § 74.14(e) of this chapter.

§ 75.4(b)

(b) In accordance with § 75.20, the owner or operator of each new affected unit shall ensure that all monitoring systems required under this part for monitoring of SO₂, NO_x, CO₂, opacity, and volumetric flow are installed and all certification tests are completed on or before the later of the following dates:

(1) January 1, 1995, except that for a gas-fired unit or oil-fired unit located in an ozone nonattainment area or the ozone transport region, the date for installation and completion of all certification tests for NO_x and CO₂ monitoring systems shall be July 1, 1995 and for a gas-fired unit or an oil-fired unit not located in an ozone nonattainment area or the ozone transport region, the date for installation and completion of all certification tests for NO_x and CO₂ monitoring systems shall be January 1, 1996; or

(2) The earlier of 90 unit operating days or 180 calendar days after the date the unit commences commercial operation, notice of which date shall be provided under subpart G of this part.

§ 75.4(c)

(c) In accordance with § 75.20, the owner or operator of any unit affected under any paragraph of § 72.6(a)(3) (ii) through (vii) of this chapter shall ensure that all monitoring systems required under this part for monitoring of SO₂, NO_x, CO₂, opacity, and volumetric flow are installed and all certification tests are completed on or before the later of the following dates:

(1) January 1, 1995, except that for a gas-fired unit or oil-fired unit located in an ozone nonattainment area or the ozone transport region, the date for installation and completion of all certification tests for NO_x and CO₂ monitoring systems shall be July 1, 1995 and for a gas-fired unit or an oil-fired unit not located in an ozone nonattainment area or the ozone transport region, the date for installation and completion of all certification tests for NO_x and CO₂ monitoring systems shall be January 1, 1996; or

(2) The earlier of 90 unit operating days or 180 calendar days after the date the unit first operates after becoming subject to the requirements of the Acid Rain Program, notice of which date shall be provided under subpart G of this part.

§ 75.4(d)

(d) This paragraph, applies to affected units under the Acid Rain Program and to units subject to a State or Federal pollutant mass emissions reduction program that adopts the emission monitoring and reporting provisions of this part. In accordance with § 75.20, for an affected unit which, on the applicable compliance date, is either in long-term cold storage (as defined in § 72.2 of this chapter) or is shutdown as the result of a planned outage or a forced outage, thereby preventing the required continuous monitoring system certification tests from being completed by the compliance date, the owner or operator shall provide notice of such unit storage or outage in accordance with § 75.61(a)(3) or § 75.61(a)(7), as applicable. For the planned and unplanned unit outages described in this paragraph, the owner or operator shall ensure that all of the continuous monitoring systems for SO₂, NO_x, CO₂, Hg, opacity, and volumetric flow rate required under this part (or under the applicable State or Federal mass emissions reduction program) are installed and that all required certification tests are completed no later than 90 unit operating days or 180 calendar days (whichever occurs first) after the date that the unit recommences commercial operation, notice of which date shall be provided under § 75.61(a)(3) or § 75.61(a)(7), as applicable. The owner or operator shall determine and report SO₂ concentration, NO_x emission rate, CO₂ concentration, Hg concentration, and flow rate data (as applicable) for all unit operating hours after the applicable compliance date until all of the required certification tests are successfully completed, using either:

(1) The maximum potential concentration of SO₂ (as defined in section 2.1.1.1 of appendix A to this part), the maximum potential NO_x emission rate, as defined in § 72.2 of this chapter, the maximum potential flow rate, as defined in section 2.1.4.1 of appendix A to this part, the maximum potential Hg concentration, as defined in section 2.1.7.1 of appendix A to this part, or the maximum potential CO₂ concentration, as defined in section 2.1.3.1 of appendix A to this

part; or

(2) The conditional data validation provisions of § 75.20(b)(3); or

(3) Reference methods under § 75.22(b); or

(4) Another procedure approved by the Administrator pursuant to a petition under § 75.66.

~~(d) In accordance with § 75.20, the owner or operator of an existing unit that is shutdown and is not yet operating by the applicable dates listed in paragraph (a) of this section, or an existing unit which has been placed in long-term cold storage after having previously reported emissions data in accordance with this part, shall ensure that all monitoring systems required under this part for monitoring of SO₂, NO_x, CO₂, opacity, and volumetric flow are installed and all certification tests are completed no later than 90 unit operating days or 180 calendar days (whichever occurs first) after the date that the unit recommences commercial operation, notice of which date shall be provided under subpart G of this part. The owner or operator shall determine and report SO₂ concentration, NO_x emission rate, CO₂ concentration, and flow data for all unit operating hours after the applicable compliance date in paragraph (a) of this section until all required certification tests are successfully completed using either:~~

~~(1) The maximum potential concentration of SO₂ (as defined in section 2.1.1.1 of appendix A to this part), the maximum potential NO_x emission rate, as defined in § 72.2 of this chapter, the maximum potential flow rate, as defined in section 2.1.4.1 of appendix A to this part, or the maximum potential CO₂ concentration, as defined in section 2.1.3.1 of appendix A to this part;~~

~~(2) Reference methods under § 75.22(b); or~~

~~(3) Another procedure approved by the Administrator pursuant to a petition under § 75.66.~~

§ 75.4(e)

(e) In accordance with § 75.20, if the owner or operator of an existing unit completes construction of a new stack, flue, flue gas desulfurization system or add-on NO_x emission controls after the applicable deadline in paragraph (a) of this section, then the owner or operator shall ensure that all monitoring systems required under this part for monitoring SO₂, NO_x, CO₂, opacity, and volumetric flow are installed on the new stack or duct and all certification tests are completed not later than 90 unit operating days or 180 calendar days (whichever occurs first) after the date that emissions first exit to the atmosphere through the new stack, flue, flue gas desulfurization system or add-on NO_x emission controls, notice of which date shall be provided under subpart G of this part. Until emissions first pass through the new stack, flue, flue gas desulfurization system or add-on NO_x emission controls, the unit is subject to the appropriate deadline in paragraph (a) of this section. The owner or operator shall determine and report SO₂ concentration, NO_x emission rate, CO₂ concentration, and flow data for all unit operating hours after emissions first pass through the new stack, flue, flue gas desulfurization system or add-on NO_x emission controls until all required certification tests are successfully completed using either:

(1) The appropriate value for substitution of missing data upon recertification pursuant to § 75.20(b)(3); or

(2) Reference methods under § 75.22(b) of this part; or

(3) Another procedure approved by the Administrator pursuant to a petition under § 75.66.

§ 75.4(f)

(f) In accordance with § 75.20, the owner or operator of an affected gas-fired or oil-fired peaking unit, if planning to use appendix E of this part, shall ensure that the required certification tests for excepted monitoring systems under appendix E are completed for backup fuel, as defined in § 72.2 of this chapter, no later than 90 unit operating days or 180 calendar days (whichever occurs first) after the date that the unit first combusts the backup fuel following the certification testing with the primary fuel. If the required testing is completed by this deadline, the appendix E correlation curve derived from the test results may be used for reporting data under this part beginning with the first date and hour that the backup fuel is combusted, provided that the fuel flowmeter for the backup fuel was certified as of that date and hour. If the required appendix E testing has not been successfully completed by the compliance date in this paragraph, then, until the testing is completed, the owner or operator shall report NO_x emission rate data for all unit operating hours that the backup fuel is combusted using either:

(1) The fuel-specific maximum potential NO_x emission rate, as defined in § 72.2 of this chapter; or

(2) Reference methods under § 75.22(b) of this part; or

(3) Another procedure approved by the Administrator pursuant to a petition under § 75.66.

§ 75.4(g) (g) The provisions of this paragraph shall apply unless an owner or operator is exempt from certifying a fuel flowmeter for use during combustion of emergency fuel under section 2.1.4.3 of appendix D to this part, in which circumstance the provisions of section 2.1.4.3 of appendix D shall apply. In accordance with § 75.20, whenever the owner or operator of a gas-fired or oil-fired unit uses an excepted monitoring system under appendix D or E of this part and combusts emergency fuel as defined in § 72.2 of this chapter, then the owner or operator shall ensure that a fuel flowmeter measuring emergency fuel is installed and the required certification tests for excepted monitoring systems are completed by no later than 30 unit operating days after the first date after January 1, 1995 that the unit combusts emergency fuel. For all unit operating hours that the unit combusts emergency fuel after January 1, 1995 until the owner or operator installs a flowmeter for emergency fuel and successfully completes all required certification tests, the owner or operator shall determine and report SO₂ mass emission data using either:

(1) The maximum potential fuel flow rate, as described in appendix D of this part, and the maximum sulfur content of the fuel, as described in section 2.1.1.1 of appendix A of this part;

(2) Reference methods under § 75.22(b) of this part; or (3) Another procedure approved by the Administrator pursuant to a petition under § 75.66.

§ 75.4(h) (h)[Reserved]

§ 75.4(i) (i) In accordance with § 75.20, the owner or operator of each affected unit at which SO₂ concentration is measured on a dry basis or at which moisture corrections are required to account for CO₂ emissions, NO_x emission rate in lb/mmBtu, heat input, or NO_x mass emissions for units in a NO_x mass reduction program, shall ensure that the continuous moisture monitoring system required by this part is installed and that all applicable initial certification tests required under § 75.20(c)(5), (c)(6), or (c)(7) for the continuous moisture monitoring system are completed no later than the following dates:

(1) April 1, 2000, for a unit that is existing and has commenced commercial operation by January 2, 2000;

(2) For a new affected unit which has not commenced commercial operation by January 2, 2000, 90 unit operating days or 180 calendar days (whichever occurs first) after the date the unit commences commercial operation; or

(3) For an existing unit that is shutdown and is not yet operating by April 1, 2000, 90 unit operating days or 180 calendar days (whichever occurs first) after the date that the unit recommences commercial operation.

(j) If the certification tests required under paragraph (b) or (c) of this section have not been completed by the applicable compliance date, the owner or operator shall determine and report SO₂ concentration, NO_x emission rate, CO₂ concentration, and flow rate data for all unit operating hours after the applicable compliance date in this paragraph until all required certification tests are successfully completed using either:

(1) The maximum potential concentration of SO₂, as defined in section 2.1.1.1 of appendix A to this part, the maximum potential NO_x emission rate, as defined in § 72.2 of this chapter, the maximum potential flow rate, as defined in section 2.1.4.1 of appendix A to this part, or the maximum potential CO₂ concentration, as defined in section 2.1.3.1 of appendix A to this part;

(2) Reference methods under § 75.22(b); or

(3) Another procedure approved by the Administrator pursuant to a petition under § 75.66.

§ 75.5

§ 75.5 Prohibitions.

§ 75.5(a) (a) A violation of any applicable regulation in this part by the owners or operators or the designated representative of an affected source or an affected unit is a violation of the Act.

§ 75.5(b) (b) No owner or operator of an affected unit shall operate the unit without complying with the requirements of §§ 75.2 through 75.75 and appendices A through G to this part.

§ 75.5(c) (c) No owner or operator of an affected unit shall use any alternative monitoring system, alternative reference method, or any other alternative for the required continuous emission

monitoring system without having obtained the Administrator's prior written approval in accordance with §§ 75.23, 75.48 and 75.66.

§ 75.5(d) (d) No owner or operator of an affected unit shall operate the unit so as to discharge, or allow to be discharged, emissions of SO₂, NO_x or CO₂ to the atmosphere without accounting for all such emissions in accordance with the provisions of §§ 75.10 through 75.19.

§ 75.5(e) (e) No owner or operator of an affected unit shall disrupt the continuous emission monitoring system, any portion thereof, or any other approved emission monitoring method, and thereby avoid monitoring and recording SO₂, NO_x, or CO₂ emissions discharged to the atmosphere, except for periods of recertification, or periods when calibration, quality assurance, or maintenance is performed pursuant to § 75.21 and appendix B of this part.

§ 75.5(f) (f) No owner or operator of an affected unit shall retire or permanently discontinue use of the continuous emission monitoring system, any component thereof, the continuous opacity monitoring system, or any other approved emission monitoring system under this part, except under any one of the following circumstances:

(1) During the period that the unit is covered by an approved retired unit exemption under § 72.8 of this chapter that is in effect; or

(2) The owner or operator is monitoring emissions from the unit with another certified monitoring system or an excepted methodology approved by the Administrator for use at that unit that provides emissions data for the same pollutant or parameter as the retired or discontinued monitoring system; or

(3) The designated representative submits notification of the date of recertification testing of a replacement monitoring system in accordance with §§ 75.20 and 75.61, and the owner or operator recertifies thereafter a replacement monitoring system in accordance with § 75.20.

§ 75.6

§ 75.6 Incorporation by reference.

The materials listed in this section are incorporated by reference in the corresponding sections noted. These incorporations by reference were approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. These materials are incorporated as they existed on the date of approval, and a notice of any change in these materials will be published in the FEDERAL REGISTER. The materials are available for purchase at the corresponding address noted below and are available for inspection at the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, DC, at the Public Information Reference Unit of the U.S. EPA, 401 M Street, SW, Washington, DC and at the Library (MD-35), U.S. EPA, Research Triangle Park, North Carolina.

§ 75.6(a) (a) The following materials are available for purchase from the following addresses: American Society for Testing and Material (ASTM), 100 Barr harbor Drive, P.O. Box C-700, West Conshohocken, Pennsylvania 19428-2959; and the University Microfilms International 300 North Zeeb Road, Ann Arbor, Michigan 48106.

| § 75.6(a)(1) (1) ASTM ~~D129-00-D129-91~~, Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), for appendices A and D of this part.

| § 75.6(a)(2) (2) ASTM ~~D240-00D240-87~~, (Reapproved 1991), Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, for appendices A, D and F of this part.

| § 75.6(a)(3) (3) ASTM ~~D287-92(2000)e1D287-82 (Reapproved 1987)~~, Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method), for appendix D of this part.

| § 75.6(a)(4) (4) ASTM D388-~~9299e1~~, Standard Classification of Coals by Rank, incorporation by reference for appendix F of this part.

§ 75.6(a)(5) (5) ~~ASTM D941-88, Standard Test Method for Density and Relative Density (Specific~~

~~Gravity) of Liquids by Lipkin Bicapillary Pycnometer, for appendix D of this part. [Reserved]~~

- § 75.6(a)(6) (6) ASTM D1072-90 (1999), Standard Test Method for Total Sulfur in Fuel Gases, for appendix D of this part.
- § 75.6(a)(7) (7) ASTM D1217-93 (1998)~~D1217-91~~, Standard Test Method for Density and Relative Density (Specific Gravity) of Liquids by Bingham Pycnometer, for appendix D of this part.
- § 75.6(a)(8) (8) ASTM D1250-80 (1997)~~e1 (Reapproved 1990)~~, Standard Guide for Petroleum Measurement Tables, for appendix D of this part.
- § 75.6(a)(9) (9) ASTM D1298-99~~D1298-85 (Reapproved 1990)~~, Standard Practice for Density, Relative Density (Specific Gravity) or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method, for appendix D of this part.
- § 75.6(a)(10) (10) ASTM D1480-93 (1997)~~D1480-91~~, Standard Test Method for Density and Relative Density (Specific Gravity) of Viscous Materials by Bingham Pycnometer, for appendix D of this part.
- § 75.6(a)(11) (11) ASTM D1481-93 (1997)~~D1481-91~~, Standard Test Method for Density and Relative Density (Specific Gravity) of Viscous Materials by Lipkin Bicapillary Pycnometer, for appendix D of this part.
- § 75.6(a)(12) (12) ASTM D1552-01~~D1552-90~~, Standard Test Method for Sulfur in Petroleum Products (High Temperature Method), for appendices A and D of this part.
- § 75.6(a)(13) (13) ASTM D1826-94 (1998)~~D1826-88~~, Standard Test Method for Calorific (Heating) Value of Gases in Natural Gas Range by Continuous Recording Calorimeter, for appendices D and F to this part.
- § 75.6(a)(14) (14) ASTM D1945-96 (2001)~~D1945-91~~, Standard Test Method for Analysis of Natural Gas by Gas Chromatography, for appendices F and G of this part.
- § 75.6(a)(15) (15) ASTM D1946-90 (2000), Standard Practice for Analysis of Reformed Gas by Gas Chromatography, for appendices F and G of this part.
- § 75.6(a)(16) (16) ~~ASTM D1989-92, Standard Test Method for Gross Calorific Value of Coal and Coke by Microprocessor Controlled Isooperibol Calorimeters, for appendix F of this part. [Reserved]~~
- § 75.6(a)(17) (17) ASTM D2013-01~~D2013-86~~, Standard Method of Preparing Coal Samples for Analysis, for appendix F of this part.
- § 75.6(a)(18) (18) ~~ASTM D2015-91, Standard Test Method for Gross Calorific Value of Coal and Coke by the Adiabatic Bomb Calorimeter, for appendices A, D and F of this part. [Reserved]~~
- § 75.6(a)(19) (19) ASTM D2234-00~~e1 D2234-89~~, Standard Test Methods for Collection of a Gross Sample of Coal, for appendix F of this part.
- § 75.6(a)(20) (20) ~~ASTM D2382-88, Standard Test Method for Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High Precision Method), for appendices D and F of this part. [Reserved]~~
- § 75.6(a)(21) (21) ASTM D2502-92 (1996)~~D2502-87~~, Standard Test Method for Estimation of Molecular Weight (Relative Molecular Mass) of Petroleum Oils from Viscosity Measurements, for appendix G of this part.
- § 75.6(a)(22) (22) ASTM D2503-92 (1997)~~D2503-82 (Reapproved 1987)~~, Standard Test Method for Molecular Weight (Relative Molecular Mass) of Hydrocarbons by Thermoelectric Measurement

of Vapor Pressure, for appendix G of this part.

- | § 75.6(a)(23) (23) ASTM ~~D2622-98~~D2622-92, Standard Test Method for Sulfur in Petroleum Products by X-Ray Spectrometry, for appendices A and D of this part.
- | § 75.6(a)(24) (24) ASTM ~~D3174-00~~D3174-89, Standard Test Method for Ash in the Analysis Sample of Coal and Coke From Coal, for appendix G of this part.
- | § 75.6(a)(25) (25) ASTM D3176-89 (1997)el, Standard Practice for Ultimate Analysis of Coal and Coke, for appendices A and F of this part.
- | § 75.6(a)(26) (26) ASTM D3177-89 (1997), Standard Test Methods for Total Sulfur in the Analysis Sample of Coal and Coke, for appendix A of this part.
- | § 75.6(a)(27) (27) ASTM D3178-89 (1997), Standard Test Methods for Carbon and Hydrogen in the Analysis Sample of Coal and Coke, for appendix G of this part.
- | § 75.6(a)(28) (28) ASTM ~~D3238-95 (2000)el~~D3238-90, Standard Test Method for Calculation of Carbon Distribution and Structural Group Analysis of Petroleum Oils by the n-d-M Method, for appendix G of this part.
- | § 75.6(a)(29) (29) ASTM ~~D3246-96~~D3246-81 (Reapproved 1987), Standard Test Method for Sulfur in Petroleum Gas By Oxidative Microcoulometry, for appendix D of this part.
- | § 75.6(a)(30) (30) ~~ASTM D3286-91a, Standard Test Method for Gross Calorific Value of Coal and Coke by the Isotherm Bomb Calorimeter, for appendix F of this part.~~[Reserved]
- | § 75.6(a)(31) (31) ASTM ~~D3588-98~~D3588-91, Standard Practice for Calculating Heat Value, Compressibility Factor, and Relative Density (Specific Gravity) of Gaseous Fuels, for appendices D and F to this part.
- | § 75.6(a)(32) (32) ASTM ~~D4052-96 (2002)el~~D4052-91, Standard Test Method for Density and Relative Density of Liquids by Digital Density Meter, for appendix D of this part.
- | § 75.6(a)(33) (33) ASTM ~~D4057-95 (2000)~~D4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, for appendix D of this part.
- | § 75.6(a)(34) (34) ASTM ~~D4177-95 (2000)~~D4177-082 (Reapproved 1990), Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, for appendix D of this part.
- | § 75.6(a)(35) (35) ASTM ~~D4239-02~~D4239-85, Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods, for appendix A of this part.
- | § 75.6(a)(36) (36) ASTM ~~D4294-98~~D4294-90, Standard Test Method for Sulfur in Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectroscopy, for appendices A and D of this part.
- | § 75.6(a)(37) (37) ASTM D4468-85 (2000)~~(Reapproved 1989)~~, Standard Test Method for Total Sulfur in Gaseous Fuels by Hydrogenolysis and Rateometric Colorimetry, for appendix D of this part.
- § 75.6(a)(38) (38) ASTM D4840-99 (reapproved 2004), "Standard Guide for Sample Chain-of-Custody Procedures," for appendix K of this part, section 7.2.9.
- | § 75.6(a)(39) (39) ASTM D4891-89 (2001), Standard Test Method for Heating Value of Gases in Natural Gas Range by Stoichiometric Combustion, for appendices D and F to this part.
- § 75.6(a)(40) (40) ASTM ~~D5291-01~~D5291-92, Standard Test Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Petroleum Products and Lubricants, for appendices F and

G to this part.

- § 75.6(a)(41) (41) ASTM D5373-93 (1997), "Standard Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Laboratory Samples of Coal and Coke," for appendix G to this part.
- § 75.6(a)(42) (42) ASTM D5504-01~~D5504-94~~, Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence, for appendix D of this part.
- § 75.6(a)(43) (43) ASTM D6784-02, "Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method)," for § 75.22(a)(7) and (b)(5).
- § 75.6(a)(44) (44) ASTM D6911-03, "Guide for Packaging and Shipping Environmental Samples for Laboratory Analysis," for appendix K of this part, section 7.2.8.
- § 75.6(a)(45) (45) ASTM D6667-04, "Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquified Petroleum Gases by Ultraviolet Fluorescence", for appendix D of this part.
- § 75.6(a)(46) (46) ASTM D4809-00, "Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method)", for appendices D, and F of this part.
- § 75.6(a)(47) (47) ASTM D5865-01ae1, "Standard Test Method for Gross Calorific Value of Coal and Coke", for appendices A, D, and F of this part.
- § 75.6(a)(48) (48) ASTM D7036-04, "Standard Practice for Competence of Air Emission Testing Bodies", for appendices A, B, and E of this part.
- § 75.6(b) (b) The following materials are available for purchase from the American Society of Mechanical Engineers (ASME), 22 Law Drive, P.O. Box 2900, Fairfield, NJ 07007-2900.
- (1) ASME MFC-3M-1989 (Reaffirmed 1995)~~with September 1990 Errata~~, Measurement of Fluid Flow in Pipes Using Orifice, Nozzle, and Venturi, for appendix D of this part.
- (2) ASME MFC-4M-1986 (Reaffirmed 1997~~1990~~), Measurement of Gas Flow by Turbine Meters, for appendix D of this part.
- (3) ASME-MFC-5M-1985, (Reaffirmed 2001), Measurement of Liquid Flow in Closed Conduits Using Transit-Time Ultrasonic Flowmeters, for appendix D of this part.
- (4) ASME MFC-6M-1998~~1987 with June 1987 Errata~~, Measurement of Fluid Flow in Pipes Using Vortex Flow Meters, for appendix D of this part.
- (5) ASME MFC-7M-1987 (Reaffirmed 2001~~1992~~), Measurement of Gas Flow by Means of Critical Flow Venturi Nozzles, for appendix D of this part.
- (6) ASME MFC-9M-1988 (Reaffirmed 2001)~~with December 1989 Errata~~, Measurement of Liquid Flow in Closed Conduits by Weighing Method, for appendix D of this part.
- § 75.6(c) (c) The following materials are available for purchase from the American National Standards Institute (ANSI), 25 West 43rd Street, Fourth Floor, New York, New York 10036:
- (1) ISO 8316: 1987(E) Measurement of Liquid Flow in Closed Conduits-Method by Collection of the Liquid in a Volumetric Tank, for appendices D and E of this part.
- (2) [Reserved]
- § 75.6(d) (d) The following materials are available for purchase from the following address: Gas Processors Association (GPA), 6526 East 60th Street, Tulsa, Oklahoma 74143:
- (1) GPA Standard 2172-1996~~86~~, Calculation of Gross Heating Value, Relative Density and Compressibility Factor for Natural Gas Mixtures from Compositional Analysis, for appendices D, E, and F of this part.
- (2) GPA Standard 2261-1999~~90~~, Analysis for Natural Gas and Similar Gaseous Mixtures

by Gas Chromatography, for appendices D, F, and G of this part.

§ 75.6(e)

(e) The following American Gas Association materials are available for purchase from the following address: ILI Infodisk, 610 Winters Avenue, Paramus, New Jersey 07652:

(1) American Gas Association Report No. 3: Orifice Metering of Natural Gas and Other Related Hydrocarbon Fluids, Part 1: General Equations and Uncertainty Guidelines (October 1990 Edition), Part 2: Specification and Installation Requirements (February 1991 Edition) and Part 3: Natural Gas Applications (August 1992 Edition), for appendices D and E of this part.

(2) American Gas Association Transmission Measurement Committee Report No. 7: Measurement of Gas by Turbine Meters (Second Revision, April 1996), for appendix D to this part.

§ 75.6(f)

(f) The following materials are available for purchase from the following address: American Petroleum Institute, Publications Department, 1220 L Street NW, Washington, DC 20005-4070:

(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 (1st edition); Section 1B, Standard Practice for Level Measurement of Liquid Hydrocarbons in Stationary Tanks by Automatic Tank Gauging, June 2001 April 1992 (reaffirmed January 1997); Section 2, Standard Practice for Gauging Petroleum and Petroleum Products in Tank Cars, September 1995 (Reaffirmed September 2000); Section 3, Standard Practice for Level Measurement of Liquid Hydrocarbons in Stationary Pressurized Storage Tanks by Automatic Tank Gauging, June 1996 (1st edition); Section 4, Standard Practice for Level Measurement of Liquid Hydrocarbons on Marine Vessels by Automatic Tank Gauging, April 1995 (1st edition); and Section 5, Standard Practice for Level Measurement of Light Hydrocarbon Liquids Onboard Marine Vessels by Automatic Tank Gauging, March 1997 (1st edition); 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) Manual of Measurement Standards, Chapter 4: Section 2, "Conventional Pipe Provers, (Provers Accumulating at Least 10,000 Pulses), Measurement Coordination (Second Edition, March 2001)," Section 3, "Small Volume Provers (First Edition)," and Section 5, "Master-Meter Provers, Measurement Coordination (Second Edition, May 2000)" from Chapter 4 of the Manual of Petroleum Measurement Standards, October 1988 (Reaffirmed 1993), for appendix D to this part.

(4) American Petroleum Institute (API) Manual of Petroleum Measurement Standards, Chapter 22: Section 2, "Differential Pressure Flow Measurement Devices" (First Edition, August 2005) for Appendix D to this part.

§ 75.7

§ 75.7 [Removed and Reserved]

§ 75.8

§ 75.8 [Removed and Reserved]

Subpart B -- Monitoring Provisions

§ 75.10

§ 75.10 General operating requirements.

§ 75.10(a)

(a) *Primary Measurement Requirement.* The owner or operator shall measure opacity, and all SO₂, NO_x, and CO₂ emissions for each affected unit as follows:

§ 75.10(a)(1)

(1) To determine SO₂ emissions, the owner or operator shall install, certify, operate, and maintain, in accordance with all the requirements of this part, a SO₂ continuous emission monitoring system and a flow monitoring system with an automated data acquisition and handling system for measuring and recording SO₂ concentration (in ppm), volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr) discharged to the atmosphere, except as provided in §§ 75.11 and 75.16 and subpart E of this part;

§ 75.10(a)(2)

(2) To determine NO_x emissions, the owner or operator shall install, certify, operate, and maintain, in accordance with all the requirements of this part, a NO_x-diluent continuous emission

monitoring system (consisting of a NO_x pollutant concentration monitor and an O₂ or CO₂ diluent gas monitor) with an automated data acquisition and handling system for measuring and recording NO_x concentration (in ppm), O₂ or CO₂ concentration (in percent O₂ or CO₂) and NO_x 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_x emissions, both NO and NO₂, either by monitoring for both NO and NO₂ or by monitoring for NO only and adjusting the emissions data to account for NO₂;

§ 75.10(a)(3)

(3) The owner or operator shall determine CO₂ 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 CO₂ continuous emission monitoring system and a flow monitoring system with an automated data acquisition and handling system for measuring and recording CO₂ concentration (in ppm or percent), volumetric gas flow (in scfh), and CO₂ mass emissions (in tons/hr) discharged to the atmosphere;

(ii) The owner or operator shall determine CO₂ emissions based on the measured carbon content of the fuel and the procedures in appendix G of this part to estimate CO₂ 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 CO₂ continuous emission monitoring system that uses an O₂ concentration monitor to determine CO₂ emissions (according to the procedures in appendix F of this part) with an automated data acquisition and handling system for measuring and recording O₂ concentration (in percent), CO₂ concentration (in percent), volumetric gas flow (in scfh), and CO₂ mass emissions (in tons/hr) discharged to the atmosphere;

§ 75.10(a)(4)

(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

§ 75.10(a)(5)

(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.

§ 75.10(b)

(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 SO₂ and NO_x emissions in the appropriate units of measurement (i.e., lb/hr for SO₂ and lb/mmBtu for NO_x).

§ 75.10(c)

(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.

§ 75.10(d)

(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:

§ 75.10(d)(1)

(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 SO₂ concentrations, volumetric flow, SO₂ mass emissions, CO₂ concentration, O₂ concentration, CO₂ mass emissions (if applicable), NO_x concentration, NO_x emission rate, and Hg concentration 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.

§ 75.10(d)(2)

(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.

§ 75.10(d)(3)

(3) Failure of an SO₂, CO₂, or O₂ emissions concentration monitor, NO_x concentration monitor, Hg concentration monitor, flow monitor, moisture monitor, or NO_x-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_x-diluent monitoring system, an hourly average NO_x emission rate in lb/mmBtu is valid only if the minimum number of data points is acquired by both the NO_x pollutant concentration monitor and the diluent monitor (CO₂ or O₂). For a moisture monitoring system consisting of one or more oxygen analyzers capable of measuring O₂ 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.

§ 75.10(e)

(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.

§ 75.10(f) (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.

§ 75.10(g) (g) *Minimum recording and reporting 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.

§ 75.11 **§ 75.11 Specific provisions for monitoring SO₂ emissions (~~SO₂ and flow monitors~~).**

§ 75.11(a) (a) *Coal-fired units.* The owner or operator shall meet the general operating requirements in § 75.10 for an SO₂ 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.

§ 75.11(b) (b) *Moisture correction.* Where SO₂ 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; 14.0% for natural gas (boilers, only) 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 SO₂ 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 O₂ 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 O₂ 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.

§ 75.11(c) (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.

| | |
|---------------|--|
| § 75.11(d) | <p>(d) <i>Gas-fired and oil-fired units.</i> 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 SO₂ emissions:</p> <p>(1) By meeting the general operating requirements in § 75.10 for an SO₂ 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;</p> <p>(2) By providing other information satisfactory to the Administrator using the applicable procedures specified in appendix D to this part for estimating hourly SO₂ mass emissions; or</p> <p>(3) By using the low mass emissions excepted methodology in § 75.19(c) for estimating hourly SO₂ mass emissions if the affected unit qualifies as a low mass emissions unit under § 75.19(a) and (b). <u>If this option is selected for SO₂, the LME methodology must also be used for NO_x and CO₂ when these parameters are required to be monitored by applicable program(s).</u></p> |
| § 75.11(e) | <p>(e) <i>Special considerations Units with SO₂ continuous emission monitoring systems</i> during the combustion of gaseous fuels. The owner or operator of an affected unit with that uses a certified flow monitor and a certified diluent gas (O₂ or CO₂) monitor to measure the unit heat input rate shall, during any hours in which the unit combusts only gaseous fuel, determine SO₂ emissions in accordance with paragraph (e)(1) or (e)(3) of this section, as applicable an SO₂ continuous emission monitoring system shall, during any hours in which the unit combusts only gaseous fuel, determine SO₂ emissions in accordance with paragraph (e)(1), (e)(2) or (e)(3) of this section, as applicable.</p> |
| § 75.11(e)(1) | <p>(1) If the gaseous fuel <u>qualifies for a default SO₂ emission rate under section 2.3.1.1, 2.3.2.1.1, or 2.3.6(b) of appendix D to this part,</u> 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 SO₂ monitoring system, determine SO₂ emissions by using Equation F-23 in appendix F to this part. Substitute into Equation F-23 the hourly heat input, calculated using a the certified flow monitoring system and a the certified diluent monitor (according to the applicable equation in section 5.2 of appendix F to this part), in conjunction with the appropriate default SO₂ emission rate from section 2.3.1.1, or 2.3.2.1.1, or 2.3.6(b) 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; <u>or</u></p> |
| § 75.11(e)(2) | <p>(2) [Reserved]The owner or operator may, in lieu of operating and recording data from the SO₂ monitoring system, determine SO₂ 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 <u>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.</u></p> |
| § 75.11(e)(3) | <p>(3) The owner or operator may determine SO₂ mass emissions by using a certified SO₂ continuous monitoring system, in conjunction with a the 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 SO₂ monitoring system shall meet the following quality assurance provisions when the very low sulfur fuel is combusted:</p> <p>(i) When conducting the daily calibration error tests of the SO₂ monitoring system, as required by section 2.1.1 in appendix B of this part, the zero-level calibration gas shall have an SO₂ 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.</p> <p>(ii) EPA recommends that the calibration response of the SO₂ monitoring system be</p> |

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 SO₂ concentration of less than 2.0 ppm recorded by the SO₂ 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 SO₂ 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 SO₂ monitoring system to a value no greater than 200 ppm.

(4) The provisions in paragraph (e)(1) of this section, may also be used for the combustion of a solid or liquid fuel that meets the definition of very low sulfur fuel in §72.2 of this chapter, mixtures of such fuels, or combinations of such fuels with gaseous fuel, if the owner or operator submits a petition under §75.66 for a default SO₂ emission rate for each fuel, mixture or combination, and if the Administrator approves the petition.

§ 75.11(f)

(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 except where the owner or operator has an approved petition to use the provisions of paragraph (e)(1) of this section.

§ 75.12

§ 75.12 Specific provisions for monitoring NO_x emission rate ~~(NO_x-diluent monitoring systems).~~

§ 75.12(a)

(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_x 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_x-diluent CEMS may measure either O₂ or CO₂ concentration in the flue gases.

§ 75.12(b)

(b) *Moisture correction.* If a correction for the stack gas moisture content is needed to properly calculate the NO_x emission rate in lb/mmBtu, e.g., if the NO_x pollutant concentration monitor measures on a different moisture basis from the diluent monitor, the owner or operator shall either report a fuel-specific default moisture value for each unit operating hour, as provided in § 75.11(b)(1), or shall install, operate, maintain, and quality assure a continuous moisture monitoring system, as defined in § 75.11(b)(2). Notwithstanding this requirement, if Equation 19-3, 19-4 or 19-8 in Method 19 in appendix A to part 60 of this chapter is used to measure NO_x emission rate, the following fuel-specific default moisture percentages shall be used in lieu of the default values specified in § 75.11(b)(1): 5.0%, for anthracite coal; 8.0% for bituminous coal; 12.0% for sub-bituminous coal; 13.0% for lignite coal; ~~and~~ 15.0% for wood; and 18.0% for natural gas (boilers, only).

§ 75.12(c)

(c) *Determination of NO_x emission rate.* The owner or operator shall calculate hourly, quarterly, and annual NO_x emission rates (in lb/mmBtu) by combining the NO_x concentration (in ppm), diluent concentration (in percent O₂ or CO₂), and percent moisture (if applicable) measurements according to the procedures in appendix F to this part.

§ 75.12(d)

(d) *Gas-fired peaking units or oil-fired peaking units.* The owner or operator of an affected

unit that qualifies as a gas-fired peaking unit or oil-fired peaking unit, as defined in § 72.2 of this chapter, based on information submitted by the designated representative in the monitoring plan shall comply with one of the following:

(1) Meet the general operating requirements in § 75.10 for a NO_x continuous emission monitoring system; or

(2) Provide information satisfactory to the Administrator using the procedure specified in appendix E of this part for estimating hourly NO_x emission rate. However, if in the years after certification of an excepted monitoring system under appendix E of this part, a unit's operations exceed a capacity factor of 20 percent in any calendar year or exceed a capacity factor of 10.0 percent averaged over three years, the owner or operator shall install, certify, and operate a NO_x-diluent continuous emission monitoring system no later than December 31 of the following calendar year. If the required CEMS has not been installed and certified by that date, the owner or operator shall report the maximum potential NO_x emission rate (MER) (as defined in § 72.2 of this chapter) for each unit operating hour, starting with the first unit operating hour after the deadline and continuing until the CEMS has been provisionally certified.

§ 75.12(e)

(e) *Low mass emissions units.* Notwithstanding the requirements of paragraphs (a) and (d) of this section, the owner or operator of an affected unit that qualifies as a low mass emissions unit under § 75.19(a) and (b) shall comply with one of the following:

(1) Meet the general operating requirements in § 75.10 for a NO_x continuous emission monitoring system;

(2) Meet the requirements specified in paragraph (d)(2) of this section for using the excepted monitoring procedures in appendix E to this part, if applicable; or

(3) Use the low mass emissions excepted methodology in § 75.19(c) for estimating hourly NO_x emission rate and hourly NO_x mass emissions, if applicable under § 75.19(a) and (b). If this option is selected for NO_x, the LME methodology must also be used for SO₂ and CO₂ when these parameters are required to be monitored by applicable program(s).

§ 75.12(f)

(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 specified in paragraph (a) of this section.

§ 75.13

§ 75.13 Specific provisions for monitoring CO₂ emissions.

§ 75.13(a)

(a) *CO₂ continuous emission monitoring system.* If the owner or operator chooses to use the continuous emission monitoring method, then the owner or operator shall meet the general operating requirements in § 75.10 for a CO₂ continuous emission monitoring system and flow monitoring system for each affected unit. The owner or operator shall comply with the applicable provisions specified in §§ 75.11 (a) through (e) or § 75.16, except that the phrase "CO₂ continuous emission monitoring system" shall apply rather than "SO₂ continuous emission monitoring system," the phrase "CO₂ concentration" shall apply rather than "SO₂ concentration," the term "maximum potential concentration of CO₂" shall apply rather than "maximum potential concentration of SO₂," and the phrase "CO₂ mass emissions" shall apply rather than "SO₂ mass emissions."

§ 75.13(b)

(b) *Determination of CO₂ emissions using appendix G to this part.* If the owner or operator chooses to use the appendix G method, then the owner or operator shall follow the procedures in appendix G to this part for estimating daily CO₂ mass emissions based on the measured carbon content of the fuel and the amount of fuel combusted. For units with wet flue gas desulfurization systems or other add-on emissions controls generating CO₂, the owner or operator shall use the procedures in appendix G to this part to estimate both combustion-related emissions based on the measured carbon content of the fuel and the amount of fuel combusted and sorbent-related emissions based on the amount of sorbent injected. The owner or operator shall calculate daily, quarterly, and annual CO₂ mass emissions (in tons) in accordance with the procedures in appendix G to this part.

§ 75.13(c)

(c) *Determination of CO₂ mass emissions using an O₂ monitor according to appendix F to this part.* If the owner or operator chooses to use the appendix F method, then the owner or

operator shall determine hourly CO₂ concentration and mass emissions with a flow monitoring system; a continuous O₂ concentration monitor; fuel F and F_C factors; and, where O₂ concentration is measured on a dry basis (or where Equation F-14b in appendix F to this part is used to determine CO₂ concentration), either a continuous moisture monitoring system, as specified in § 75.11(b)(2), or a fuel-specific default moisture percentage (if applicable), as defined in § 75.11(b)(1); and by using the methods and procedures specified in appendix F to this part. For units using a common stack, multiple stack, or bypass stack, the owner or operator may use the provisions of § 75.16, except that the phrase "CO₂ continuous emission monitoring system" shall apply rather than "SO₂ continuous emission monitoring system," the term "maximum potential concentration of CO₂" shall apply rather than "maximum potential concentration of SO₂," and the phrase "CO₂ mass emissions" shall apply rather than "SO₂ mass emissions."

§ 75.13(d)

(d) *Determination of CO₂ mass emissions from low mass emissions units.* The owner or operator of a unit that qualifies as a low mass emissions unit under § 75.19(a) and (b) shall comply with one of the following:

(1) Meet the general operating requirements in § 75.10 for a CO₂ continuous emission monitoring system and flow monitoring system;

(2) Meet the requirements specified in paragraph (b) or (c) of this section for use of the methods in appendix G or F to this part, respectively; or

(3) Use the low mass emissions excepted methodology in § 75.19(c) for estimating hourly CO₂ mass emissions, if applicable under § 75.19(a) and (b). If this option is selected for CO₂, the LME methodology must also be used for NO_x and SO₂ when these parameters are required to be monitored by applicable program(s).

§ 75.14

§ 75.14 Specific provisions for monitoring opacity.

§ 75.14(a)

(a) *Coal-fired units and oil-fired units.* The owner or operator shall meet the general operating provisions in § 75.10 of this part for a continuous opacity monitoring system for each affected coal-fired or oil-fired unit, except as provided in paragraphs (b), (c), and (d) of this section and in § 75.18. Each continuous opacity monitoring system shall meet the design, installation, equipment, and performance specifications in Performance Specification 1 in appendix B to part 60 of this chapter. Any continuous opacity monitoring system previously certified to meet Performance Specification 1 shall be deemed certified for the purposes of this part.

§ 75.14(b)

(b) *Unit with wet flue gas pollution control system.* If the owner or operator can demonstrate that condensed water is present in the exhaust flue gas stream and would impede the accuracy of opacity measurements, then the owner or operator of an affected unit equipped with a wet flue gas pollution control system for SO₂ emissions or particulates is exempt from the opacity monitoring requirements of this part.

§ 75.14(c)

(c) *Gas-fired units.* The owner or operator of an affected unit that qualifies as gas-fired, as defined in § 72.2 of this chapter, based on information submitted by the designated representative in the monitoring plan is exempt from the opacity monitoring requirements of this part. Whenever a unit previously categorized as a gas-fired unit is recategorized as another type of unit by changing its fuel mix, the owner or operator shall install, operate, and certify a continuous opacity monitoring system as required by paragraph (a) of this section by December 31 of the following calendar year.

§ 75.14(d)

(d) *Diesel-fired units and dual-fuel reciprocating engine units.* The owner or operator of an affected diesel-fired unit or a dual-fuel reciprocating engine unit is exempt from the opacity monitoring requirements of this part.

§ 75.15

§ 75.15 Special provisions for measuring Hg mass emissions using the excepted sorbent trap monitoring methodology.

For an affected coal-fired unit under a State or Federal Hg mass emission reduction program

that adopts the provisions of subpart I of this part, if the owner or operator elects to use sorbent trap monitoring systems (as defined in § 72.2 of this chapter) to quantify Hg mass emissions, the guidelines in paragraphs (a) through (j) of this section shall be followed for this excepted monitoring methodology:

- § 75.15(a) (a) For each sorbent trap monitoring system (whether primary or redundant backup), the use of paired sorbent traps, as described in appendix K to this part, is required;
- § 75.15(b) (b) Each sorbent trap shall have both a main section, a backup section, and a third section to allow spiking with a calibration gas of known Hg concentration, as described in appendix K to this part;
- § 75.15(c) (c) A certified flow monitoring system is required;
- § 75.15(d) (d) Correction for stack gas moisture content is required, and in some cases, a certified O₂ or CO₂ monitoring system is required (see § 75.81(a)(4));
- § 75.15(e) (e) Each sorbent trap monitoring system shall be installed and operated in accordance with appendix K to this part. The automated data acquisition and handling system shall ensure that the sampling rate is proportional to the stack gas volumetric flow rate.
- § 75.15(f) (f) At the beginning and end of each sample collection period, and at least once in each unit operating hour during the collection period, the dry gas meter reading shall be recorded.
- § 75.15(g) (g) After each sample collection period, the mass of Hg adsorbed in each sorbent trap (in all three sections) shall be determined according to the applicable procedures in appendix K to this part.
- § 75.15(h) (h) The hourly Hg mass emissions for each collection period are determined using the results of the analyses in conjunction with contemporaneous hourly data recorded by a certified stack flow monitor, corrected for the stack gas moisture content. For each pair of sorbent traps analyzed, the average of the two Hg concentrations shall be used for reporting purposes under § 75.84(f). Notwithstanding this requirement, if, due to circumstances beyond the control of the owner or operator, one of the paired traps is accidentally lost, damaged, or broken and cannot be analyzed, the results of the analysis of the other trap, ~~if valid~~, may be used for reporting purposes, provided that:
- (1) The other trap has met all of the applicable quality-assurance requirements of this part;
and
(2) The Hg concentration measured by the other trap is multiplied by a factor of 1.222,-
- § 75.15(i) (i) All unit operating hours for which valid Hg concentration data are obtained with the primary sorbent trap monitoring system (as verified using the quality assurance procedures in appendix K to this part) shall be reported in the electronic quarterly report under § 75.84(f). For hours in which data from the primary monitoring system are invalid, the owner or operator may report valid Hg concentration data from a certified redundant backup CEMS or sorbent trap monitoring system or from an applicable reference method under § 75.22. If no quality-assured Hg concentration are available for a particular hour, the owner or operator shall report the appropriate substitute data value in accordance with § 75.39.
- § 75.15(j) (j) Initial certification requirements and additional quality-assurance requirements for the sorbent trap monitoring systems are found in § 75.20(c)(9), in section 6.5.7 of appendix A to this part, in sections 1.5 and 2.3 of appendix B to this part, and in appendix K to this part.
- § 75.15(k) (k) When a sorbent trap monitoring system is tested for relative accuracy, both the size of the sorbent traps and the type of sorbent material used by the traps shall be the same as for daily operation of the system.
- § 75.15(l) (l) Whenever the size of the sorbent traps or the type of sorbent material used by the traps is

changed, the owner or operator shall conduct a diagnostic RATA of the sorbent trap monitoring system. The modified system shall not be used to report Hg emissions under this part until the RATA has been performed and passed. Notwithstanding this requirement, Hg concentrations measured by the modified system during a successful RATA may be reported as quality-assured data under this part.

§ 75.16

§ 75.16 Special provisions for monitoring emissions from common, bypass, and multiple stacks for SO₂ emissions and heat input determinations.

§ 75.16(a)

(a) [Reserved]

§ 75.16(b)

(b) *Common stack procedures.* The following procedures shall be used when more than one unit uses a common stack:

§ 75.16(b)(1)

(1) *Unit utilizing common stack with other affected unit(s).* When a Phase I or Phase II affected unit utilizes a common stack with one or more other Phase I or Phase II affected units, but no nonaffected units, the owner or operator shall either:

(i) Install, certify, operate, and maintain an SO₂ continuous emission monitoring system and flow monitoring system in the duct to the common stack from each affected unit; or

(ii) Install, certify, operate, and maintain an SO₂ continuous emission monitoring system and flow monitoring system in the common stack; and ~~(A) Combine emissions for the affected units for recordkeeping and compliance purposes; or~~

~~(B) Provide information satisfactory to the Administrator on methods for apportioning SO₂ mass emissions measured in the common stack to each of the Phase I and Phase II affected units. The designated representative shall provide the information to the Administrator through a petition submitted under § 75.66. The Administrator may approve such substitute methods for apportioning SO₂ mass emissions measured in a common stack whenever the method ensures complete and accurate accounting of all emissions regulated under this part.~~

§ 75.16(b)(2)

(2) *Unit utilizing common stack with nonaffected unit(s).* When one or more Phase I or Phase II affected units utilizes a common stack with one or more nonaffected units, the owner or operator shall either:

§ 75.16(b)(2)(i)

(i) Install, certify, operate, and maintain an SO₂ continuous emission monitoring system and flow monitoring system in the duct to the common stack from each Phase I and Phase II unit; or

§ 75.16(b)(2)(ii)

(ii) Install, certify, operate, and maintain an SO₂ continuous emission monitoring system and flow monitoring system in the common stack; and

(A) Designate the nonaffected units as opt-in units in accordance with part 74 of this chapter and combine emissions for recordkeeping and compliance purposes; or

(B) Install, certify, operate, and maintain an SO₂ continuous emission monitoring system and flow monitoring system in the duct from each nonaffected unit; determine SO₂ mass emissions from the affected units as the difference between SO₂ mass emissions measured in the common stack and SO₂ mass emissions measured in the ducts of the nonaffected units, not to be reported as an hourly average value less than zero; combine emissions for the Phase I and Phase II affected units for recordkeeping and compliance purposes; and calculate and report SO₂ mass emissions from the Phase I and Phase II affected units, pursuant to an approach approved by the Administrator, such that these emissions are not underestimated; or

(C) Record the combined emissions from all units as the combined SO₂ mass emissions for the Phase I and Phase II affected units for recordkeeping and compliance purposes; or

(D) Petition through the designated representative and provide information satisfactory to the Administrator on methods for apportioning SO₂ mass emissions measured in the common stack to each of the units using the common stack and on reporting the SO₂ mass emissions. The Administrator may approve such demonstrated substitute methods for apportioning and reporting SO₂ mass emissions measured in a common stack whenever the demonstration ensures that there is a complete and accurate accounting of all emissions regulated under this part and, in particular, that the emissions from any affected unit are not underestimated.

- § 75.16(c) (c) *Unit with bypass stack.* Whenever any portion of the flue gases from an affected unit can be routed through a bypass stack so as to avoid the installed SO₂ continuous emission monitoring system and flow monitoring system, the owner or operator shall either:
- § 75.16(c)(1) (1) Install, certify, operate, and maintain separate SO₂ continuous emission monitoring systems and flow monitoring systems on the main stack and the bypass stack and calculate SO₂ mass emissions for the unit as the sum of the SO₂ mass emissions measured at the two stacks; or
- § 75.16(c)(2) (2) Monitor SO₂ mass emissions at the main stack using SO₂ and flow rate monitoring systems and measure SO₂ mass emissions at the bypass stack using the reference methods in § 75.22(b) for SO₂ and flow rate and calculate SO₂ mass emissions for the unit as the sum of the emissions recorded by the installed monitoring systems on the main stack and the emissions measured by the reference method monitoring systems; or
- § 75.16(c)(3) (3) Install, certify, operate, and maintain SO₂ and flow rate monitoring systems only on the main stack. If this option is chosen, report the following values for each hour during which emissions pass through the bypass stack: the maximum potential concentration of SO₂ as determined under section 2.1.1.1 of appendix A to this part (or, if available, the SO₂ concentration measured by a certified monitor located at the control device inlet may be reported instead), and the hourly volumetric flow rate value that would be substituted for the flow monitor installed on the main stack or flue under the missing data procedures in subpart D of this part if data from the flow monitor installed on the main stack or flue were missing for the hour. The maximum potential SO₂ concentration may be specific to the type of fuel combusted in the unit during the bypass (see § 75.33(b)(5)). The option in this paragraph, (c)(3), may only be used if use of the bypass stack is limited to unit startup, emergency situations (e.g., malfunction of a flue gas desulfurization system), and periods of routine maintenance of the flue gas desulfurization system or maintenance on the main stack. If this option is chosen, it is not necessary to designate the exhaust configuration as a multiple stack configuration in the monitoring plan required under § 75.53, with respect to SO₂ or any other parameter that is monitored only at the main stack. Calculate SO₂ mass emissions for the unit as the sum of the emissions calculated with the substitute values and the emissions recorded by the SO₂ and flow monitoring systems installed on the main stack.
- § 75.16(d) (d) *Unit with multiple stacks or ducts.* When the flue gases from an affected unit utilize two or more ducts feeding into two or more stacks (that may include flue gases from other affected or nonaffected units), or when the flue gases utilize two or more ducts feeding into a single stack and the owner or operator chooses to monitor in the ducts rather than the stack, the owner or operator shall either:
- (1) Install, certify, operate, and maintain an SO₂ continuous emission monitoring system and flow monitoring system in each duct feeding into the stack or stacks and determine SO₂ mass emissions from each affected unit as the sum of the SO₂ mass emissions recorded for each duct; or
- (2) Install, certify, operate, and maintain an SO₂ continuous emission monitoring system and flow monitoring system in each stack. Determine SO₂ mass emissions from each affected unit as the sum of the SO₂ mass emissions recorded for each stack. Notwithstanding the prior sentence, if another unit also exhausts flue gases to one or more of the stacks, the owner or operator shall also comply with the applicable common stack requirements of this section to determine and record SO₂ mass emissions from the units using that stack and shall calculate and report SO₂ mass emissions from the affected units and stacks, pursuant to an approach approved by the Administrator, such that these emissions are not underestimated.
- § 75.16(e) (e) *Heat input rate.* The owner or operator of an affected unit using a common stack, bypass stack, or multiple stacks shall account for heat input rate according to the following:
- § 75.16(e)(1) (1) The owner or operator of an affected unit using a common stack, bypass stack, or multiple stack with a diluent monitor and a flow monitor on each stack may use the flow rate and diluent monitors to determine the heat input rate for the affected unit, using the procedures specified in paragraphs (b) through (d) of this section, except that the term "heat input rate" shall

apply rather than "SO₂ mass emissions" or "emissions" and the phrase "a diluent monitor and a flow monitor" shall apply rather than "SO₂ continuous emission monitoring system and flow monitoring system." The applicable equation in appendix F to this part shall be used to calculate the heat input rate from the hourly flow rate, diluent monitor measurements, and (if the equation in appendix F requires a correction for the stack gas moisture content) hourly moisture measurements. Notwithstanding the options for combining heat input rate in paragraphs (b)(1)(ii) and (b)(2)(ii) of this section, the owner or operator of an affected unit with a diluent monitor and a flow monitor installed on a common stack to determine the combined heat input rate at the common stack shall also determine and report heat input rate to each individual unit, according to paragraph (e)(3) of this section.

§ 75.16(e)(2)

(2) In the event that an owner or operator of a unit with a bypass stack does not install and certify a diluent monitor and flow monitoring system in a bypass stack, the owner or operator shall determine total heat input rate to the unit for each unit operating hour during which the bypass stack is used according to the missing data provisions for heat input rate under § 75.36 or the procedures for calculating heat input rate from fuel sampling and analysis in section 5.5 of appendix F to this part.

§ 75.16(e)(3)

(3) The owner or operator of an affected unit with a diluent monitor and a flow monitor installed on a common stack to determine heat input rate at the common stack may choose to apportion the heat input rate from the common stack to each affected unit utilizing the common stack by using either of the following two methods, provided that all of the units utilizing the common stack are combusting fuel with the same F-factor found in section 3 of appendix F of this part. The heat input rate may be apportioned either by using the ratio of load (in MWe) for each individual unit to the total load for all units utilizing the common stack or by using the ratio of steam flow-load (in 1000 lb/hr or mmBtu/hr thermal output) for each individual unit to the total steam flow-load for all units utilizing the common stack, in conjunction with the appropriate unit and stack operating times. If using either of these apportionment methods, the owner or operator shall apportion according to section 5.6 of appendix F to this part.

§ 75.16(e)(4)

(4) Notwithstanding paragraph (e)(1) of this section, any affected unit that is using the procedures in this part to meet the monitoring and reporting requirements of a State or federal NO_x mass emission reduction program must also meet the requirements for monitoring heat input rate in §§ 75.71, 75.72 and 75.75.

§ 75.17

§ 75.17 Specific provisions for monitoring emissions from common, bypass, and multiple stacks for NO_x emission rate.

Notwithstanding the provisions of paragraphs (a), (b), (c), and (d) of this section, the owner or operator of an affected unit that is using the procedures in this part to meet the monitoring and reporting requirements of a State or federal NO_x mass emission reduction program must also meet the provisions for monitoring NO_x emission rate in §§ 75.71 and 75.72.

§ 75.17(a)

(a) *Unit utilizing common stack with other affected unit(s).* When an affected unit utilizes a common stack with one or more affected units, but no nonaffected units, the owner or operator shall either:

§ 75.17(a)(1)

(1) Install, certify, operate, and maintain a NO_x continuous emission monitoring system in the duct to the common stack from each affected unit; or

§ 75.17(a)(2)

(2) Install, certify, operate, and maintain a NO_x continuous emission monitoring system in the common stack and follow the appropriate procedure in paragraphs (a)(2) (i) through (iii) of this section, depending on whether or not the units are required to comply with a NO_x emission limitation (in lb/mmBtu, annual average basis) pursuant to section 407(b) of the Act (referred to hereafter as "NO_x emission limitation").

§ 75.17(a)(2)(i)

(i) When each of the affected units has a NO_x emission limitation, the designated representative shall submit a compliance plan to the Administrator that indicates:

(A) Each unit will comply with the most stringent NO_x emission limitation of any unit utilizing the common stack; or

(B) Each unit will comply with the applicable NO_x emission limitation by averaging its emissions with the other unit(s) utilizing the common stack, pursuant to the emissions averaging plan submitted under part 76 of this chapter; or

(C) Each unit's compliance with the applicable NO_x emission limit will be determined by a method satisfactory to the Administrator for apportioning to each of the units the combined NO_x emission rate (in lb/mmBtu) measured in the common stack and for reporting the NO_x emission rate, as provided in a petition submitted by the designated representative. The Administrator may approve such demonstrated substitute methods for apportioning and reporting NO_x emission rate measured in a common stack whenever the demonstration ensures that there is a complete and accurate estimation of all emissions regulated under this part and, in particular, that the emissions from any unit with a NO_x emission limitation are not underestimated.

§ 75.17(a)(2)(ii)

(ii) When none of the affected units has a NO_x emission limitation, the owner or operator and the designated representative have no additional obligations pursuant to section 407 of the Act and may record and report a combined NO_x emission rate (in lb/mmBtu) for the affected units utilizing the common stack.

§ 75.17(a)(2)(iii)

(iii) When at least one of the affected units has a NO_x emission limitation and at least one of the affected units does not have a NO_x emission limitation, the owner or operator shall either:

(A) Install, certify, operate, and maintain NO_x and diluent monitors in the ducts from the affected units; or

(B) Develop, demonstrate, and provide information satisfactory to the Administrator on methods for apportioning the combined NO_x emission rate (in lb/mmBtu) measured in the common stack on each of the units. The Administrator may approve such demonstrated substitute methods for apportioning the combined NO_x emission rate measured in a common stack whenever the demonstration ensures complete and accurate estimation of all emissions regulated under this part.

§ 75.17(b)

(b) *Unit utilizing common stack with nonaffected unit(s).* When one or more affected units utilizes a common stack with one or more nonaffected units, the owner or operator shall either:

(1) Install, certify, operate, and maintain a NO_x-diluent continuous emission monitoring system in the duct from each affected unit; or

(2) Develop, demonstrate, and provide information satisfactory to the Administrator on methods for apportioning the combined NO_x emission rate (in lb/mmBtu) measured in the common stack for each of the units. The Administrator may approve such demonstrated substitute methods for apportioning the combined NO_x emission rate measured in a common stack whenever the demonstration ensures complete and accurate estimation of all emissions regulated under this part.

§ 75.17(c)

(c) *Unit with multiple stacks or ducts.* When the flue gases from an affected unit discharge to the atmosphere through two or more stacks or when flue gases from an affected unit utilize two or more ducts feeding into a single stack and the owner or operator chooses to monitor in the ducts rather than the stack, the owner or operator shall monitor the NO_x emission rate in a way that is representative of each affected unit. Where another unit also exhausts flue gases to one or more of the stacks where monitoring systems are installed, the owner or operator shall also comply with the applicable common stack monitoring requirements of this section. The owner or operator shall either:

§ 75.17(c)(1)

(1) Install, certify, operate, and maintain a NO_x-diluent continuous emission monitoring system and a flow monitoring system in each stack or duct and determine the NO_x emission rate for the unit as the Btu-weighted average of the NO_x emission rates measured in the stacks or ducts using the heat input estimation procedures in appendix F to this part. Alternatively, for units that are eligible to use the procedures of appendix D to this part, the owner or operator may monitor heat input and NO_x emission rate at the unit level, in lieu of installing flow monitors on each stack or duct. If this alternative unit-level monitoring is performed, report, for each unit operating hour, the highest emission rate measured by any of the NO_x-diluent monitoring systems

installed on the individual stacks or ducts as the hourly NO_x emission rate for the unit, and report the hourly unit heat input as determined under appendix D to this part. Also, when this alternative unit-level monitoring is performed, the applicable NO_x missing data procedures in §§ 75.31 or 75.33 shall be used for each unit operating hour in which a quality-assured NO_x emission rate is not obtained for one or more of the individual stacks or ducts; or

§ 75.17(c)(2)

(2) Provided that the products of combustion are well-mixed, install, certify, operate, and maintain a NO_x continuous emission monitoring system in one stack or duct from the affected unit and record the monitored value as the NO_x emission rate for the unit. The owner or operator shall account for NO_x emissions from the unit during all times when the unit combusts fuel. Therefore, this option shall not be used if the monitored stack or duct can be bypassed (e.g., by using dampers). Follow the procedure in § 75.17(d) for units with bypass stacks. Further, this option shall not be used unless the monitored NO_x emission rate truly represents the NO_x emissions discharged to the atmosphere (e.g., the option is disallowed if there are any additional NO_x emission controls downstream of the monitored location).

§ 75.17(d)

(d) *Unit with a main stack and bypass stack configuration.* For an affected unit with a discharge configuration consisting of a main stack and a bypass stack, the owner or operator shall either:

(1) Follow the procedures in paragraph (c)(1) of this section; or

(2) Install, certify, operate, and maintain a NO_x-diluent CEMS only on the main stack. If this option is chosen, it is not necessary to designate the exhaust configuration as a multiple stack configuration in the monitoring plan required under § 75.53, with respect to NO_x or any other parameter that is monitored only at the main stack. For each unit operating hour in which the bypass stack is used and the emissions are either uncontrolled (or the add-on controls are not documented to be operating properly), report the maximum potential NO_x emission rate (as defined in § 72.2 of this chapter). The maximum potential NO_x emission rate may be specific to the type of fuel combusted in the unit during the bypass (*see* § 75.33(c)(8)). Alternatively, for a unit with NO_x add-on emission controls, for each unit operating hour in which the bypass stack is used and the emissions are controlled, the owner or operator may report the maximum controlled NO_x emission rate (MCR) instead of the maximum potential NO_x emission rate provided that the add-on controls are documented to be operating properly, as described in the quality assurance/quality control program for the unit, required by section 1 in appendix B of this part. To provide the necessary documentation, the owner or operator shall record parametric data to verify the proper operation of the NO_x add-on emission controls as described in § 75.34(d). Furthermore, the owner or operator shall calculate the MCR using the procedure described in appendix A § 2.1.2.1(b) by replacing the words "maximum potential NO_x emission rate (MER)" with the words "maximum controlled NO_x emission rate (MCR)" in and by using the NO_x MEC instead of the NO_x MPC.

§ 75.18

§ 75.18 Specific provisions for monitoring emissions from common and by-pass stacks for opacity.

§ 75.18(a)

(a) *Unit using common stack.* When an affected unit utilizes a common stack with other affected units or nonaffected units, the owner or operator shall comply with the applicable monitoring provision in this paragraph, as determined by existing Federal, State, or local opacity regulations.

(1) Where another regulation requires the installation of a continuous opacity monitoring system upon each affected unit, the owner or operator shall install, certify, operate, and maintain a continuous opacity monitoring system meeting Performance Specification 1 in appendix B to part 60 of this chapter (referred to hereafter as a "certified continuous opacity monitoring system") upon each unit.

(2) Where another regulation does not require the installation of a continuous opacity monitoring system upon each affected unit, and where the affected source is not subject to any existing Federal, State, or local opacity regulations, the owner or operator shall install, certify, operate, and maintain a certified continuous opacity monitoring system upon each common stack for the combined effluent.

§ 75.18(b)

(b) *Unit using bypass stack.* Where any portion of the flue gases from an affected unit can be routed so as to bypass the installed continuous opacity monitoring system, the owner or operator shall install, certify, operate, and maintain a certified continuous opacity monitoring system on each bypass stack flue, duct, or stack gas stream unless either:

(1) An applicable Federal, State, or local opacity regulation or permit exempts the unit from a requirement to install a continuous opacity monitoring system in the bypass stack; or

(2) A continuous opacity monitoring system is already installed and certified at the inlet of the add-on emissions controls.

(3) The owner or operator monitors opacity using method 9 of appendix A of part 60 of this chapter whenever emissions pass through the bypass stack. Method 9 shall be used in accordance with the applicable State regulations.

§ 75.19

§ 75.19 Optional SO₂, NO_x, and CO₂ emissions calculation for low mass emissions units.

§ 75.19(a)

(a) *Applicability and qualification*

§ 75.19(a)(1)

(1) For units that meet the requirements of this paragraph (a)(1) and paragraphs (a)(2) and (b) of this section, the low mass emissions (LME) excepted methodology in paragraph (c) of this section may be used in lieu of continuous emission monitoring systems or, if applicable, in lieu of excepted methods under appendices ~~D or E~~, E, and G to this part, for the purpose of determining unit heat input, NO_x, SO₂, and CO₂ mass emissions, and NO_x emission rate under this part. If the owner or operator of a qualifying unit elects to use the LME methodology, it must be used for all parameters that are required to be monitored by the applicable program(s). For example, for an Acid Rain Program LME unit, the methodology must be used to estimate SO₂, NO_x, and CO₂ mass emissions, NO_x emission rate, and unit heat input. ~~hourly heat input and hourly NO_x, SO₂, and CO₂ mass emissions under this part.~~

§ 75.19(a)(1)(i)

(i) A low mass emissions unit is an affected unit that is gas-fired, or oil-fired (as defined in § 72.2 of this chapter), and for which:

(A) An initial demonstration is provided, in accordance with paragraph (a)(2) of this section, which shows that the unit emits :

(1) No more than 25 tons of SO₂ annually and less than 100 tons of NO_x annually, for Acid Rain Program affected units. If the unit is also subject to the provisions of subpart H of this part, no more than 50 of the allowable annual tons of NO_x may be emitted during the ozone season; or

(2) Less than 100 tons of NO_x annually *and* no more than 50 tons of NO_x during the ozone season, for non-Acid Rain Program units subject to the provisions of subpart H of this part, for which the owner or operator reports emissions data on a year-round basis, in accordance with § 75.74(a) or § 75.74(b); or

(3) No more than 50 tons of NO_x per ozone season, for non-Acid Rain Program units subject to the provisions of subpart H of this part, for which the owner or operator reports emissions data only during the ozone season, in accordance with § 75.74(b); and

(B) An annual demonstration is provided thereafter, using one of the allowable methodologies in paragraph (c) of this section, showing that the low mass emissions unit continues to emit no more than the applicable number of tons of SO₂ and/or NO_x specified in paragraph (a)(1)(i)(A) of this section.

(C) This paragraph, (a)(1)(i)(C), applies only to a unit that is subject to an SO₂ emission limitation under the Acid Rain Program, and that combusts a gaseous fuel other than pipeline natural gas or natural gas (as defined in § 72.2 of this chapter). The owner or operator of such a unit must quantify the sulfur content and variability of the gaseous fuel by performing the demonstration described in section 2.3.6 of appendix D to this part, in order for the unit to qualify for LME status. If the results of that demonstration show that the gaseous fuel qualifies under paragraph (b) of section 2.3.6 to use a default SO₂ emission rate to report SO₂ mass emissions under this part, the unit is eligible for LME status.

§ 75.19(a)(1)(ii)

(ii) Each qualifying LME unit must start using the low mass emissions excepted methodology as follows:

(A) For a unit that reports emission data on a year-round basis, begin using the methodology in the first unit operating hour in the calendar year designated in the certification application as the first year that the methodology will be used; or

(B) For a unit that is subject to Subpart H of this part and that reports only during the ozone season according to § 75.74(c), begin using the methodology in the first unit operating hour in the ozone season designated in the certification application as the first ozone season that the methodology will be used.

(C) For a new or newly-affected unit, see paragraph (b)(4) of this section for additional guidance.

§ 75.19(a)(2)

(2) A unit may initially qualify as a low mass emissions unit if the designated representative submits a certification application to use the LME methodology (as described in § 75.63 (a)(1)(ii) and in this paragraph, (a)(2)) and the Administrator (or permitting authority, as applicable) certifies the use of such methodology. The certification application shall be submitted no later than 45 days prior to the date on which use of the low mass emissions methodology is expected to commence, and the application must contain:

§ 75.19(a)(2)(i)

(i) A statement identifying the projected date on which the LME methodology will first be used. The projected commencement date shall be consistent with paragraphs (a)(1)(ii) and (b)(4) of this section, as applicable; and

§ 75.19(a)(2)(ii)

(ii) Either:

§ 75.19(a)(2)(ii)(A)

(A) Actual SO₂ and/or NO_x mass emissions data (as applicable) for each of the three calendar years (or ozone seasons) prior to the calendar year in which the certification application is submitted demonstrating to the satisfaction of the Administrator or (if applicable) the permitting authority, that the unit emitted less than the applicable number of tons of SO₂ and/or NO_x specified in paragraph (a)(1)(i)(A) of this section. For the purposes of this paragraph, (a)(2)(ii)(A), the required actual SO₂ or NO_x mass emissions for each qualifying year or ozone season shall be determined using the SO₂, NO_x and heat input data reported to the Administrator in the electronic quarterly reports required under § 75.64 or under the Ozone Transport Commission (OTC) NO_x Budget Trading Program. Notwithstanding this requirement, in the absence of such electronic reports, an estimate of the actual emissions for each of the previous three years (or ozone seasons) shall be provided, using either the maximum rated heat input methodology described in paragraph (c)(3)(i) of this section or procedures consistent with the long term fuel flow heat input methodology described in paragraph (c)(3)(ii) of this section, in conjunction with the appropriate SO₂ or NO_x emission rate from paragraph (c)(1)(i) of this section for SO₂, and paragraph (c)(1)(ii) or (c)(1)(iv) of this section for NO_x. Alternatively, the initial estimate of the NO_x emission rate may be based on historical emission test data that is representative of operation at normal load or historical data from a CEMS certified under part 60 of this chapter or under a state CEM program; or

§ 75.19(a)(2)(ii)(B)

(B) When the three full years (or ozone seasons) of actual SO₂ and NO_x mass emissions data (or reliable estimates thereof) described under paragraph (a)(2)(ii)(A) of this section do not exist, the designated representative may submit an application to use the low mass emissions excepted methodology based upon a combination of actual historical SO₂ and NO_x mass emissions data and projected SO₂ and NO_x mass emissions, totaling three years (or ozone seasons). Except as provided in paragraph (a)(3) of this section, actual data must be used for any years (or ozone seasons) in which such data exists and projected data should be used for any remaining future years (or ozone seasons) needed to provide emissions data for three consecutive calendar years (or ozone seasons). For example, if a unit commenced operation two years ago, the designated representative may submit actual, historical data for the previous two years and one year of projected emissions for the current calendar year or, for a new unit, the designated representative may submit three years of projected emissions, beginning with the current calendar year. Any actual or projected annual emissions must demonstrate to the satisfaction of the Administrator that the unit will emit less than the applicable number of tons of SO₂ and/or NO_x specified in paragraph (a)(1)(i)(A) of this section. Projected emissions shall be calculated using either the appropriate default emission rates from paragraphs (c)(1)(i) and (c)(1)(ii) of this section (or,

alternatively for NO_x, a conservative estimate of the NO_x emission rate, as described in paragraph (a)(4) of this section), in conjunction with projections of unit operating hours or fuel type and fuel usage, according to one of the allowable calculation methodologies in paragraph (c) of this section; and

§ 75.19(a)(2)(iii) (iii) A description of the methodology from paragraph (c) of this section that will be used to demonstrate on-going compliance under paragraph (b) of this section; and

§ 75.19(a)(2)(iv) (iv) Appropriate documentation demonstrating that the unit is eligible to use projected emissions to qualify for LME status under paragraph (a)(3) of this section (if applicable).

§ 75.19(a)(3) (3) In the following circumstances, projected emissions for a future year (or years) may be used in lieu of the actual emissions data from one (or more) of the three years (or ozone seasons) preceding the year of the certification application:

§ 75.19(a)(3)(i) (i) If the owner or operator takes an enforceable permit restriction on the number of annual or ozone season unit operating hours for the future year (or years), such that the unit will emit no more than the applicable number of tons of SO₂ and/or NO_x specified in paragraph (a)(1)(i)(A) of this section; or

§ 75.19(a)(3)(ii) (ii) If the actual emissions for one (or more) of the three years (or ozone seasons) prior to the year of the certification application is not representative of the present and expected future emissions from the unit, because the owner or operator has recently installed emission controls on the unit.

§ 75.19(a)(4) (4) When the owner or operator elects to demonstrate initial LME qualification and on-going compliance using a fuel-and-unit-specific NO_x emission rate in accordance with paragraph (c)(1)(iv) of this section, there will be instances (e.g., for a new or newly-affected unit) where it is not possible to determine that NO_x emission rate prior to submitting the certification application. In such cases, if the generic default NO_x emission rates in Table LM-2 of this section are inappropriately high for the unit, the owner or operator may use a more representative, but conservatively high estimate of the expected NO_x emission rate, for the purposes of the initial monitoring plan submittal and to calculate the unit's projected annual or ozone season emissions under paragraph (a)(2)(ii)(B) of this section. For example, the NO_x emission rate could, as described in paragraph (a)(2)(ii)(A) of this section, be estimated using historical CEM data or historical emission test data that is representative of operation at normal load. The NO_x emission limit specified in the operating permit for the unit could also be used to estimate the NO_x emission rate (except for units equipped with SCR or SNCR), or, consistent with paragraph (c)(1)(iv)(C)(4) of this section, for a unit that uses SCR or SNCR to control NO_x emissions, an estimated default NO_x emission rate of 0.15 lb/mmBtu could be used. However, these estimated NO_x emission rates may not be used for reporting purposes in the time period extending from the first hour in which the LME methodology is used to the date and hour on which the fuel-and-unit-specific NO_x emission rate testing is completed. Rather, in that interval, the owner or operator shall either report the appropriate default NO_x emission rate from Table LM-2, or shall report the maximum potential NO_x emission rate, calculated in accordance with § 72.2 of this chapter and section 2.1.2.1 of appendix A to this part. Then, beginning with the first unit operating hour after completion of the tests, the appropriate default NO_x emission rate(s) obtained from the fuel-and-unit-specific testing shall be used for emissions reporting.

§ 75.19(b) (b) *On-going qualification and disqualification.*

§ 75.19(b)(1) (1) Once a low mass emissions unit has qualified for and has started using the low mass emissions excepted methodology, an annual demonstration is required, showing that the unit continues to emit no more than the applicable number of tons of SO₂ and/or NO_x specified in paragraph (a)(1)(i)(A) of this section. The calculation methodology used for the annual demonstration shall be the methodology described in the certification application under paragraph (a)(2)(iii) of this section.

§ 75.19(b)(2) (2) If any low mass emissions unit fails to provide the required annual demonstration under paragraph (b)(1) of this section, such that the calculated cumulative emissions for the unit exceed

the applicable number of tons of SO₂ and/or NO_x specified in paragraph (a)(1)(i)(A) of this section at the end of any calendar year or ozone season, then:

(i) The low mass emissions unit shall be disqualified from using the low mass emissions excepted methodology; and

(ii) The owner or operator of the low mass emissions unit shall install and certify monitoring systems that meet the requirements of §§ 75.11, 75.12, and 75.13, and shall report SO₂ (Acid Rain Program units, only), NO_x, and CO₂ (Acid Rain Program units, only) emissions data and heat input data from such monitoring systems by December 31 of the calendar year following the year in which the unit exceeded the number of tons of SO₂ and/or NO_x specified in paragraph (a)(1)(i)(A) of this section; and

(iii) If the required monitoring systems have not been installed and certified by the applicable deadline in paragraph (b)(2)(ii) of this section, the owner or operator shall report the following values for each unit operating hour, beginning with the first operating hour after the deadline and continuing until the monitoring systems have been provisionally certified: the maximum potential hourly heat input for the unit, as defined in § 72.2 of this chapter; the SO₂ emissions, in lb/hr, calculated using the applicable default SO₂ emission rate from paragraph (c)(1)(i) of this section and the maximum potential hourly unit heat input; the CO₂ emissions, in tons/hr, calculated using the applicable default CO₂ emission rate from paragraph (c)(1)(iii) of this section and the maximum potential hourly unit heat input; and the maximum potential NO_x emission rate, as defined in § 72.2 of this chapter.

§ 75.19(b)(3)

(3) If a low mass emissions unit that initially qualifies to use the low mass emissions excepted methodology under this section changes fuels, such that a fuel other than those allowed for use in the low mass emissions methodology is combusted in the unit, the unit shall be disqualified from using the low mass emissions excepted methodology as of the first hour that the new fuel is combusted in the unit. The owner or operator shall install and certify SO₂ (Acid Rain Program units, only), NO_x, and CO₂ (Acid Rain Program units, only) and flow (if necessary) monitoring systems that meet the requirements of §§ 75.11, 75.12, and 75.13 prior to a change to such fuel, and shall report emissions data from such monitoring systems beginning with the date and hour on which the new fuel is first combusted in the unit. If the required monitoring systems are not installed and certified prior to the fuel switch, the owner or operator shall report (as applicable) the maximum potential concentration of SO₂, CO₂ and NO_x, the maximum potential NO_x emission rate, the maximum potential flowrate, the maximum potential hourly heat input and the maximum (or minimum, if appropriate) potential moisture percentage, from the date and hour of the fuel switch until the monitoring systems are certified or until probationary calibration error tests of the monitors are passed and the conditional data validation procedures in § 75.20(b)(3) begin to be used. All maximum and minimum potential values shall be specific to the new fuel and shall be determined in a manner consistent with section 2 of appendix A to this part and § 72.2 of this chapter. The owner or operator must notify the Administrator (or the permitting authority) in the case where a unit switches fuels without previously having installed and certified a SO₂, NO_x and CO₂ monitoring system meeting the requirements of §§ 75.11, 75.12, and 75.13.

§ 75.19(b)(4)

(4) If a new or newly-affected unit initially qualifies to use the low mass emissions excepted methodology under this section and the owner or operator wants to use the low mass emissions methodology for the unit, he or she must:

(i) Keep the records specified in paragraph (c)(2) of this section, beginning with the date and hour of commencement of commercial operation, for a new unit subject to an Acid Rain emission limitation, and beginning with the date and hour of the commencement of operation, for a new unit subject to a NO_x mass reduction program under subpart H of this part. For newly-affected units, the records in paragraph (c)(2) of this section shall be kept as follows:

(A) For Acid Rain Program units, begin keeping the records as of the first hour of commercial operation of the unit following the date on which the unit becomes affected; or

(B) For units subject to a NO_x mass reduction program under subpart H of this part, begin keeping the records as of the first hour of unit operation following the date on which the unit becomes an affected unit;

(ii) Use these records to determine the cumulative heat input and SO₂, CO₂, and/or NO_x mass emissions in order to continue to qualify as a low mass emissions unit; and

(iii) Determine the cumulative SO₂ and/or NO_x mass emissions according to paragraph (c)

of this section using the same procedures used after the certification deadline for the unit, for purposes of demonstrating eligibility to use the excepted methodology set forth in this section. For example, use the default emission rates in tables LM-1, LM-2, and LM-3 of this section or use the fuel-and-unit-specific NO_x emission rate determined according to paragraph (c)(1)(iv) of this section. For Acid Rain Program LME units, the Administrator will not count SO₂ mass emissions calculated for the period between commencement of commercial operation and the certification deadline for the unit under § 75.4 against SO₂ allowances to be held in the unit account.

§ 75.19(b)(5)

(5) A low mass emissions unit that has been disqualified from using the low mass emissions excepted methodology may subsequently submit an application to qualify again to use the low mass emissions methodology under paragraph (a)(2) of this section only if, following the non-compliant year (or ozone season), at least three full years (or ozone seasons) of actual, monitored emissions data is obtained showing that the unit emitted no more than the applicable number of tons of SO₂ and/or NO_x specified in paragraph (a)(1)(i)(A) of this section. Further, the designated representative or authorized account representative must certify in the application that the unit operation for the years or ozone seasons for which the emissions were monitored are representative of the projected future operation of the unit.

§ 75.19(c)(1)(i)

(c) *Low mass emissions excepted methodology, calculations, and values.*

(1) *Determination of SO₂, NO_x, and CO₂ emission rates.*

(i) If the unit combusts only natural gas and/or fuel oil, use Table LM-1 of this section to determine the appropriate SO₂ emission rate for use in calculating hourly SO₂ mass emissions under this section. Alternatively, for fuel oil combustion, a lower, fuel-specific SO₂ emission factor may be used in lieu of the applicable emission factor from Table LM-1, if a federally enforceable permit condition is in place that limits the sulfur content of the oil. If this alternative is chosen, the fuel-specific SO₂ emission rate in lb/mmBtu shall be calculated by multiplying the fuel sulfur content limit (weight percent sulfur) by 1.01. In addition, the owner or operator shall periodically determine the sulfur content of the oil combusted in the unit, using one of the oil sampling and analysis options described in section 2.2 of appendix D to this part, and shall keep records of these fuel sampling results in a format suitable for inspection and auditing. If the unit combusts gaseous fuel(s) other than natural gas, the owner or operator shall use the procedures in section 2.3.6 of appendix D to this part to document the total sulfur content of each such fuel and to determine the appropriate default SO₂ emission rate for each such fuel. (Acid Rain Program units, only). If the unit combusts gaseous fuel(s) other than natural gas, the owner or operator shall use the procedures in section 2.3.6 of appendix D to this part to document the total sulfur content of each such fuel and to determine the appropriate default SO₂ emission rate for each such fuel.

§ 75.19(c)(1)(ii)

(ii) If the unit combusts only natural gas and/or fuel oil, use either the appropriate NO_x emission factor from Table LM-2 of this section, or a fuel-and-unit-specific NO_x emission rate determined according to paragraph (c)(1)(iv) of this section, to calculate hourly NO_x mass emissions under this section. If the unit combusts a gaseous fuel other than pipeline natural gas or natural gas, the owner or operator shall determine a fuel-and-unit-specific NO_x emission rate according to paragraph (c)(1)(iv) of this section.

§ 75.19(c)(1)(iii)

(iii) If the unit combusts only natural gas and/or fuel oil, use Table LM-3 of this section to determine the appropriate CO₂ emission rate for use in calculating hourly CO₂ mass emissions under this section (Acid Rain Program units, only). If the unit combusts a gaseous fuel other than pipeline natural gas or natural gas, the owner or operator shall determine a fuel-and-unit-specific CO₂ emission rate for the fuel, as follows:

§ 75.19(c)(1)(iii)(A)

(A) Derive a carbon-based F-factor for the fuel, using fuel sampling and analysis, as described in section 3.3.6 of appendix F to this part; and

§ 75.19(c)(1)(iii)(B)

(B) Use Equation G-4 in appendix G to this part to derive the default CO₂ emission rate. Rearrange the equation, solving it for the ratio of W_{CO₂} / H (this ratio will yield an emission rate, in units of tons/mmBtu). Then, substitute the carbon-based F-factor determined in paragraph (c)(1)(iii)(A) of this section into the rearranged equation to determine the default CO₂ emission rate for the unit.

§ 75.19(c)(1)(iv)

(iv) In lieu of using the default NO_x emission rate from Table LM-2 of this section, the owner or operator may, for each fuel combusted by a low mass emissions unit, determine a fuel-and-unit-specific NO_x emission rate for the purpose of calculating NO_x mass emissions under

this section. This option may be used by any unit which qualifies to use the low mass emissions excepted methodology under paragraph (a) of this section, and also by groups of units which combust fuel from a common source of supply and which use the long term fuel flow methodology under paragraph (c)(3)(ii) of this section to determine heat input. The testing must be completed in a timely manner, such that the test results are reported electronically no later than the end of the calendar year or ozone season in which the LME methodology is first used. If this option is chosen, the following procedures shall be used.

§ 75.19(c)(1)(iv)(A)

(A) Except as otherwise provided in paragraphs (c)(1)(iv)(F), (c)(1)(iv)(G), and (c)(1)(iv)(I) of this section, determine a fuel-and-unit-specific NO_x emission rate by conducting a four load NO_x emission rate test procedure as specified in section 2.1 of appendix E to this part, for each type of fuel combusted in the unit. For a group of units sharing a common fuel supply, the appendix E testing must be performed on each individual unit in the group, unless some or all of the units in the group belong to an identical group of units, as defined in paragraph (c)(1)(iv)(B) of this section, in which case, representative testing may be conducted on units in the identical group of units, as described in paragraph (c)(1)(iv)(B) of this section. For the purposes of this section, make the following modifications to the appendix E test procedures:

- (1) Do not measure the heat input as required under 2.1.3 of appendix E to this part.
- (2) Do not plot the test results as specified under 2.1.6 of appendix E to this part.
- (3) When using Method 20 for turbines do not correct the NO_x concentration to 15% O₂.
- (4) If the testing is performed on an uncontrolled diffusion flame turbine, a correction to the observed average NO_x concentration from each run of the Method 20 test must be applied using the following Equation LM-1a.

$$NOx_{corr} = NOx_{obs} \left(\frac{P_r}{P_o} \right)^{0.5} e^{19(H_o - H_r)} \left(\frac{T_r}{T_a} \right)^{1.53}$$

(Eq. LM-1a)

Where:

NO_x_{corr} = Corrected NO_x concentration (ppm).

NO_x_{obs} = Average measured NO_x concentration for each run of the Method 20 test (ppm).

P_r = Average annual atmospheric pressure (or average ozone season atmospheric pressure for a Subpart H unit that reports data only during the ozone season) at the nearest weather station (e.g., a standardized NOAA weather station located at the airport) for the year (or ozone season) prior to the year of the test (mm Hg).

P_o = Observed atmospheric pressure during the test run (mm Hg).

H_r = Average annual atmospheric humidity ratio (or average ozone season humidity ratio for a Subpart H unit that reports data only during the ozone season) at the nearest weather station, for the year (or ozone season) prior to the year of the test (g H₂O/g air).

H_o = Observed humidity ratio during the test run (g H₂O/g air).

T_r = Average annual atmospheric temperature (or average ozone season atmospheric temperature for a Subpart H unit that reports data only during the ozone season) at the nearest weather station, for the year (or ozone season) prior to the year of the test (° K).

T_a = Observed atmospheric temperature during the test run (° K).

§ 75.19(c)(1)(iv)(B)

(B) Representative appendix E testing may be done on low mass emissions units in a group of identical units. All of the units in a group of identical units must combust the same fuel type but do not have to share a common fuel supply.

§ 75.19(c)(1)(iv)(B)(1)

(1) To be considered identical, all low mass emissions units must be of the same size (based on maximum rated hourly heat input), manufacturer and model, and must have the same history of modifications (e.g., have the same controls installed, the same types of burners and have undergone major overhauls at the same frequency (based on hours of operation)). Also, under similar operating conditions, the stack or turbine outlet temperature of each unit must be within + 50 degrees Fahrenheit of the average stack or turbine outlet temperature for all of the units.

§ 75.19(c)(1)(iv)(B)(2)

(2) If all of the low mass emissions units in the group qualify as identical, then

representative testing of the units in the group may be performed according to Table LM-4 of this section.

- § 75.19(c)(1)(iv)(B)(3) (3) [Reserved]
- § 75.19(c)(1)(iv)(B)(4) (4) If the acceptance criteria in paragraph (c)(1)(iv)(B)(1) of this section are not met then the group of low mass emissions units is not considered an identical group of units and individual appendix E testing of each unit is required.
- § 75.19(c)(1)(iv)(B)(5) (5) Fuel and unit specific NO_x emission rates determined according to paragraphs (c)(1)(iv)(F) and (c)(1)(iv)(G) of this section may be used in lieu of appendix E testing for one or more low mass emissions units in a group of identical units.
- § 75.19(c)(1)(iv)(C) (C) Based on the results of the part 75 appendix E testing, determine the fuel-and-unit-specific NO_x emission rate as follows:
- § 75.19(c)(1)(iv)(C)(1) (1) Except for LME units that use selective catalytic reduction (SCR) or selective non-catalytic reduction (SNCR) to control NO_x emissions, the highest three-run average NO_x emission rate obtained at any load in the appendix E test for a particular type of fuel shall be the fuel-and-unit-specific NO_x emission rate, for that type of fuel.
- § 75.19(c)(1)(iv)(C)(2) (2) [Reserved]
- § 75.19(c)(1)(iv)(C)(3) (3) For a group of identical low mass emissions units (except for units that use SCR or SNCR to control NO_x emissions), the fuel-and-unit-specific NO_x emission rate for all units in the group, for a particular type of fuel, shall be the highest three-run average NO_x emission rate obtained at any tested load from any unit tested in the group, for that type of fuel.
- § 75.19(c)(1)(iv)(C)(4) (4) Except as provided in paragraphs (c)(1)(iv)(C)(7) and (c)(1)(iv)(C)(8) of this section, for an individual low mass emissions unit which uses SCR or SNCR to control NO_x emissions, the fuel-and-unit-specific NO_x emission rate for each type of fuel combusted in the unit shall be the higher of:
- (i) The highest three-run average emission rate from any load of the appendix E test for that type of fuel; or
 - (ii) 0.15 lb/mmBtu.
- § 75.19(c)(1)(iv)(C)(5) (5) [Reserved]
- § 75.19(c)(1)(iv)(C)(6) (6) Except as provided in paragraphs (c)(1)(iv)(C)(7) and (c)(1)(iv)(C)(8) of this section, for a group of identical low mass emissions units that are all equipped with SCR or SNCR to control NO_x emissions, the fuel-and-unit-specific NO_x emission rate for each unit in the group of units, for a particular type of fuel, shall be the higher of:
- (i) The highest three-run average NO_x emission rate at any load from all appendix E tests of all tested units in the group, for that type of fuel; or
 - (ii) 0.15 lb/mmBtu.
- § 75.19(c)(1)(iv)(C)(7) (7) Notwithstanding the requirements of paragraphs (c)(1)(iv)(C)(4) and (c)(1)(iv)(C)(6) of this section, for a unit (or group of identical units) equipped with SCR (or SNCR) and water (or steam) injection to control NO_x emissions:
- (i) If the appendix E testing is performed when the water (or steam) injection is in use *and* either upstream of the SCR or SNCR or during a time period when the SCR or SNCR is out of service; then
 - (ii) The highest three-run average emission rate from the appendix E testing may be used as the fuel-and-unit-specific NO_x emission rate for the unit (or, if applicable, for each unit in the group), for each unit operating hour in which the water-to-fuel ratio is within the acceptable range established during the appendix E testing.
- § 75.19(c)(1)(iv)(C)(8) (8) Notwithstanding the requirements of paragraphs (c)(1)(iv)(C)(4) and (c)(1)(iv)(C)(6) of this section, for a unit (or group of identical units) equipped with SCR (or SNCR) and uses dry low-NO_x technology to control NO_x emissions:
- (i) If the appendix E testing is performed during a time period when the dry low-NO_x controls are in use, but the SCR or SNCR is out of service; then
 - (ii) The highest three-run average emission rate from the appendix E testing may be used as

the fuel-and-unit-specific NO_x emission rate for the unit (or, if applicable, for each unit in the group), for each unit operating hour in which the parametric data described in paragraph (c)(1)(iv)(H)(2) of this section demonstrate that the dry low-NO_x controls are operating in the premixed or low-NO_x mode.

§ 75.19(c)(1)(iv)(C)(9)

(9) For an individual combustion turbine (or a group of identical turbines) that operate principally at base load (or at a set point temperature), but are capable of operating at a higher peak load (or higher internal operating temperature), the fuel-and-unit-specific NO_x emission rate for the unit (or for each unit in the group) shall be as follows:

(i) If the testing is done only at base load, use the three-run average NO_x emission rate for base load operating hours and 1.15 times that emission rate for peak load operating hours; or

(ii) If the testing is done at both base load and peak load, use the three-run average NO_x emission rate from the base load testing for base load operating hours and the three-run average NO_x emission rate from the peak load testing for peak load operating hours.

§ 75.19(c)(1)(iv)(D)

(D) For each low mass emissions unit or group of identical units for which the provisions of paragraph (c)(1)(iv) of this section are used to account for NO_x emission rate, the owner or operator shall determine a new fuel-and-unit-specific NO_x emission rate every five years (20 calendar quarters), unless changes in the fuel supply, physical changes to the unit, changes in the manner of unit operation, or changes to the emission controls occur which may cause a significant increase in the unit's actual NO_x emission rate. If such changes occur, the fuel-and-unit-specific NO_x emission rate(s) shall be re-determined according to paragraph (c)(1)(iv) of this section. Testing shall be done at the number of loads specified in paragraph (c)(1)(iv)(A) or (c)(1)(iv)(I) of this section, as applicable. If a low mass emissions unit belongs to a group of identical units and it is required to retest to determine a new fuel-and-unit-specific NO_x emission rate because of changes in the fuel supply, physical changes to the unit, changes in the manner of unit operation or changes to the emission controls occur which may cause a significant increase in the unit's actual NO_x emission rate, any other unit in that group of identical units is not required to re-determine the fuel-and-unit-specific NO_x emission rate unless such unit also undergoes changes in the fuel supply, physical changes to the unit, changes in the manner of unit operation or changes to the emission controls occur which may cause a significant increase in the unit's actual NO_x emission rates.

§ 75.19(c)(1)(iv)(E)

(E) Each low mass emissions unit or each low mass emissions unit in a group of identical units for which a fuel-and-unit-specific NO_x emission rate(s) are determined shall meet the quality assurance and quality control provisions of paragraph (e) of this section.

§ 75.19(c)(1)(iv)(F)

(F) Low mass emissions units may use the results of appendix E testing, if such test results are available from a test conducted no more than five years prior to the time of initial certification, to determine the appropriate fuel-and unit-specific NO_x emission rate(s). However, fuel-and-unit-specific NO_x emission rates from historical testing may not be used longer than five years after the appendix E testing was conducted.

§ 75.19(c)(1)(iv)(G)

(G) Low mass emissions units for which at least three years of quality-assured NO_x emission rate data from a NO_x-diluent CEMS that meets the quality assurance requirements of either: this part, or appendix F to part 60 of this chapter, or a comparable State CEM program, and corresponding fuel usage data are available may determine fuel-and-unit-specific NO_x emission rates from the actual data using the following procedure. Separate the actual NO_x emission rate data into groups, according to the type of fuel combusted. Discard data from periods when multiple fuels were combusted. Each fuel-specific data set must contain at least 168 hours of data and must represent all normal operating ranges of the unit when combusting the fuel. Sort the data in each fuel-specific data set in ascending order according to NO_x emission rate. Determine the 95th percentile NO_x emission rate for each data set as defined in § 72.2 of this chapter. Use the 95th percentile value for each data set as the fuel-and-unit-specific NO_x emission rate, except that for a unit that uses SCR or SNCR for NO_x emission control, if the 95th percentile value is less than 0.15 lb/mmBtu, a value of 0.15 lb/mmBtu shall be used as the fuel-and-unit-specific NO_x emission rate.

§ 75.19(c)(1)(iv)(H)

(H) For low mass emissions units with add-on NO_x emission controls, and for units that use dry low-NO_x technology, the owner or operator shall, during every hour of unit operation during the test period, monitor and record parameters, as required under paragraph (e)(5) of this section,

which indicate that the NO_x emission controls are operating properly. After the test period, these same parameters shall be monitored and recorded and kept for all operating hours in order to determine whether the NO_x controls are operating properly and to allow the determination of the correct NO_x emission rate as required under paragraph (c)(1)(iv) of this section.

(1) For low mass emissions units with steam or water injection, the steam-to-fuel or water-to-fuel ratio used during the testing must be documented. The water-to-fuel or steam-to-fuel ratio must be maintained during unit operations for a unit to use the fuel and unit specific NO_x emission rate determined during the test. Owners or operators must include in the monitoring plan the acceptable range of the water-to-fuel or steam-to-fuel ratio, which will be used to indicate hourly, proper operation of the NO_x controls for each unit. The water-to-fuel or steam-to-fuel ratio shall be monitored and recorded during each hour of unit operation. If the water-to-fuel or steam-to-fuel ratio is not within the acceptable range in a given hour the fuel and unit specific NO_x emission rate may not be used for that hour, and the appropriate default NO_x emission rate from Table LM-2 shall be reported instead.

(2) For a low mass emissions unit that uses dry low-NO_x premix technology to control NO_x emissions, proper operation of the emission controls means that the unit is in the low-NO_x or premixed combustion mode, and fired with natural gas. Evidence of operation in the low-NO_x or premixed mode shall be provided by monitoring the appropriate turbine operating parameters. These parameters may include percentage of full load, turbine exhaust temperature, combustion reference temperature, compressor discharge pressure, fuel and air valve positions, dynamic pressure pulsations, internal guide vane (IGV) position, and flame detection or flame scanner condition. The acceptable values and ranges for all parameters monitored shall be specified in the monitoring plan for the unit, and the parameters shall be monitored during each subsequent operating hour. If one or more of these parameters is not within the acceptable range or at an acceptable value in a given operating hour, the fuel-and-unit-specific NO_x emission rate may not be used for that hour, and the appropriate default NO_x emission rate from Table LM-2 shall be reported instead. When the unit is fired with oil the appropriate default value from Table LM-2 shall be reported.

(3) For low mass emissions units with other types of add-on NO_x controls, appropriate parameters and the acceptable range of the parameters which indicate hourly proper operation of the NO_x controls must be specified in the monitoring plan. These parameters shall be monitored during each subsequent operating hour. If any of these parameters are not within the acceptable range in a given operating hour, the fuel-and-unit specific NO_x emission rates may not be used in that hour, and the appropriate default NO_x emission rate from Table LM-2 shall be reported instead.

§ 75.19 (c)(1)(iv)(I)

(I) Notwithstanding the requirements in paragraph (c)(1)(iv)(A) of this section, the appendix E testing to determine (or re-determine) the fuel-specific, unit-specific NO_x emission rate for a unit (or for each unit in a group of identical units) may be performed at fewer than four loads, under the following circumstances:

(1) Testing may be done at one load level if the data analysis described in paragraph (c)(1)(iv)(J) of this section is performed and the results show that the unit has operated (or all units in the group of identical units have operated) at a single load level for at least 85.0 percent of all operating hours in the previous three years (12 calendar quarters) prior to the calendar quarter of the appendix E testing. For combustion turbines that are operated to produce approximately constant output (in MW) but which use internal operating and exhaust temperatures and not the actual output in MW to control the operation of the turbine, the internal operating temperature set point may be used as a surrogate for load in demonstrating that the unit qualifies for single-load testing. If the data analysis shows that the unit does not qualify for single-load testing, testing may be done at two (or three) load levels if the unit has operated (or if all units in the group of identical units have operated) cumulatively at two (or three) load levels for at least 85.0 percent of all operating hours in the previous three years; or

(2) If a multiple-load appendix E test was initially performed for a unit (or group of identical units) to determine the fuel-and-unit specific NO_x emission rate, then the periodic retests required under paragraph (c)(1)(iv)(D) of this section may be single-load tests, performed at the load level for which the highest average NO_x emission rate was obtained in the initial test.

§ 75.19 (c)(1)(iv)(J)

(J) To determine whether a unit qualifies for testing at fewer than four loads under paragraph (c)(1)(iv)(I) of this section, follow the procedures in paragraph (c)(1)(iv)(J)(i) or (c)(1)(iv)(J)(ii) of this section, as applicable.

(i) Determine the range of operation of the unit, according to section 6.5.2.1 of appendix A to this part. Divide the range of operation into four equal load bands. For example, if the range

of operation extends from 20 MW to 100 MW, the four equal load bands would be: band # 1: from 20 MW to 40 MW; band #2: from 41 MW to 60 MW; band #3: from 61 MW to 80 MW; and band # 4: from 81 to 100 MW. Then, perform a historical load analysis for all unit operating hours in the 12 calendar quarters preceding the quarter of the test. Alternatively, for sources that report emissions data only during the ozone season, the historical load analysis may be based on unit operation in the previous three ozone seasons, rather than unit operation in the previous 12 calendar quarters. Determine the percentage of the data that fall into each load band. For a unit that is not part of a group of identical units, if 85.0% or more of the data fall into one load band, single-load testing may be performed at any point within that load band. For a group of identical units, if each unit in the group meets the 85.0% criterion, then representative single-load testing within the load band may be performed. If the 85.0% criterion cannot be met to qualify for single-load testing but this criterion can be met cumulatively for two (or three) load levels, then testing may be performed at two (or three) loads instead of four.

(ii) For a combustion turbine that uses exhaust temperature and not the actual output in megawatts to control the operation of the turbine (or for a group of identical units of this type), the owner or operator must document that the unit (or each unit in the group) has operated within + 10% of the set point temperature for 85.0% of the operating hours in the previous 12 calendar quarters to qualify for single-load testing. Alternatively, for sources that report emissions data only during the ozone season, the historical set point temperature analysis may be based on unit operation in the previous three ozone seasons, rather than unit operation in the previous 12 calendar quarters. When the set point temperature is used rather than unit load to justify single-load testing, the designated representative shall certify in the monitoring plan for the unit that this is the normal manner of unit operation and shall document the setpoint temperature.

§ 75.19(c)(2) (2) *Records of operating time, fuel usage, unit output and NO_x emission control operating status.* The owner or operator shall keep the following records on-site, for three years, in a form suitable for inspection, except that for unmanned facilities, the records may be kept at a central location, rather than on-site:

§ 75.19(c)(2)(i) (i) For each low mass emissions unit, the owner or operator shall keep hourly records which indicate whether or not the unit operated during each clock hour of each calendar year. The owner or operator may report partial operating hours or may assume that for each hour the unit operated the operating time is a whole hour. Units using partial operating hours and the maximum rated hourly heat input to calculate heat input for each hour must report partial operating hours.

§ 75.19(c)(2)(ii) (ii) For each low mass emissions unit, the owner or operator shall keep hourly records indicating the type(s) of fuel(s) combusted in the unit during each hour of unit operation.

§ 75.19(c)(2)(iii) (iii) For each low mass emissions unit using the long term fuel flow methodology under paragraph (c)(3)(ii) of this section to determine hourly heat input, the owner or operator shall keep hourly records of unit load (in megawatts or thousands of pounds of steam per hour), for the purpose of apportioning heat input to the individual unit operating hours.

§ 75.19(c)(2)(iv) (iv) For each low mass emissions unit with add-on NO_x emission controls of any kind and each unit that uses dry low-NO_x technology, the owner or operator shall keep hourly records of the hourly value of the parameter(s) specified in (c)(1)(iv)(H) of this section used to indicate proper operation of the unit's NO_x controls.

§ 75.19(c)(3) (3) *Heat input.* Hourly, quarterly and annual heat input for a low mass emissions unit shall be determined using either the maximum rated hourly heat input method under paragraph (c)(3)(i) of this section or the long term fuel flow method under paragraph (c)(3)(ii) of this section.

§ 75.19(c)(3)(i) (i) *Maximum rated hourly heat input method.*
(A) For the purposes of the mass emission calculation methodology of paragraph (c)(3) of this section, HI_{hr}, the hourly heat input (mmBtu) to a low mass emissions unit shall be deemed to equal the maximum rated hourly heat input, as defined in § 72.2 of this chapter, multiplied by the operating time of the unit for each hour. The owner or operator may choose to record and report partial operating hours or may assume that a unit operated for a whole hour for each hour the unit operated. However, the owner or operator of a unit may petition the Administrator under § 75.66 for a lower value for maximum rated hourly heat input than that defined in § 72.2 of this chapter.

The Administrator may approve such lower value if the owner or operator demonstrates that either the maximum hourly heat input specified by the manufacturer or the highest observed hourly heat input, or both, are not representative, and such a lower value is representative, of the unit's current capabilities because modifications have been made to the unit, limiting its capacity permanently.

(B) The quarterly heat input, HI_{qtr} , in mmBtu, shall be determined using Equation LM-1:

$$HI_{qtr} = \sum_{1}^n HI_{hr}$$

(Eq. LM-1)

Where:

n = Number of unit operating hours in the quarter.

HI_{hr} = Hourly heat input under paragraph (c)(3)(i)(A) of this section (mmBtu).

(C) The year-to-date cumulative heat input (mmBtu) shall be the sum of the quarterly heat input values for all of the calendar quarters in the year to date.

(D) For a unit subject to the provisions of subpart H of this part, which is not required to report emission data on a year-round basis and elects to report only during the ozone season, the quarterly heat input for the second calendar quarter of the year shall, for compliance purposes, include only the heat input for the months of May and June, and the cumulative ozone season heat input shall be the sum of the heat input values for May, June and the third calendar quarter of the year.

§ 75.19(c)(3)(ii)

(ii) *Long term fuel flow heat input method.* The owner or operator may, for the purpose of demonstrating that a low mass emissions unit or group of low mass emissions units sharing a common fuel supply meets the requirements of this section, use records of long-term fuel flow, to calculate hourly heat input to a low mass emissions unit.

§ 75.19(c)(3)(ii)(A)

(A) This option may be used for a group of low mass emissions units only if:

(1) The low mass emissions units combust fuel from a common source of supply; and

(2) Records are kept of the total amount of fuel combusted by the group of low mass emissions units and the hourly output (in megawatts or pounds of steam) from each unit in the group; and

(3) All of the units in the group are low mass emissions units.

§ 75.19(c)(3)(ii)(B)

(B) For each fuel used during the quarter, the volume in standard cubic feet (for gas) or gallons (for oil) may be determined using any of the following methods;

(1) Fuel billing records (for low mass emissions units, or groups of low mass emissions units, which purchase fuel from non-affiliated sources);

(2) American Petroleum Institute (API) standard, 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 (1st edition); Section 1B, Standard Practice for Level Measurement of Liquid Hydrocarbons in Stationary Tanks by Automatic Tank Gauging, June 2001~~April 1992 (reaffirmed January 1997)~~; Section 2, Standard Practice for Gauging Petroleum and Petroleum Products in Tank Cars, September 1995 (Reaffirmed September 2000); Section 3, Standard Practice for Level Measurement of Liquid Hydrocarbons in Stationary Pressurized Storage Tanks by Automatic Tank Gauging, June 1996 (1st edition); Section 4, Standard Practice for Level Measurement of Liquid Hydrocarbons on Marine Vessels by Automatic Tank Gauging, April 1995 (1st edition); and Section 5, Standard Practice for Level Measurement of Light Hydrocarbon Liquids Onboard Marine Vessels by Automatic Tank Gauging, March 1997 (1st edition); Shop Testing of Automatic Liquid Level Gages, Bulletin 2509 B, December 1961 (Reaffirmed August 1987, October 1992) (incorporated by reference under § 75.6); or;

(3) A fuel flow meter certified and maintained according to appendix D to this part.

§ 75.19(c)(3)(ii)(C)

(C) Except as provided in paragraph (c)(3)(ii)(C)(3) of this section, for each fuel combusted during a quarter, the gross calorific value of the fuel shall be determined by either:

(1) Using the applicable procedures for gas and oil analysis in sections 2.2 and 2.3 of appendix D to this part. If this option is chosen the highest gross calorific value recorded during

the previous calendar year shall be used (or, for a new or newly-affected unit, if there are no sample results from the previous year, use the highest GCV from the samples taken in the current year); or

(2) Using the appropriate default gross calorific value listed in Table LM-5 of this section.

(3) For gaseous fuels other than pipeline natural gas or natural gas, the GCV sampling frequency shall be daily unless the results of a demonstration under section 2.3.5 of appendix D to this part show that the fuel has a low GCV variability and qualifies for monthly sampling. If daily GCV sampling is required, use the highest GCV obtained in the calendar quarter as GCV_{\max} in Equation LM-3 of this section.

§ 75.19(c)(3)(ii)(D)

(D) If Eq. LM-2 is used for heat input determination, the specific gravity of each type of fuel oil combusted during the quarter shall be determined either by:

(1) Using the procedures in section 2.2.6 of appendix D to this part. If this option is chosen, use the highest specific gravity value recorded during the previous calendar year (or, for a new or newly-affected unit, if there are no sample results from the previous year, use the highest specific gravity from the samples taken in the current year); or

(2) Using the appropriate default specific gravity value in Table LM-6 of this section.

§ 75.19(c)(3)(ii)(E)

(E) The quarterly heat input from each type of fuel combusted during the quarter by a low mass emissions unit or group of low mass emissions units sharing a common fuel supply shall be determined using either Equation LM-2 or Equation LM-3 for oil (as applicable to the method used to quantify oil usage) and Equation LM-3 for gaseous fuels. For a unit subject to the provisions of subpart H of this part, which is not required to report emission data on a year-round basis and elects to report only during the ozone season, the quarterly heat input for the second calendar quarter of the year shall include only the heat input for the months of May and June.

$$HI_{fuel-qtr} = M_{qtr} \frac{GCV_{\max}}{10^6}$$

Eq. LM-2 (for fuel oil)

Where:

$HI_{fuel-qtr}$ = Quarterly total heat input from oil (mmBtu).

M_{qtr} = Mass of oil consumed during the quarter, determined as the product of the volume of oil under paragraph (c)(3)(ii)(B) of this section and the specific gravity under paragraph (c)(3)(ii)(D) of this section (lb).

GCV_{\max} = Gross calorific value of oil, as determined under paragraph (c)(3)(ii)(C) of this section (Btu/lb)

10^6 = Conversion of Btu to mmBtu.

$$HI_{fuel-qtr} = Q_{qtr} \frac{GCV_{\max}}{10^6}$$

Eq. LM-3 (for gaseous fuel or fuel oil)

Where:

$HI_{fuel-qtr}$ = Quarterly heat input from gaseous fuel or fuel oil (mmBtu).

Q_{qtr} = Volume of gaseous fuel or fuel oil combusted during the quarter, as determined under paragraph (c)(3)(ii)(B) of this section standard cubic feet (scf) or (gal), as applicable.

GCV_{\max} = Gross calorific value of the gaseous fuel or fuel oil combusted during the quarter, as determined under paragraph (c)(3)(ii)(C) of this section (Btu/scf) or (Btu/gal), as applicable.

10^6 = Conversion of Btu to mmBtu.

§ 75.19(c)(3)(ii)(F)

(F) Use Eq. LM-4 to calculate $HI_{qtr-total}$, the quarterly heat input (mmBtu) for all fuels. $HI_{qtr-total}$ shall be the sum of the $HI_{fuel-qtr}$ values determined using Equations LM-2 and LM-3.

$$HI_{qtr-total} = \sum_{all-fuels} HI_{fuel-qtr}$$

(Eq. LM-4)

§ 75.19(c)(3)(ii)(G)

(G) The year-to-date cumulative heat input (mmBtu) for all fuels shall be the sum of all quarterly total heat input ($HI_{qtr-total}$) values for all calendar quarters in the year to date. For a unit subject to the provisions of subpart H of this part, which is not required to report emission data on a year-round basis and elects to report only during the ozone season, the cumulative ozone season heat input shall be the sum of the quarterly heat input values for the second and third calendar quarters of the year.

§ 75.19(c)(3)(ii)(H)

(H) For each low mass emissions unit or each low mass emissions unit in a group of identical units, the owner or operator shall determine the cumulative quarterly unit load in megawatts or thousands of pounds of steam per hour. The quarterly cumulative unit load shall be the sum of the hourly unit load values recorded under paragraph (c)(2) of this section and shall be determined using Equations LM-5 or LM-6. For a unit subject to the provisions of subpart H of this part, which is not required to report emission data on a year-round basis and elects to report only during the ozone season, the quarterly cumulative load for the second calendar quarter of the year shall include only the unit loads for the months of May and June.

$$MW_{qtr} = \sum_{all-hours} MW$$

Eq. LM-5 (for MW output)

$$ST_{qtr} = \sum_{all-hours} ST$$

Eq. LM-6 (for steam output)

Where:

MW_{qtr} = Sum of all unit operating loads recorded during the quarter by the unit (MW).
 $ST_{fuel-qtr}$ = Sum of all hourly steam loads recorded during the quarter by the unit (klb of steam/hr).
 MW = Unit operating load for a particular unit operating hour (MW).
 ST = Unit steam load for a particular unit operating hour (klb of steam/hr).

§ 75.19(c)(3)(ii)(I)

(I) For a low mass emissions unit that is not included in a group of low mass emissions units sharing a common fuel supply, apportion the total heat input for the quarter, $HI_{qtr-total}$ to each hour of unit operation using either Equation LM- 7 or LM-8:

$$HI_{hr} = HI_{qtr-total} \frac{MW_{hr}}{MW_{qtr}}$$

(Eq LM-7 for MW output)

$$HI_{hr} = HI_{qtr-total} \frac{ST_{hr}}{ST_{qtr}}$$

(Eq LM-8 for steam output)

Where:

HI_{hr} = Hourly heat input to the unit (mmBtu).
 MW_{hr} = Hourly operating load for the unit (MW).
 ST_{hr} = Hourly steam load for the unit (klb of steam/hr).

§ 75.19(c)(3)(ii)(J)

(J) For each low mass emissions unit that is included in a group of units sharing a common fuel supply, apportion the total heat input for the quarter, $HI_{qtr-total}$ to each hour of operation using either Equation LM-7a or LM-8a:

$$HI_{hr} = HI_{qtr-total} \frac{MW_{hr}}{\sum_{all-units} MW_{qtr}}$$

(Eq LM-7a for MW output)

$$HI_{hr} = HI_{qtr-total} \frac{ST_{hr}}{\sum_{all-units} ST_{qtr}}$$

(Eq LM-8a for steam output)

Where:

HI_{hr} = Hourly heat input to the individual unit (mmBtu).
 MW_{hr} = Hourly operating load for the individual unit (MW).
 ST_{hr} = Hourly steam load for the individual unit (klb of steam/hr).
 $\sum_{all-units} MW_{qtr}$ = Sum of the quarterly operating loads (from Eq. LM-5) for all units in the group (MW).
 $\sum_{all-units} ST_{qtr}$ = Sum of the quarterly steam loads (from Eq. LM-6) for all units in the group (klb of steam/hr).

§ 75.19(c)(4)

(4) *Calculation of SO₂, NO_x and CO₂ mass emissions.* The owner or operator shall, for the purpose of demonstrating that a low mass emissions unit meets the requirements of this section, calculate SO₂, NO_x and CO₂ mass emissions in accordance with the following.

§ 75.19(c)(4)(i)

(i) *SO₂ Mass Emissions.*

(A) The hourly SO₂ mass emissions (lbs) for a low mass emissions unit (Acid Rain Program units, only) shall be determined using Equation LM-9 and the appropriate fuel-based SO₂ emission factor ~~from Table LM-1 of this section~~ for the fuels combusted in that hour. If more than one fuel is combusted in the hour, use the highest emission factor for all of the fuels combusted in the hour. If records are missing as to which fuel was combusted in the hour, use the highest emission factor for all of the fuels capable of being combusted in the unit.

$$W_{SO2} = EF_{SO2} \times HI_{hr}$$

(Eq. LM-9)

Where:

W_{SO2} = Hourly SO₂ mass emissions (lbs).
 EF_{SO2} = Either the SO₂ emission factor from Table LM-1 of this section or the fuel-and-unit-specific SO₂ emission rate from paragraph (c)(1)(i) of this section (lb/mmBtu).
 HI_{hr} = Either the maximum rated hourly heat input under paragraph (c)(3)(i)(A) of this section or the hourly heat input under paragraph (c)(3)(ii) of this section (mmBtu).

(B) The quarterly SO₂ mass emissions (tons) for the low mass emissions unit shall be the sum of all the hourly SO₂ mass emissions in the quarter, as determined under paragraph (c)(4)(i)(A) of this section, divided by 2000 lb/ton.

(C) The year-to-date cumulative SO₂ mass emissions (tons) for the low mass emissions unit shall be the sum of the quarterly SO₂ mass emissions, as determined under paragraph (c)(4)(i)(B) of this section, for all of the calendar quarters in the year to date.

§ 75.19(c)(4)(ii)

(ii) *NO_x mass emissions and NO_x emission rate.*

(A) The hourly NO_x mass emissions for the low mass emissions unit (lbs) shall be determined using Equation LM-10. If more than one fuel is combusted in the hour, use the

highest emission rate for all of the fuels combusted in the hour. If records are missing as to which fuel was combusted in the hour, use the highest emission factor for all of the fuels capable of being combusted in the unit. For low mass emissions units with NO_x emission controls of any kind and for which a fuel-and-unit-specific NO_x emission rate is determined under paragraph (c)(1)(iv) of this section, for any hour in which the parameters under paragraph (c)(1)(iv)(A) of this section do not show that the NO_x emission controls are operating properly, use the NO_x emission rate from Table LM-2 of this section for the fuel combusted during the hour with the highest NO_x emission rate.

$$W_{NOx} = EF_{NOx} \times HI_{hr}$$

(Eq. LM-10)

Where:

W_{NOx} = Hourly NO_x mass emissions (lbs).

EF_{NOx} = Either the NO_x emission factor from Table LM-2 of this section or the fuel-and-unit-specific NO_x emission rate determined under paragraph (c)(1)(iv) of this section (lb/mmBtu).

HI_{hr} = Either the maximum rated hourly heat input from paragraph (c)(3)(i)(A) of this section or the hourly heat input as determined under paragraph (c)(3)(ii) of this section (mmBtu).

(B) The quarterly NO_x mass emissions (tons) for the low mass emissions unit shall be the sum of all of the hourly NO_x mass emissions in the quarter, as determined under paragraph (c)(4)(ii)(A) of this section, divided by 2000 lb/ton.

(C) The year-to-date cumulative NO_x mass emissions (tons) for the low mass emissions unit shall be the sum of the quarterly NO_x mass emissions, as determined under paragraph (c)(4)(ii)(B) of this section, for all of the calendar quarters in the year to date. For a unit subject to the provisions of subpart H of this part, which is not required to report emission data on a year-round basis and elects to report only during the ozone season, the ozone season NO_x mass emissions for the unit shall be the sum of the quarterly NO_x mass emissions, as determined under paragraph (c)(4)(ii)(B) of this section, for the second and third calendar quarters of the year, and the second quarter report shall include emissions data only for May and June.

(D) The quarterly and cumulative NO_x emission rate in lb/mmBtu (if required by the applicable program(s)) shall be determined as follows. Calculate the quarterly NO_x emission rate by taking the arithmetic average of all of the hourly EF_{NOx} values. Calculate the cumulative (year-to-date) NO_x emission rate by taking the arithmetic average of the quarterly NO_x emission rates.

§ 75.19(c)(4)(iii)

(iii) *CO₂ Mass Emissions.*

(A) The hourly CO₂ mass emissions (tons) for the affected low mass emissions unit (Acid Rain Program units, only) shall be determined using Equation LM-11 and the appropriate fuel-based CO₂ emission factor from Table LM-3 of this section for the fuel being combusted in that hour. If more than one fuel is combusted in the hour, use the highest emission factor for all of the fuels combusted in the hour. If records are missing as to which fuel was combusted in the hour, use the highest emission factor for all of the fuels capable of being combusted in the unit.

$$W_{CO2} = EF_{CO2} \times HI_{hr}$$

(Eq. LM-11)

Where:

W_{CO2} = Hourly CO₂ mass emissions (tons).

EF_{CO2} = Either the fuel-based CO₂ emission factor from Table LM-3 of this section or the fuel-and-unit-specific CO₂ emission rate from paragraph (c)(1)(iii) of this section (tons/mmBtu).

HI_{hr} = Either the maximum rated hourly heat input from paragraph (c)(3)(i)(A) of this section or the hourly heat input as determined under paragraph (c)(3)(ii) of this section (mmBtu).

(B) The quarterly CO₂ mass emissions (tons) for the low mass emissions unit shall be the sum of all of the hourly CO₂ mass emissions in the quarter, as determined under paragraph

(c)(4)(iii)(A) of this section.

(C) The year-to-date cumulative CO₂ mass emissions (tons) for the low mass emissions unit shall be the sum of all of the quarterly CO₂ mass emissions, as determined under paragraph (c)(4)(iii)(B) of this section, for all of the calendar quarters in the year to date.

§ 75.19(d)

(d) Each unit that qualifies under this section to use the low mass emissions methodology must follow the recordkeeping and reporting requirements pertaining to low mass emissions units in subparts F and G of this part.

§ 75.19(e)

(e) The quality control and quality assurance requirements in § 75.21 are not applicable to a low mass emissions unit for which the low mass emissions excepted methodology under paragraph (c) of this section is being used in lieu of a continuous emission monitoring system or an excepted monitoring system under appendix D or E to this part, except for fuel flowmeters used to meet the provisions in paragraph (c)(3)(ii) of this section. However, the owner or operator of a low mass emissions unit shall implement the following quality assurance and quality control provisions:

§ 75.19(e)(1)

(1) For low mass emissions units or groups of units which use the long term fuel flow methodology under paragraph (c)(3)(ii) of this section and which use fuel billing records to determine fuel usage, the owner or operator shall keep, at the facility, for three years, the records of the fuel billing statements used for long term fuel flow determinations.

§ 75.19(e)(2)

(2) For low mass emissions units or groups of units which use the long term fuel flow methodology under paragraph (c)(3)(ii) of this section and which use one of the methods specified in paragraph (c)(3)(ii)(B)(2) of this section to determine fuel usage, the owner or operator shall keep, at the facility, a copy of the standard used and shall keep records, for three years, of all measurements obtained for each quarter using the methodology.

§ 75.19(e)(3)

(3) For low mass emissions units or groups of units which use the long term fuel flow methodology under paragraph (c)(3)(ii) of this section and which use a certified fuel flow meter to determine fuel usage, the owner or operator shall comply with the quality control quality assurance requirements for a fuel flow meter under section 2.1.6 of appendix D of this part.

§ 75.19(e)(4)

(4) For each low mass emissions unit for which fuel-and-unit-specific NO_x emission rates are determined in accordance with paragraph (c)(1)(iv) of this section, the owner or operator shall keep, at the facility, records which document the results of all NO_x emission rate tests conducted according to appendix E to this part. If CEMS data are used to determine the fuel-and-unit-specific NO_x emission rates under paragraph (c)(1)(iv)(G) of this section, the owner or operator shall keep, at the facility, records of the CEMS data and the data analysis performed to determine a fuel-and-unit-specific NO_x emission rate. The appendix E test records and historical CEMS data records shall be kept until the fuel and unit specific NO_x emission rates are re-determined.

§ 75.19(e)(5)

(5) For each low mass emissions unit for which fuel-and-unit-specific NO_x emission rates are determined in accordance with paragraph (c)(1)(iv) of this section and which has add-on NO_x emission controls of any kind or uses dry low-NO_x technology, the owner or operator shall develop and keep on-site a quality assurance plan which explains the procedures used to document proper operation of the NO_x emission controls. The plan shall include the parameters monitored (e.g., water-to-fuel ratio) and the acceptable ranges for each parameter used to determine proper operation of the unit's NO_x controls.

§ 75.19(e)(6)

(6) For unmanned facilities, the records required by paragraphs (e)(1), (e)(2) and (e)(4) of this section may be kept at a central location, rather than at the facility.

Table LM-1: SO₂ Emission Factors (lb/mmBtu) for Various Fuel Types

| Fuel type | SO ₂ emission factors |
|----------------------|----------------------------------|
| Pipeline Natural Gas | 0.0006 lb/mmBtu. |
| Other Natural Gas | 0.06 lb/mmBtu. |
| Residual Oil | 2.1 lb/mmBtu. |
| Diesel Fuel | 0.5 lb/mmBtu. |

Table LM-2: NO_x Emission Rates (lb/mmBtu) for Various Boiler/Fuel Types

| Unit type | Fuel type | NO _x emission rate |
|-----------|-----------|-------------------------------|
| Turbine | Gas | 0.7 |
| Turbine | Oil | 1.2 |
| Boiler | Gas | 1.5 |
| Boiler | Oil | 2 |

Table LM-3: CO₂ Emission Factors (ton/mmBtu) for Gas and Oil

| Fuel type | CO ₂ emission factors |
|---------------------------------|----------------------------------|
| Pipeline (or other) Natural Gas | 0.059 ton/mmBtu |
| Oil | 0.081 ton/mmBtu |

Table LM-4: Identical Unit Testing Requirements

| Number of identical units in the group | Number of appendix E tests required |
|--|---|
| 2 | 1 |
| 3 to 6 | 2 |
| 7 | 3 |
| > 7 | n tests; where n = number of units divided by 3 and rounded to nearest integer. |

Table LM-5: Default Gross Calorific Values (GCVs) for Various Fuels

| Fuel | GCV for use in equation LM-2 or LM-3 |
|----------------------|--------------------------------------|
| Pipeline Natural Gas | 1050 Btu/scf. |
| Other Natural Gas | 1100 Btu/scf. |
| Residual Oil | 19,700 Btu/lb or 167,500 Btu/gallon. |
| Diesel Fuel | 20,500 Btu/lb or 151,700 Btu/gallon. |

Table LM-6: Default Specific Gravity Values for Fuel Oil

| Fuel | Specific gravity (lb/gal) |
|--------------|----------------------------------|
| Residual Oil | 8.5 |
| Diesel Fuel | 7.4 |

Subpart C -- Operation and Maintenance Requirements

§ 75.20

§ 75.20 Initial certification and recertification procedures.

§ 75.20(a)

(a) *Initial certification approval process.* The owner or operator shall ensure that each continuous emission or opacity monitoring system required by this part meets the initial certification requirements of this section and shall ensure that all applicable initial certification tests under paragraph (c) of this section are completed by the deadlines specified in § 75.4 and prior to use in the Acid Rain Program. In addition, whenever the owner or operator installs a continuous emission or opacity monitoring system in order to meet the requirements of §§ 75.11 through 75.18, where no continuous emission or opacity monitoring system was previously installed, initial certification is required.

§ 75.20(a)(1)

(1) *Notification of initial certification test dates.* The owner or operator or designated representative shall submit a written notice of the dates of initial certification testing at the unit as specified in § 75.61(a)(1).

§ 75.20(a)(2)

(2) *Certification application.* The owner or operator shall apply for certification of each continuous emission or opacity monitoring system used under the Acid Rain Program. The owner or operator shall submit the certification application in accordance with § 75.60 and each complete certification application shall include the information specified in § 75.63.

§ 75.20(a)(3)

(3) *Provisional approval of certification (or recertification) applications.* Upon the successful completion of the required certification (or recertification) procedures of this section, each continuous emission or opacity monitoring system shall be deemed provisionally certified (or recertified) for use under the Acid Rain Program for a period not to exceed 120 days following receipt by the Administrator of the complete certification (or recertification) application under paragraph (a)(4) of this section. Notwithstanding this paragraph, no continuous emission or opacity monitor systems for a combustion source seeking to enter the Opt-in Program in accordance with part 74 of this chapter shall be deemed provisionally certified (or recertified) for use under the Acid Rain Program. Data measured and recorded by a provisionally certified (or recertified) continuous emission or opacity monitoring system, operated in accordance with the requirements of appendix B to this part, will be considered valid quality-assured data (retroactive to the date and time of provisional certification or recertification), provided that the Administrator does not invalidate the provisional certification (or recertification) by issuing a notice of disapproval within 120 days of receipt by the Administrator of the complete certification (or recertification) application. Note that when the conditional data validation procedures of paragraph (b)(3) of this section are used for the initial certification (or recertification) of a continuous emissions monitoring system, the date and time of provisional certification (or recertification) of the CEMS may be earlier than the date and time of completion of the required certification (or recertification) tests.

§ 75.20(a)(4)

(4) *Certification (or recertification) application formal approval process.* The Administrator will issue a notice of approval or disapproval of the certification (or recertification) application to the owner or operator within 120 days of receipt of the complete certification (or recertification) application. In the event the Administrator does not issue such a notice within 120 days of receipt, each continuous emission or opacity monitoring system which meets the performance requirements of this part and is included in the certification (or

recertification) application will be deemed certified (or recertified) for use under the Acid Rain Program.

§ 75.20(a)(4)(i)

(i) *Approval notice.* If the certification (or recertification) application is complete and shows that each continuous emission or opacity monitoring system meets the performance requirements of this part, then the Administrator will issue a notice of approval of the certification (or recertification) application within 120 days of receipt.

§ 75.20(a)(4)(ii)

(ii) *Incomplete application notice.* A certification (or recertification) application will be considered complete when all of the applicable information required to be submitted in § 75.63 has been received by the Administrator, the EPA Regional Office, and the appropriate State and/or local air pollution control agency. If the certification (or recertification) application is not complete, then the Administrator will issue a notice of incompleteness that provides a reasonable timeframe for the designated representative to submit the additional information required to complete the certification (or recertification) application. If the designated representative has not complied with the notice of incompleteness by a specified due date, then the Administrator may issue a notice of disapproval specified under paragraph (a)(4)(iii) of this section. The 120-day review period shall not begin prior to receipt of a complete application.

§ 75.20(a)(4)(iii)

(iii) *Disapproval notice.* If the certification (or recertification) application shows that any continuous emission or opacity monitoring system does not meet the performance requirements of this part, or if the certification (or recertification) application is incomplete and the requirement for disapproval under paragraph (a)(4)(ii) of this section has been met, the Administrator shall issue a written notice of disapproval of the certification (or recertification) application within 120 days of receipt. By issuing the notice of disapproval, the provisional certification (or recertification) is invalidated by the Administrator, and the data measured and recorded by each uncertified continuous emission or opacity monitoring system shall not be considered valid quality-assured data as follows: from the hour of the probationary calibration error test that began the initial certification (or recertification) test period (if the conditional data validation procedures of paragraph (b)(3) of this section were used to retrospectively validate data); or from the date and time of completion of the invalid certification or recertification tests (if the conditional data validation procedures of paragraph (b)(3) of this section were not used). The owner or operator shall follow the procedures for loss of initial certification in paragraph (a)(5) of this section for each continuous emission or opacity monitoring system which is disapproved for initial certification. For each disapproved recertification, the owner or operator shall follow the procedures of paragraph (b)(5) of this section.

§ 75.20(a)(4)(iv)

(iv) *Audit decertification.* The Administrator may issue a notice of disapproval of the certification status of a continuous emission or opacity monitoring system in accordance with § 75.21.

§ 75.20(a)(5)

(5) *Procedures for loss of certification.* When the Administrator issues a notice of disapproval of a certification application or a notice of disapproval of certification status (as specified in paragraph (a)(4) of this section), then:

§ 75.20(a)(5)(i)

(i) Until such time, date, and hour as the continuous emission monitoring system can be adjusted, repaired, or replaced and certification tests successfully completed (or, if the conditional data validation procedures in paragraphs (b)(3)(ii) through (b)(3)(ix) of this section are used, until a probationary calibration error test is passed following corrective actions in accordance with paragraph (b)(3)(ii) of this section), the owner or operator shall substitute the following values, as applicable, for each hour of unit operation during the period of invalid data specified in paragraph (a)(4)(iii) of this section or in § 75.21: the maximum potential concentration of SO₂, as defined in section 2.1.1.1 of appendix A to this part, to report SO₂ concentration; the maximum potential NO_x emission rate, as defined in § 72.2 of this chapter, to report NO_x emissions in lb/mmBtu; the maximum potential concentration of NO_x, as defined in section 2.1.2.1 of appendix A to this part, to report NO_x emissions in ppm (when a NO_x concentration monitoring system is used to determine NO_x mass emissions, as defined under § 75.71(a)(2)); the maximum potential concentration of Hg, as defined in section 2.1.7 of appendix A to this part, to report Hg emissions in µg/scm (when a Hg concentration monitoring system or a sorbent trap monitoring system is used to determine Hg mass emissions, as defined under § 75.81(b)); the maximum potential flow rate, as defined in section 2.1.4.1 of appendix A to this part, to report volumetric flow; the maximum potential concentration of CO₂, as defined in

section 2.1.3.1 of appendix A to this part, to report CO₂ concentration data; and either the minimum potential moisture percentage, as defined in section 2.1.5 of appendix A to this part or, if Equation 19-3, 19-4 or 19-8 in Method 19 in appendix A to part 60 of this chapter is used to determine NO_x emission rate, the maximum potential moisture percentage, as defined in section 2.1.6 of appendix A to this part; and

§ 75.20(a)(5)(ii)

(ii) The designated representative shall submit a notification of certification retest dates as specified in § 75.61(a)(1)(ii) and a new certification application according to the procedures in paragraph (a)(2) of this section; and

§ 75.20(a)(5)(iii)

(iii) The owner or operator shall repeat all certification tests or other requirements that were failed by the continuous emission or opacity monitoring system, as indicated in the Administrator's notice of disapproval, no later than 30 unit operating days after the date of issuance of the notice of disapproval.

§ 75.20(b)

(b) *Recertification approval process.* Whenever the owner or operator makes a replacement, modification, or change in a certified continuous emission monitoring system or continuous opacity monitoring system that may significantly affect the ability of the system to accurately measure or record the SO₂ or CO₂ concentration, stack gas volumetric flow rate, NO_x emission rate, NO_x concentration, Hg concentration, percent moisture, or opacity, or to meet the requirements of § 75.21 or appendix B to this part, the owner or operator shall recertify the continuous emission monitoring system or continuous opacity monitoring system, according to the procedures in this paragraph. Furthermore, whenever the owner or operator makes a replacement, modification, or change to the flue gas handling system or the unit operation that may significantly change the flow or concentration profile, the owner or operator shall recertify the monitoring system according to the procedures in this paragraph. Examples of changes which require recertification include: replacement of the analyzer; change in location or orientation of the sampling probe or site; and complete replacement of an existing continuous emission monitoring system or continuous opacity monitoring system. The owner or operator shall also recertify the continuous emission monitoring systems for a unit that has recommenced commercial operation following a period of long-term cold storage as defined in § 72.2 of this chapter. The owner or operator shall recertify a continuous opacity monitoring system whenever the monitor path length changes or as required by an applicable State or local regulation or permit. Any change to a flow monitor or gas monitoring system for which a RATA is not necessary shall not be considered a recertification event. In addition, changing the polynomial coefficients or K factor(s) of a flow monitor shall require a 3-load RATA, but is not considered to be a recertification event; however, records of the polynomial coefficients or K factor(s) currently in use shall be maintained on-site in a format suitable for inspection. Changing the coefficient or K factor(s) of a moisture monitoring system shall require a RATA, but is not considered to be a recertification event; however, records of the coefficient or K factor(s) currently in use by the moisture monitoring system shall be maintained on-site in a format suitable for inspection. In such cases, any other tests that are necessary to ensure continued proper operation of the monitoring system (e.g., 3-load flow RATAs following changes to flow monitor polynomial coefficients, linearity checks, calibration error tests, DAHS verifications, etc.) shall be performed as diagnostic tests, rather than as recertification tests. The data validation procedures in paragraph (b)(3) of this section shall be applied to RATAs associated with changes to flow or moisture monitor coefficients, and to linearity checks, 7-day calibration error tests, and cycle time tests, when these are required as diagnostic tests. When the data validation procedures of paragraph (b)(3) of this section are applied in this manner, replace the word "recertification" with the word "diagnostic."

§ 75.20(b)(1)

(1) *Tests required.* For all recertification testing, the owner or operator shall complete all initial certification tests in paragraph (c) of this section that are applicable to the monitoring system, except as otherwise approved by the Administrator. For diagnostic testing after changing the flow rate monitor polynomial coefficients, the owner or operator shall complete a 3-level RATA. For diagnostic testing after changing the K factor or mathematical algorithm of a moisture monitoring system, the owner or operator shall complete a RATA.

§ 75.20(b)(2)

(2) *Notification of recertification test dates.* The owner, operator, or designated representative shall submit notice of testing dates for recertification under this paragraph as specified in § 75.61(a)(1)(ii), unless all of the tests in paragraph (c) of this section are required for recertification, in which case the owner or operator shall provide notice in accordance with

the notice provisions for initial certification testing in § 75.61(a)(1)(i).

§ 75.20(b)(3)

(3) *Recertification test period requirements and data validation.* The data validation provisions in paragraphs (b)(3)(i) through (b)(3)(ix) of this section shall apply to all CEMS recertifications and diagnostic testing. The provisions in paragraphs (b)(3)(ii) through (b)(3)(ix) of this section may also be applied to initial certifications (see sections 6.2(a), 6.3.1(a), 6.3.2(a), 6.4(a) and 6.5(f) of appendix A to this part) and may be used to supplement the linearity check and RATA data validation procedures in sections 2.2.3(b) and 2.3.2(b) of appendix B to this part.

§ 75.20(b)(3)(i)

(i) The owner or operator shall use substitute data, according to the standard missing data procedures in §§ 75.33 through 75.37 (or shall report emission data using a reference method or another monitoring system that has been certified or approved for use under this part), in the period extending from the hour of the replacement, modification or change made to a monitoring system that triggers the need to perform recertification testing, until either: the hour of successful completion of all of the required recertification tests; or the hour in which a probationary calibration error test (according to paragraph (b)(3)(ii) of this section) is performed and passed, following all necessary repairs, adjustments or reprogramming of the monitoring system. The first hour of quality-assured data for the recertified monitoring system shall either be the hour after all recertification tests have been completed or, if conditional data validation is used, the first quality-assured hour shall be determined in accordance with paragraphs (b)(3)(ii) through (b)(3)(ix) of this section. Notwithstanding these requirements, if the replacement, modification, or change requiring recertification of the CEMS is such that the historical data stream is no longer representative (e.g., where the SO₂ concentration and stack flow rate change significantly after installation of a wet scrubber), the owner or operator shall substitute for missing data as follows, in lieu of using the standard missing data procedures in §§ 75.33 through 75.37: for a change that results in a significantly higher concentration or flow rate, substitute maximum potential values according to the procedures in paragraph (a)(5) of this section; or for a change that results in a significantly lower concentration or flow rate, substitute data using the standard missing data procedures. The owner or operator shall then use the initial missing data procedures in § 75.31, beginning with the first hour of quality assured data obtained with the recertified monitoring system, unless otherwise provided by § 75.34 for units with add-on emission controls.

§ 75.20(b)(3)(ii)

(ii) Once the modification or change to the CEMS has been completed and all of the associated repairs, component replacements, adjustments, linearization, and reprogramming of the CEMS have been completed, a probationary calibration error test is required to establish the beginning point of the recertification test period. In this instance, the first successful calibration error test of the monitoring system following completion of all necessary repairs, component replacements, adjustments, linearization and reprogramming shall be the probationary calibration error test. The probationary calibration error test must be passed before any of the required recertification tests are commenced.

§ 75.20(b)(3)(iii)

(iii) Beginning with the hour of commencement of a recertification test period, emission data recorded by the CEMS are considered to be conditionally valid, contingent upon the results of the subsequent recertification tests.

§ 75.20(b)(3)(iv)

(iv) Each required recertification test shall be completed no later than the following number of unit operating hours (or unit operating days) after the probationary calibration error test that initiates the test period:

(A) For a linearity check and/or cycle time test, 168 consecutive unit operating hours, as defined in § 72.2 of this chapter or, for CEMS installed on common stacks or bypass stacks, 168 consecutive stack operating hours, as defined in § 72.2 of this chapter;

(B) For a RATA (whether normal-load or multiple-load), 720 consecutive unit operating hours, as defined in § 72.2 of this chapter or, for CEMS installed on common stacks or bypass stacks, 720 consecutive stack operating hours, as defined in § 72.2 of this chapter; and

(C) For a 7-day calibration error test, 21 consecutive unit operating days, as defined in § 72.2 of this chapter.

§ 75.20(b)(3)(v)

(v) All recertification tests shall be performed hands-off. No adjustments to the calibration of the CEMS, other than the routine calibration adjustments following daily calibration error tests as described in section 2.1.3 of appendix B to this part, are permitted during the recertification

test period. Routine daily calibration error tests shall be performed throughout the recertification test period, in accordance with section 2.1.1 of appendix B to this part. The additional calibration error test requirements in section 2.1.3 of appendix B to this part shall also apply during the recertification test period.

§ 75.20(b)(3)(vi)

(vi) If all of the required recertification tests and required daily calibration error tests are successfully completed in succession with no failures, and if each recertification test is completed within the time period specified in paragraph (b)(3)(iv)(A), (B), or (C) of this section, then all of the conditionally valid emission data recorded by the CEMS shall be considered quality assured, from the hour of commencement of the recertification test period until the hour of completion of the required test(s).

§ 75.20(b)(3)(vii)

(vii) If a required recertification test is failed or aborted due to a problem with the CEMS, or if a daily calibration error test is failed during a recertification test period, data validation shall be done as follows:

§ 75.20(b)(3)(vii)(A)

(A) If any required recertification test is failed, it shall be repeated. If any recertification test other than a 7-day calibration error test is failed or aborted due to a problem with the CEMS, the original recertification test period is ended, and a new recertification test period must be commenced with a probationary calibration error test. The tests that are required in the new recertification test period will include any tests that were required for the initial recertification event which were not successfully completed and any recertification or diagnostic tests that are required as a result of changes made to the monitoring system to correct the problems that caused the failure of the recertification test. For a 2- or 3-load flow RATA, if the relative accuracy test is passed at one or more load levels, but is failed at a subsequent load level, provided that the problem that caused the RATA failure is corrected without re-linearizing the instrument, the length of the new recertification test period shall be equal to the number of unit operating hours remaining in the original recertification test period, as of the hour of failure of the RATA. However, if re-linearization of the flow monitor is required after a flow RATA is failed at a particular load level, then a subsequent 3-load RATA is required, and the new recertification test period shall be 720 consecutive unit (or stack) operating hours. The new recertification test sequence shall not be commenced until all necessary maintenance activities, adjustments, linearizations, and reprogramming of the CEMS have been completed;

§ 75.20(b)(3)(vii)(B)

(B) If a linearity check, RATA, or cycle time test is failed or aborted due to a problem with the CEMS, all conditionally valid emission data recorded by the CEMS are invalidated, from the hour of commencement of the recertification test period to the hour in which the test is failed or aborted, except for the case in which a multiple-load flow RATA is passed at one or more load levels, failed at a subsequent load level, and the problem that caused the RATA failure is corrected without re-linearizing the instrument. In that case, data invalidation shall be prospective, from the hour of failure of the RATA until the commencement of the new recertification test period. Data from the CEMS remain invalid until the hour in which a new recertification test period is commenced, following corrective action, and a probationary calibration error test is passed, at which time the conditionally valid status of emission data from the CEMS begins again;

§ 75.20(b)(3)(vii)(C)

(C) If a 7-day calibration error test is failed within the recertification test period, previously-recorded conditionally valid emission data from the CEMS are not invalidated. The conditionally valid data status is unaffected, unless the calibration error on the day of the failed 7-day calibration error test exceeds twice the performance specification in section 3 of appendix A to this part, as described in paragraph (b)(3)(vii)(D) of this section; and

§ 75.20(b)(3)(vii)(D)

(D) If a daily calibration error test is failed during a recertification test period (i.e., the results of the test exceed twice the performance specification in section 3 of appendix A to this part), the CEMS is out-of-control as of the hour in which the calibration error test is failed. Emission data from the CEMS shall be invalidated prospectively from the hour of the failed calibration error test until the hour of completion of a subsequent successful calibration error test following corrective action, at which time the conditionally valid status of data from the monitoring system resumes. Failure to perform a required daily calibration error test during a recertification test period shall also cause data from the CEMS to be invalidated prospectively, from the hour in which the calibration error test was due until the hour of completion of a subsequent successful calibration error test. Whenever a calibration error test is failed or missed

during a recertification test period, no further recertification tests shall be performed until the required subsequent calibration error has been passed, re-establishing the conditionally valid status of data from the monitoring system. If a calibration error test failure occurs while a linearity check or RATA is still in progress, the linearity check or RATA must be re-started.

§ 75.20(b)(3)(vii)(E)

(E) Trial gas injections and trial RATA runs are permissible during the recertification test period, prior to commencing a linearity check or RATA, for the purpose of optimizing the performance of the CEMS. The results of such gas injections and trial runs shall not affect the status of previously-recorded conditionally valid data or result in termination of the recertification test period, provided that the following specifications and conditions are met:

(1) For gas injections, the stable, ending monitor response is within +5 percent or within 5 ppm of the tag value of the reference gas;

(2) For RATA trial runs, the average reference method reading and the average CEMS reading for the run differ by no more than +10% of the average reference method value or +15 ppm, or +1.5% H₂O, or +0.02 lb/mmBtu from the average reference method value, as applicable;

(3) No adjustments to the calibration of the CEMS are made following the trial injection(s) or run(s), other than the adjustments permitted under section 2.1.3 of appendix B to this part; and

(4) The CEMS is not repaired, re-linearized or reprogrammed (e.g., changing flow monitor polynomial coefficients, linearity constants, or K-factors) after the trial injections(s) or run(s).

§ 75.20(b)(3)(vii)(F)

(F) If the results of any trial gas injection(s) or RATA run(s) are outside the limits in paragraphs (b)(3)(vii)(E)(1) or (2) of this section or if the CEMS is repaired, re-linearized or reprogrammed after the trial injection(s) or run(s), the trial injection(s) or run(s) shall be counted as a failed linearity check or RATA attempt. If this occurs, follow the procedures pertaining to failed and aborted recertification tests in paragraphs (b)(3)(vii)(A) and (b)(3)(vii)(B) of this section.

§ 75.20(b)(3)(viii)

(viii) If any required recertification test is not completed within its allotted time period, data validation shall be done as follows. For a late linearity test, RATA, or cycle time test that is passed on the first attempt, data from the monitoring system shall be invalidated from the hour of expiration of the recertification test period until the hour of completion of the late test. For a late 7-day calibration error test, whether or not it is passed on the first attempt, data from the monitoring system shall also be invalidated from the hour of expiration of the recertification test period until the hour of completion of the late test. For a late linearity test, RATA, or cycle time test that is failed on the first attempt or aborted on the first attempt due to a problem with the monitor, all conditionally valid data from the monitoring system shall be considered invalid back to the hour of the first probationary calibration error test which initiated the recertification test period. Data from the monitoring system shall remain invalid until the hour of successful completion of the late recertification test and any additional recertification or diagnostic tests that are required as a result of changes made to the monitoring system to correct problems that caused failure of the late recertification test.

§ 75.20(b)(3)(ix)

(ix) If any required recertification test of a monitoring system has not been completed by the end of a calendar quarter and if data contained in the quarterly report are conditionally valid pending the results of test(s) to be completed in a subsequent quarter, the owner or operator shall indicate this by means of a suitable conditionally valid data flag in the electronic quarterly report for that quarter. The owner or operator shall resubmit the report for that quarter if the required recertification test is subsequently failed. In the resubmitted report, the owner or operator shall use the appropriate missing data routine in § 75.31 or § 75.33 to replace with substitute data each hour of conditionally valid data that was invalidated by the failed recertification test. Alternatively, if any required recertification test is not completed by the end of a particular calendar quarter but is completed no later than 30 days after the end of that quarter (i.e., prior to the deadline for submitting the quarterly report under § 75.64), the test data and results may be submitted with the earlier quarterly report even though the test date(s) are from the next calendar quarter. In such instances, if the recertification test(s) are passed in accordance with the provisions of paragraph (b)(3) of this section, conditionally valid data may be reported as quality-assured, in lieu of reporting a conditional data flag. If the recertification test(s) is failed and if conditionally valid data are replaced, as appropriate, with substitute data, then neither the reporting of a conditional data flag nor resubmission is required. In addition, if the owner or operator uses a conditionally valid data flag in any of the four quarterly reports for a given year, the owner or operator shall indicate the final status of the conditionally valid data (i.e., resolved or unresolved) in the annual compliance certification report required under § 72.90 of this

chapter for that year. The Administrator may invalidate any conditionally valid data that remains unresolved at the end of a particular calendar year and may require the owner or operator to resubmit one or more of the quarterly reports for that calendar year, replacing the unresolved conditionally valid data with substitute data values determined in accordance with § 75.31 or § 75.33, as appropriate.

§ 75.20(b)(4)

(4) *Recertification application.* The designated representative shall apply for recertification of each continuous emission or opacity monitoring system used under the Acid Rain Program. The owner or operator shall submit the recertification application in accordance with § 75.60, and each complete recertification application shall include the information specified in § 75.63.

§ 75.20(b)(5)

(5) *Approval or disapproval of request for recertification.* The procedures for provisional certification in paragraph (a)(3) of this section shall apply to recertification applications. The Administrator will issue a notice of approval, disapproval, or incompleteness according to the procedures in paragraph (a)(4) of this section. In the event that a recertification application is disapproved, data from the monitoring system are invalidated and the applicable missing data procedures in §§ 75.31 or 75.33 shall be used from the date and hour of receipt of the disapproval notice back to the hour of the adjustment or change to the CEMS that triggered the need for recertification testing or, if the conditional data validation procedures in paragraphs (b)(3)(ii) through (b)(3)(ix) of this section were used, back to the hour of the probationary calibration error test that began the recertification test period. Data from the monitoring system remain invalid until all required recertification tests have been passed or until a subsequent probationary calibration error test is passed, beginning a new recertification test period. The owner or operator shall repeat all recertification tests or other requirements, as indicated in the Administrator's notice of disapproval, no later than 30 unit operating days after the date of issuance of the notice of disapproval. The designated representative shall submit a notification of the recertification retest dates, as specified in § 75.61(a)(1)(ii), and shall submit a new recertification application according to the procedures in paragraph (b)(4) of this section.

§ 75.20(c)

(c) *Initial certification and recertification procedures.* Prior to the deadline in § 75.4, the owner or operator shall conduct initial certification tests and in accordance with § 75.63, the designated representative shall submit an application to demonstrate that the continuous emission or opacity monitoring system and components thereof meet the specifications in appendix A to this part. The owner or operator shall compare reference method values with output from the automated data acquisition and handling system that is part of the continuous emission monitoring system being tested. Except as otherwise specified in paragraphs (b)(1), (d), and (e) of this section, and in sections 6.3.1 and 6.3.2 of appendix A to this part, the owner or operator shall perform the following tests for initial certification or recertification of continuous emission or opacity monitoring systems or components according to the requirements of appendix A to this part:

§ 75.20(c)(1)

(1) For each SO₂ pollutant concentration monitor, each NO_x concentration monitoring system used to determine NO_x mass emissions, as defined under § 75.71(a)(2), each Hg concentration monitoring system, and for each NO_x-diluent continuous emission monitoring system:

(i) A 7-day calibration error test, where, for the NO_x-diluent continuous emission monitoring system, the test is performed separately on the NO_x pollutant concentration monitor and the diluent gas monitor;

(ii) A linearity check, where, for the NO_x-diluent continuous emission monitoring system, the test is performed separately on the NO_x pollutant concentration monitor and the diluent gas monitor; For Hg monitors, perform this check with elemental Hg standards;

(iii) A relative accuracy test audit. For the NO_x-diluent continuous emission monitoring system, the RATA shall be done on a system basis, in units of lb/mmBtu. For the NO_x concentration monitoring system, the RATA shall be done on a ppm basis. For the Hg concentration monitoring system, the RATA shall be done on a µg/scm basis;

(iv) A bias test; ~~and~~

(v) A cycle time test, (where, for the NO_x-diluent continuous emission monitoring system, the test is performed separately on the NO_x pollutant concentration monitor and the diluent gas monitor); and

(vi) For Hg monitors only, a 3-level system integrity check, using a NIST-traceable source of oxidized Hg, as described in section 6.2 of appendix A to this part. This test is not required for

an Hg monitor that does not have a converter.

- § 75.20(c)(2)
- (2) For each flow monitor:
 - (i) A 7-day calibration error test;
 - (ii) Relative accuracy test audits, as follows:
 - (A) A single-load (or single-level) RATA at the normal load (or level), as defined in section 6.5.2.1(d) of appendix A to this part, for a flow monitor installed on a peaking unit or bypass stack, or for a flow monitor exempted from multiple-level RATA testing under section 6.5.2 (e) of appendix A to this part;
 - (B) For all other flow monitors, a RATA at each of the three load levels (or operating levels) corresponding to the three flue gas velocities described in section 6.5.2(a) of appendix A to this part;
 - (iii) A bias test for the single-load (or single-level) flow RATA described in paragraph (c)(2)(ii)(A) of this section; and
 - (iv) A bias test (or bias tests) for the 3-level flow RATA described in paragraph (c)(2)(ii)(B) of this section, at the following load or operational level(s):
 - (A) At each load level designated as normal under section 6.5.2.1(d) of appendix A to this part, for units that produce electrical or thermal output, or
 - (B) At the operational level identified as normal in section 6.5.2.1(d) of appendix A to this part, for units that do not produce electrical or thermal output.
- § 75.20(c)(3)
- (3) The initial certification test data from an O₂ or a CO₂ diluent gas monitor certified for use in a NO_x continuous emission monitoring system may be submitted to meet the requirements of paragraph (c)(4) of this section. Also, for a diluent monitor that is used both as a CO₂ monitoring system and to determine heat input, only one set of diluent monitor certification data need be submitted (under the component and system identification numbers of the CO₂ monitoring system).
- § 75.20(c)(4)
- (4) For each CO₂ pollutant concentration monitor, each CO₂ monitoring system that uses an O₂ monitor to determine CO₂ concentration, and each diluent gas monitor used only to monitor heat input rate:
- (i) A 7-day calibration error test;
 - (ii) A linearity check;
 - (iii) A relative accuracy test audit, where, for an O₂ monitor used to determine CO₂ concentration, the CO₂ reference method shall be used for the RATA; and
 - (iv) A cycle-time test.
- § 75.20(c)(5)
- (5) For each continuous moisture monitoring system consisting of wet- and dry-basis O₂ analyzers:
- (i) A 7-day calibration error test of each O₂ analyzer;
 - (ii) A cycle time test of each O₂ analyzer;
 - (iii) A linearity test of each O₂ analyzer; and
 - (iv) A RATA, directly comparing the percent moisture measured by the monitoring system to a reference method.
- § 75.20(c)(6)
- (6) For each continuous moisture sensor: A RATA, directly comparing the percent moisture measured by the monitor sensor to a reference method.
- § 75.20(c)(7)
- (7) For a continuous moisture monitoring system consisting of a temperature sensor and a data acquisition and handling system (DAHS) software component programmed with a moisture lookup table:
- (i) A demonstration that the correct moisture value for each hour is being taken from the moisture lookup tables and applied to the emission calculations. At a minimum, the demonstration shall be made at three different temperatures covering the normal range of stack temperatures from low to high.
 - (ii) [Reserved]
- § 75.20(c)(8)
- (8) The owner or operator shall ensure that initial certification or recertification of a continuous opacity monitor for use under the Acid Rain Program is conducted according to one of the following procedures:
- (i) Performance of the tests for initial certification or recertification, according to the requirements of Performance Specification 1 in appendix B to part 60 of this chapter; or

(ii) A continuous opacity monitoring system tested and certified previously under State or other Federal requirements to meet the requirements of Performance Specification 1 shall be deemed certified for the purposes of this part.

§ 75.20(c)(9) (9) For each sorbent trap monitoring system, perform a RATA, on a µg/dscm basis, and a bias test.

§ 75.20(c)(10) (10) For the automated data acquisition and handling system, tests designed to verify:
(i) Proper computation of hourly averages for pollutant concentrations, flow rate, pollutant emission rates, and pollutant mass emissions; and
(ii) Proper computation and application of the missing data substitution procedures in subpart D of this part and the bias adjustment factors in section 7 of appendix A to this part.

§ 75.20(c)(11) (11) The owner or operator shall provide adequate facilities for initial certification or recertification testing that include:
(i) Sampling ports adequate for test methods applicable to such facility, such that: (A) Volumetric flow rate, pollutant concentration, and pollutant emission rates can be accurately determined by applicable test methods and procedures; and
(B) A stack or duct free of cyclonic flow during performance tests is available, as demonstrated by applicable test methods and procedures.
(ii) Basic facilities (e.g., electricity) for sampling and testing equipment.

§ 75.20(d) (d) *Initial certification and recertification and quality assurance procedures for optional backup continuous emission monitoring systems.*

§ 75.20(d)(1) (1) *Redundant backups.* The owner or operator of an optional redundant backup CEMS shall comply with all the requirements for initial certification and recertification according to the procedures specified in paragraphs (a), (b), and (c) of this section. The owner or operator shall operate the redundant backup CEMS during all periods of unit operation, except for periods of calibration, quality assurance, maintenance, or repair. The owner or operator shall perform upon the redundant backup CEMS all quality assurance and quality control procedures specified in appendix B to this part, except that the daily assessments in section 2.1 of appendix B to this part are optional for days on which the redundant backup CEMS is not used to report emission data under this part. For any day in which a redundant backup CEMS is used to report emission data, the system must meet all of the applicable daily assessment criteria in appendix B to this part.

§ 75.20(d)(2) (2) *Non-redundant backups.* The owner or operator of an optional non-redundant backup CEMS or like-kind replacement analyzer shall comply with all of the following requirements for initial certification, quality assurance, recertification, and data reporting:

§ 75.20(d)(2)(i) (i) Except as provided in paragraph (d)(2)(v) of this section, for a regular non-redundant backup CEMS (i.e., a non-redundant backup CEMS that has its own separate probe, sample interface, and analyzer) or a non-redundant backup flow monitor, all of the tests in paragraph (c) of this section are required for initial certification of the system, except for the 7-day calibration error test.

§ 75.20(d)(2)(ii) (ii) For a like-kind replacement non-redundant backup analyzer (i.e., a non-redundant backup analyzer that uses the same probe and sample interface as a primary monitoring system), no initial certification of the analyzer is required. A non-redundant backup analyzer, connected to the same probe and interface as a primary CEMS in order to satisfy the dual span requirements of section 2.1.1.4 or 2.1.2.4 of appendix A to this part, shall be treated in the same manner as a like-kind replacement analyzer.

§ 75.20(d)(2)(iii) (iii) Each non-redundant backup CEMS or like-kind replacement analyzer shall comply with the daily and quarterly quality assurance and quality control requirements in appendix B to this part for each day and quarter that the non-redundant backup CEMS or like-kind replacement analyzer is used to report data, and shall meet the additional linearity and calibration error test requirements specified in this paragraph. The owner or operator shall ensure that each non-redundant backup CEMS or like-kind replacement analyzer passes a linearity check (for pollutant concentration and diluent gas monitors) or a calibration error test (for flow monitors) prior to each use for recording and reporting emissions. For a primary NO_x-diluent CEMS consisting of the primary pollutant analyzer and a like-kind replacement diluent analyzer (or vice-versa),

provided that the primary pollutant or diluent analyzer (as applicable) is operating and is not out-of-control with respect to any of its quality assurance requirements, only the like-kind replacement analyzer must pass a linearity check before the system is used for data reporting. When a non-redundant backup CEMS or like-kind replacement analyzer is brought into service, prior to conducting the linearity test, a probationary calibration error test (as described in paragraph (b)(3)(ii) of this section), which will begin a period of conditionally valid data, may be performed in order to allow the validation of data retrospectively, as follows. Conditionally valid data from the CEMS or like-kind replacement analyzer are validated back to the hour of completion of the probationary calibration error test if the following conditions are met: if no adjustments are made to the CEMS or like-kind replacement analyzer other than the allowable calibration adjustments specified in section 2.1.3 of appendix B to this part between the probationary calibration error test and the successful completion of the linearity test; and if the linearity test is passed within 168 unit (or stack) operating hours of the probationary calibration error test. However, if the linearity test is performed within 168 unit or stack operating hours but is either failed or aborted due to a problem with the CEMS or like-kind replacement analyzer, then all of the conditionally valid data are invalidated back to the hour of the probationary calibration error test, and data from the non-redundant backup CEMS or from the primary monitoring system of which the like-kind replacement analyzer is a part remain invalid until the hour of completion of a successful linearity test. Notwithstanding this requirement, the conditionally valid data status may be re-established after a failed or aborted linearity check, if corrective action is taken and a calibration error test is subsequently passed. However, in no case shall the use of conditional data validation extend for more than 168 unit or stack operating hours beyond the date and time of the original probationary calibration error test when the analyzer was brought into service.

§ 75.20(d)(2)(iv)

(iv) When data are reported from a non-redundant backup CEMS or like-kind replacement analyzer, the appropriate bias adjustment factor shall be determined as follows:

(A) For a regular non-redundant backup CEMS, as described in paragraph (d)(2)(i) of this section, apply the bias adjustment factor from the most recent RATA of the non-redundant backup system (even if that RATA was done more than 12 months previously); or

(B) When a like-kind replacement non-redundant backup analyzer is used as a component of a primary CEMS (as described in paragraph (d)(2)(ii) of this section), apply the primary monitoring system bias adjustment factor.

§ 75.20(d)(2)(v)

(v) For each parameter monitored (i.e., SO₂, CO₂, NO_x, Hg or flow rate) at each unit or stack, a regular non-redundant backup CEMS may not be used to report data at that affected unit or common stack for more than 720 hours in any one calendar year (or 720 hours in any ozone season, for sources that report emission data only during the ozone season, in accordance with § 75.74(c)), unless the CEMS passes a RATA at that unit or stack. For each parameter monitored (SO₂, CO₂ or NO_x) at each unit or stack, the use of a like-kind replacement non-redundant backup analyzer (or analyzers) is restricted to 720 cumulative hours per calendar year (or ozone season, as applicable), unless the owner or operator redesignates the like-kind replacement analyzer(s) as component(s) of regular non-redundant backup CEMS and each redesignated CEMS passes a RATA at that unit or stack.

§ 75.20(d)(2)(vi)

(vi) For each regular non-redundant backup CEMS, no more than eight successive calendar quarters shall elapse following the quarter in which the last RATA of the CEMS was done at a particular unit or stack, without performing a subsequent RATA. Otherwise, the CEMS may not be used to report data from that unit or stack until the hour of completion of a passing RATA at that location.

§ 75.20(d)(2)(vii)

(vii) Each regular non-redundant backup CEMS shall be represented in the monitoring plan required under § 75.53 as a separate monitoring system, with unique system and component identification numbers. When like-kind replacement non-redundant backup analyzers are used, the owner or operator shall represent each like-kind replacement analyzer used during a particular calendar quarter in the monitoring plan required under § 75.53 as a component of a primary monitoring system. The owner or operator shall also assign a unique component identification number to each like-kind replacement analyzer, beginning with the letters "LK" (e.g., "LK1," "LK2," etc.) and shall specify the manufacturer, model, and serial number of the like-kind replacement analyzer. This information may be added, deleted or updated as necessary, from quarter to quarter. The owner or operator shall also report data from the like-kind replacement analyzer using the system identification number of the primary monitoring system and the

assigned component identification number of the like-kind replacement analyzer. For the purposes of the electronic quarterly report required under § 75.64, the owner or operator may manually enter the appropriate component identification number(s) of any like-kind replacement analyzer(s) used for data reporting during the quarter.

§ 75.20(d)(2)(viii)

(viii) When reporting data from a certified regular non-redundant backup CEMS, use a method of determination (MODC) code of "02." When reporting data from a like-kind replacement non-redundant backup analyzer, use a MODC of "17" (see Table 4a under § 75.57). For the purposes of the electronic quarterly report required under § 75.64, the owner or operator may manually enter the required MODC of "17" for a like-kind replacement analyzer.

§ 75.20(d)(3)

(3) *Reference method backups.* A monitoring system that is operated as a reference method backup system pursuant to the reference method requirements of methods 2, 6C, 7E, or 3A in appendix A of part 60 of this chapter need not perform and pass the certification tests required by paragraph (c) of this section prior to its use pursuant to this paragraph.

§ 75.20(e)

(e) *Certification/recertification procedures for either peaking unit or by-pass stack/duct continuous emission monitoring systems.* The owner or operator of either a peaking unit or by-pass stack/duct continuous emission monitoring system shall comply with all the requirements for certification or recertification according to the procedures specified in paragraphs (a), (b), and (c) of this section, except as follows: the owner or operator need only perform one nine-run relative accuracy test audit for certification or recertification of a flow monitor installed on the by-pass stack/duct or on the stack/duct used only by affected peaking unit(s). The relative accuracy test audit shall be performed during normal operation of the peaking unit(s) or the by-pass stack/duct.

§ 75.20(f)

(f) *Certification/recertification procedures for alternative monitoring systems.* The designated representative representing the owner or operator of each alternative monitoring system approved by the Administrator as equivalent to or better than a continuous emission monitoring system according to the criteria in subpart E of this part shall apply for certification to the Administrator prior to use of the system under the Acid Rain Program, and shall apply for recertification to the Administrator following a replacement, modification, or change according to the procedures in paragraph (c) of this section. The owner or operator of an alternative monitoring system shall comply with the notification and application requirements for certification or recertification according to the procedures specified in paragraphs (a) and (b) of this section.

~~(1) The Administrator will publish each request for initial certification of an alternative monitoring system in the Federal Register and, following a public comment period of 60 days, will issue a notice of approval or disapproval.~~

~~(2) No alternative monitoring system shall be authorized by the Administrator in a permit issued pursuant to part 72 of this chapter unless approved by the Administrator in accordance with this part.~~

§ 75.20(g)

(g) *Initial certification and recertification procedures for excepted monitoring systems under appendices D and E.* The owner or operator of a gas-fired unit, oil-fired unit, or diesel-fired unit using the optional protocol under appendix D or E to this part shall ensure that an excepted monitoring system under appendix D or E to this part meets the applicable general operating requirements of § 75.10, the applicable requirements of appendices D and E to this part, and the initial certification or recertification requirements of this paragraph.

§ 75.20(g)(1)

(1) *Initial certification and recertification testing.* The owner or operator shall use the following procedures for initial certification and recertification of an excepted monitoring system under appendix D or E to this part.

§ 75.20(g)(1)(i)

(i) When the optional SO₂ mass emissions estimation procedure in appendix D to this part or the optional NO_x emissions estimation protocol in appendix E to this part is used, the owner or operator shall provide data from a flowmeter accuracy test (or shall provide a statement of calibration if the flowmeter meets the accuracy standard by design) for each fuel flowmeter, according to section 2.1.5.1 of appendix D to this part. For orifice, nozzle, and venturi-type flowmeters, the results of primary element visual inspections and/or calibrations of the transmitters or transducers shall also be provided.

- § 75.20(g)(1)(ii) (ii) For the automated data acquisition and handling system used under either the optional SO₂ mass emissions estimation procedure in appendix D of this part or the optional NO_x emissions estimation protocol in appendix E of this part, the owner or operator shall perform tests designed to verify:
- (A) The proper computation of hourly averages for pollutant concentrations, fuel flow rates, emission rates, heat input, and pollutant mass emissions; and
- (B) Proper computation and application of the missing data substitution procedures in appendix D or E of this part.
- § 75.20(g)(1)(iii) (iii) When the optional NO_x emissions protocol in appendix E is used, the owner or operator shall complete all initial performance testing under section 2.1 of appendix E.
- § 75.20(g)(2) (2) *Initial certification, recertification, and QA testing notification.* The designated representative shall provide initial certification testing notification, recertification testing notification, and routine periodic quality-assurance testing, as specified in § 75.61. Initial certification testing notification, recertification testing notification, or periodic quality assurance testing notification is not required for an excepted monitoring system under appendix D to this part.
- § 75.20(g)(3) (3) *Monitoring plan.* The designated representative shall submit an initial monitoring plan in accordance with § 75.62(a).
- § 75.20(g)(4) (4) *Initial certification or recertification application.* The designated representative shall submit an initial certification or recertification application in accordance with §§ 75.60 and 75.63.
- § 75.20(g)(5) (5) *Provisional approval of initial certification and recertification applications.* Upon the successful completion of the required initial certification or recertification procedures for each excepted monitoring system under appendix D or E to this part, each excepted monitoring system under appendix D or E to this part shall be deemed provisionally certified (or recertified) for use under the Acid Rain Program during the period for the Administrator's review. The provisions for the initial certification or recertification application formal approval process in paragraph (a)(4) of this section shall apply, except that the term "excepted monitoring system" shall apply rather than "continuous emission or opacity monitoring system" and except that the procedures for loss of certification or for disapproval of a recertification request in paragraph (g)(7) of this section shall apply rather than the procedures for loss of certification or denial of a recertification request in paragraph (a)(5) or (b)(5) of this section. Data measured and recorded by a provisionally certified (or recertified) excepted monitoring system under appendix D or E to this part will be considered quality assured data from the date and time of completion of the last initial certification or recertification test, provided that the Administrator does not revoke the provisional certification or recertification by issuing a notice of disapproval in accordance with the provisions in paragraph (a)(4) or (b)(5) of this section.
- § 75.20(g)(6) (6) *Recertification requirements.* Recertification of an excepted monitoring system under appendix D or E to this part is required for any modification to the system or change in operation that could significantly affect the ability of the system to accurately account for emissions and for which the Administrator determines that an accuracy test of the fuel flowmeter or a retest under appendix E to this part to re-establish the NO_x correlation curve is required. Examples of such changes or modifications include fuel flowmeter replacement, changes in unit configuration, or exceedance of operating parameters.
- § 75.20(g)(7) (7) *Procedures for loss of certification or recertification for excepted monitoring systems under appendices D and E to this part.* In the event that a certification or recertification application is disapproved for an excepted monitoring system, data from the monitoring system are invalidated, and the applicable missing data procedures in section 2.4 of appendix D or section 2.5 of appendix E to this part shall be used from the date and hour of receipt of such notice back to the hour of the provisional certification. Data from the excepted monitoring system remain invalid until all required tests are repeated and the excepted monitoring system is again provisionally certified. The owner or operator shall repeat all certification or recertification tests or other requirements, as indicated in the Administrator's notice of disapproval, no later than 30 unit operating days after the date of issuance of the notice of disapproval. The designated representative shall submit a notification of the certification or recertification retest dates if

required under paragraph (g)(2) of this section and shall submit a new certification or recertification application according to the procedures in paragraph (g)(4) of this section.

- § 75.20(h) (h) *Initial certification and recertification procedures for low mass emissions units using the excepted methodologies under § 75.19.* The owner or operator of a gas-fired or oil-fired unit using the low mass emissions excepted methodology under § 75.19 shall meet the applicable general operating requirements of § 75.10, the applicable requirements of § 75.19, and the applicable certification requirements of this paragraph.
- § 75.20(h)(1) (1) *Monitoring plan.* The designated representative shall submit a monitoring plan in accordance with §§ 75.53 and 75.62.
- § 75.20(h)(2) (2) *Certification application.* The designated representative shall submit a certification application in accordance with § 75.63(a)(1)(ii).
- § 75.20(h)(3) (3) *Approval of certification applications.* The provisions for the certification application formal approval process in the introductory text of paragraph (a)(4) and in paragraphs (a)(4)(i), (ii), and (iv) of this section shall apply, except that "continuous emission or opacity monitoring system" shall be replaced with "low mass emissions excepted methodology." Provisional certification status for the low mass emissions methodology begins on the date of submittal (consistent with the definition of "submit" in § 72.2 of this chapter) of a complete certification application, and the methodology is considered to be certified either upon receipt of a written approval notice from the Administrator or, if such notice is not provided, at the end of the Administrator's 120 day review period. However, in contrast to CEM systems or appendix D and E monitoring systems, a provisionally certified or certified low mass emissions excepted methodology may not be used to report data under the Acid Rain Program or in a NO_x mass emissions reduction program under subpart H of this part prior to the applicable commencement date specified in § 75.19(a)(2)(i).
- § 75.20(h)(4) (4) *Disapproval of low mass emissions unit certification applications.* If the Administrator determines that the certification application for a low mass emissions unit does not demonstrate that the unit meets the requirements of §§ 75.19(a) and (b), the Administrator shall issue a written notice of disapproval of the certification application within 120 days of receipt. By issuing the notice of disapproval, the provisional certification is invalidated by the Administrator, and any emission data reported using the excepted methodology during the Administrator's 120-day review period shall be considered invalid. The owner or operator shall use the following procedures when a certification application is disapproved:
- § 75.20(h)(4)(i) (i) The owner or operator shall substitute the following values, as applicable, for each hour of unit operation in which data were reported using the low mass emissions methodology until such time, date, and hour as continuous emission monitoring systems or excepted monitoring systems, where applicable, are installed and provisionally certified: the maximum potential concentration of SO₂, as defined in section 2.1.1.1 of appendix A to this part; the maximum potential fuel flowrate, as defined in section 2.4.2 of appendix D to this part; the maximum potential values of fuel sulfur content, GCV, and density (if applicable) in Table D-6 of appendix D to this part; the maximum potential NO_x emission rate, as defined in § 72.2 of this chapter; the maximum potential flow rate, as defined in section 2.1.4.1 of appendix A to this part; or the maximum potential CO₂ concentration as defined in section 2.1.3.1 of appendix A to this part. For a unit subject to a State or federal NO_x mass reduction program where the owner or operator intends to monitor NO_x mass emissions with a NO_x pollutant concentration monitor and a flow monitoring system, substitute for NO_x concentration using the maximum potential concentration of NO_x, as defined in section 2.1.2.1 of appendix A to this part, and substitute for volumetric flow using the maximum potential flow rate, as defined in section 2.1.4.1 of appendix A to this part; and
- § 75.20(h)(4)(ii) (ii) The designated representative shall submit a notification of certification test dates for the required monitoring systems, as specified in § 75.61(a)(1)(i), and shall submit a certification application according to the procedures in paragraph (a)(2) of this section.
- § 75.20(h)(5) (5) *Recertification.* Recertification of an approved low mass emissions excepted methodology is not required. Once the Administrator has approved the methodology for use, the owner or operator is subject to the on-going qualification and disqualification procedures in § 75.19(b), on

an annual or ozone season basis, as applicable.

§ 75.21

§ 75.21 Quality assurance and quality control requirements.

§ 75.21(a)

(a) *Continuous emission monitoring systems.* The owner or operator of an affected unit shall operate, calibrate and maintain each continuous emission monitoring system used to report emission data under the Acid Rain Program as follows:

§ 75.21(a)(1)

(1) The owner or operator shall operate, calibrate and maintain each primary and redundant backup continuous emission monitoring system according to the quality assurance and quality control procedures in appendix B of this part.

§ 75.21(a)(2)

(2) The owner or operator shall ensure that each non-redundant backup CEMS meets the quality assurance requirements of § 75.20(d) for each day and quarter that the system is used to report data.

§ 75.21(a)(3)

(3) The owner or operator shall perform quality assurance upon a reference method backup monitoring system according to the requirements of method 2, 6C, 7E, or 3A in appendix A of part 60 of this chapter (supplemented, as necessary, by guidance from the Administrator), or one of the Hg reference methods in § 75.22, as applicable, instead of the procedures specified in appendix B of this part.

§ 75.21(a)(4)

(4) The owner or operator of a unit with an SO₂ continuous emission monitoring system is not required to perform the daily or quarterly assessments of the SO₂ monitoring system under appendix B to this part on any day or in any calendar quarter in which only gaseous fuel is combusted in the unit if, during those days and calendar quarters, SO₂ emissions are determined in accordance with § 75.11(e)(1) ~~or (e)(2)~~. However, such assessments are permissible, and if any daily calibration error test or linearity test of the SO₂ monitoring system is failed while the unit is combusting only gaseous fuel, the SO₂ monitoring system shall be considered out-of-control. The length of the out-of-control period shall be determined in accordance with the applicable procedures in section 2.1.4 or 2.2.3 of appendix B to this part.

§ 75.21(a)(5)

(5) For a unit with an SO₂ continuous monitoring system, in which gaseous fuel that is very low sulfur fuel (as defined in § 72.2 of this chapter) is sometimes burned as a primary or backup fuel and in which higher-sulfur fuel(s) such as oil or coal are, at other times, burned as primary or backup fuel(s), the owner shall perform the relative accuracy test audits of the SO₂ monitoring system (as required by section 6.5 of appendix A to this part and section 2.3.1 of appendix B to this part) only when the higher-sulfur fuel is combusted in the unit and shall not perform SO₂ relative accuracy test audits when the very low sulfur gaseous fuel is the only fuel being combusted.

§ 75.21(a)(6)

(6) If the designated representative certifies that a unit with an SO₂ monitoring system burns only very low sulfur fuel (as defined in § 72.2 of this chapter), the SO₂ monitoring system is exempted from the relative accuracy test audit requirements in appendices A and B to this part.

§ 75.21(a)(7)

(7) If the designated representative certifies that a particular unit with an SO₂ monitoring system combusts primarily fuel(s) that are very low sulfur fuel(s) (as defined in § 72.2 of this chapter) and combusts higher sulfur fuel(s) only for infrequent, non-routine operations (e.g., only as emergency backup fuel(s) or for short-term testing), the SO₂ monitoring system shall be exempted from the RATA requirements of appendices A and B to this part in any calendar year that the unit combusts the higher-sulfur fuel(s) for no more than 480 hours. If, in a particular calendar year, the higher-sulfur fuel usage exceeds 480 hours, the owner or operator shall perform a RATA of the SO₂ monitor (while combusting the higher-sulfur fuel) either by the end of the calendar quarter in which the exceedance occurs or by the end of a 720 unit (or stack) operating hour grace period (under section 2.3.3 of appendix B to this part) following the quarter in which the exceedance occurs.

§ 75.21(a)(8)

(8) The quality assurance provisions of §§ 75.11(e)(3)(i) through 75.11(e)(3)(iv) shall apply to all units with SO₂ monitoring systems during hours in which only very low sulfur fuel (as defined in § 72.2 of this chapter) is combusted in the unit. § 75.21(a)(9)

(9) Provided that a unit with an SO₂ monitoring system is not exempted from the SO₂

RATA requirements of this part under paragraphs (a)(6) or (a)(7) of this section, any calendar quarter during which a unit combusts only very low sulfur fuel (as defined in § 72.2 of this chapter) shall be excluded in determining the quarter in which the next relative accuracy test audit must be performed for the SO₂ monitoring system. However, no more than eight successive calendar quarters shall elapse after a relative accuracy test audit of an SO₂ monitoring system, without a subsequent relative accuracy test audit having been performed. The owner or operator shall ensure that a relative accuracy test audit is performed, in accordance with paragraph (a)(5) of this section, either by the end of the eighth successive elapsed calendar quarter since the last RATA or by the end of a 720 unit (or stack) operating hour grace period, as provided in section 2.3.3 of appendix B to this part.

- § 75.21(a)(10) (10) The owner or operator who, in accordance with § 75.11(e)(1), uses a certified flow monitor and a certified diluent monitor and Equation F-23 in appendix F to this part to calculate SO₂ emissions during hours in which a unit combusts only natural gas or pipeline natural gas (as defined in § 72.2 of this chapter) shall meet all quality control and quality assurance requirements in appendix B to this part for the flow monitor and the diluent monitor.
- § 75.21(b) (b) *Continuous opacity monitoring systems.* The owner or operator of an affected unit shall operate, calibrate, and maintain each continuous opacity monitoring system used under the Acid Rain Program according to the procedures specified for State Implementation Plans, pursuant to part 51, appendix M of this chapter.
- § 75.21(c) (c) *Calibration gases.* The owner or operator shall ensure that all calibration gases used to quality assure the operation of the instrumentation required by this part shall meet the definition in § 72.2 of this chapter.
- § 75.21(d) (d) *Notification for periodic relative accuracy test audits.* The owner or operator or the designated representative shall submit a written notice of the dates of relative accuracy testing as specified in § 75.61.
- § 75.21(e) (e) *Consequences of audits.* The owner or operator shall invalidate data from a continuous emission monitoring system or continuous opacity monitoring system upon failure of an audit under appendix B to this part or any other audit, beginning with the unit operating hour of completion of a failed audit as determined by the Administrator. The owner or operator shall not use invalidated data for reporting either emissions or heat input, nor for calculating monitor data availability.
- § 75.21(e)(1) (1) *Audit decertification.* Whenever both an audit of a continuous emission or opacity monitoring system (or component thereof, including the data acquisition and handling system), of any excepted monitoring system under appendix D or E to this part, or of any alternative monitoring system under subpart E of this part, and a review of the initial certification application or of a recertification application, reveal that any system or component should not have been certified or recertified because it did not meet a particular performance specification or other requirement of this part, both at the time of the initial certification or recertification application submission and at the time of the audit, the Administrator will issue a notice of disapproval of the certification status of such system or component. For the purposes of this paragraph, an audit shall be either a field audit of the facility or an audit of any information submitted to EPA or the State agency regarding the facility. By issuing the notice of disapproval, the certification status is revoked prospectively by the Administrator. The data measured and recorded by each system shall not be considered valid quality-assured data from the date of issuance of the notification of the revoked certification status until the date and time that the owner or operator completes subsequently approved initial certification or recertification tests. The owner or operator shall follow the procedures in § 75.20(a)(5) for initial certification or § 75.20(b)(5) for recertification to replace, prospectively, all of the invalid, non-quality-assured data for each disapproved system.
- § 75.21(e)(2) (2) *Out-of-control period.* Whenever a continuous emission monitoring system or continuous opacity monitoring system fails a quality assurance audit, or any other audit, the system is out-of-control. The owner or operator shall follow the procedures for out-of-control periods in § 75.24.

§ 75.22 § 75.22 Reference test methods.

§ 75.22(a)

(a) The owner or operator shall use the following methods included in appendix A to part 60 of this chapter to conduct monitoring system tests for certification or recertification of continuous emission monitoring systems and excepted monitoring systems under appendix E of this part and quality assurance and quality control procedures.

(1) Methods 1 or 1A are the reference methods for selection of sampling site and sample traverses.

(2) Method 2 or its allowable alternatives, as provided in appendix A to part 60 of this chapter, except for Methods 2B and 2E, are the reference methods for determination of volumetric flow.

(3) Methods 3, 3A, or 3B are the reference methods for the determination of the dry molecular weight O₂ and CO₂ concentrations in the emissions.

(4) Method 4 (either the standard procedure described in section 8.1 of the method or the moisture approximation procedure described in section 8.2 of the method) shall be used to correct pollutant concentrations from a dry basis to a wet basis (or from a wet basis to a dry basis) and shall be used when relative accuracy test audits of continuous moisture monitoring systems are conducted. For the purpose of determining the stack gas molecular weight, however, the alternative wet bulb-dry bulb technique for approximating the stack gas moisture content described in section 2.2 of Method 4 may be used in lieu of the procedures in sections 8.1 and 8.2 of the method.

(5) Methods 6, 6A, 6B or 6C, and 7, 7A, 7C, 7D or 7E, as applicable, are the reference methods for determining SO₂ and NO_x pollutant concentrations. Alternatively, Method 20 may be used as the reference method for relative accuracy test audits of NO_x CEMS installed on combustion turbines. (Methods 6A and 6B may also be used to determine SO₂ emission rate in lb/mmBtu). Methods 7, 7A, 7C, 7D, or 7E must be used to measure total NO_x emissions, both NO and NO₂, for purposes of this part. The owner or operator shall not use the following exceptions or options of method 7E:

(i) Section 7.1 of the method allowing for use of prepared calibration gas mixtures that are produced in accordance with method 205 in Appendix M of 40 CFR Part 51;

(ii) Paragraph (3) in Section 8.4 of the method allowing for the use of a multi-hole probe to satisfy the multipoint traverse requirement of the method;

(iii) Section 8.6 of the method allowing for the use of "Dynamic Spiking" as an alternative to the interference and system bias checks of the method. Dynamic spiking may be conducted (optionally) as an additional quality assurance check, the exception in section 5.1.2 of method 7E.)

(6) Method 20 is the reference method for determining NO_x and diluent emissions from stationary gas turbines for testing under appendix E of this part.

(7) ASTM D6784-02, "Standard Test Method for Elemental, Oxidized, Particle-Bound, and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources" (also known as the Ontario Hydro Method) (incorporated by reference, see § 75.6) is the reference method for determining Hg concentration. ~~When this method is used,~~ Alternatively, Method 29 in appendix A-8 to part 60 of this chapter may be used, with these caveats: the procedures for preparation of Hg standards and sample analysis in sections 13.4.1.1 through 13.4.1.3 ASTM D6784-02 shall be followed instead of the procedures in sections 7.5.33 and 11.1.3 of Method 29, and the QA/QC procedures in section 13.4.2 of ASTM D6784-02 shall be performed instead of the procedures in section 9.2.3 of Method 29. The tester may also opt to use the sample recovery and preparation procedures in ASTM D6784-02 instead of the Method 29 procedures, as follows: sections 8.2.8 and 8.2.9.1 of Method 29 may be replaced with sections 13.2.9.1 through 13.2.9.3 of ASTM D6784-02; sections 8.2.9.2 and 8.2.9.3 of Method 29 may be replaced with sections 13.2.10.1 through 13.2.10.4 of ASTM D6784-02; section 8.3.4 of Method 29 may be replaced with section 13.3.4 or 13.3.6 of ASTM D6784-02 (as appropriate); and section 8.3.5 of Method 29 may be replaced with section 13.3.5 or 13.3.6 of ASTM D6784-02 (as appropriate). ~~Whenever these methods are used,~~ When ASTM D6784-02 or Method 29 is used, paired sampling trains are required, ~~and to~~ to validate a RATA run, the relative deviation (RD), calculated according to section 11.7 of appendix K to this part, must not exceed 10 percent, ~~when the average concentration is greater than 1.0 µg/m³. If the average concentration is ≤ 1.0 µg/m³, the RD must not exceed 20 percent.~~ when the average concentration is ≤ 1.0 µg/m³, the RD must not exceed 20 percent. If the RD criterion is met, use the average Hg concentration measured by the two trains (vapor phase Hg, only) in the relative accuracy calculations. ~~Alternatively,~~ As a second alternative, an instrumental reference method or other suitable reference method capable of measuring total vapor phase Hg may be used, subject to the approval of the Administrator.

§ 75.22(b)

(b) The owner or operator may use the following methods in appendix A to part 60 of this chapter as a reference method backup monitoring system to provide quality-assured monitor data:

- (1) Method 3A for determining O₂ or CO₂ concentration;
- (2) Method 6C for determining SO₂ concentration;
- (3) Method 7E for determining total NO_x concentration (both NO and NO₂); and
- (4) Method 2, or its allowable alternatives, as provided in appendix A to part 60 of this chapter, except for Methods 2B and 2E, for determining volumetric flow. The sample point(s) for reference methods shall be located according to the provisions of section 6.5.5 of appendix A to this part.
- (5) ASTM D6784-02, "Standard Test Method for Elemental, Oxidized, Particle-Bound, and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources" (also known as the Ontario Hydro Method and incorporated by reference, see § 75.6) for determining Hg concentration. Alternatively, an instrumental reference method capable of measuring total vapor phase Hg may be used, subject to the approval of the Administrator.

§ 75.22(c)(1)

(c)(1) Instrumental EPA Reference Methods 3A, 6C, 7E, and 20 shall be conducted using calibration gases as defined in section 5 of appendix A to this part. Otherwise, performance tests shall be conducted and data reduced in accordance with the test methods and procedures of this part unless the Administrator:

- (i) Specifies or approves, in specific cases, the use of a reference method with minor changes in methodology;
- (ii) Approves the use of an equivalent method; or
- (iii) Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors.

§ 75.22(c)(2)

(2) Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require testing under Section 114 of the Act.

§ 75.23

§ 75.23 Alternatives to standards incorporated by reference.

(a) The designated representative of a unit may petition the Administrator for an alternative to any standard incorporated by reference and prescribed in this part in accordance with § 75.66(c).

(b) [Reserved]

§ 75.24

§ 75.24 Out-of-control periods and adjustment for system bias.

§ 75.24(a)

(a) If an out-of-control period occurs to a monitor or continuous emission monitoring system, the owner or operator shall take corrective action and repeat the tests applicable to the "out-of-control parameter" as described in appendix B of this part.

(1) For daily calibration error tests, an out-of-control period occurs when the calibration error of a pollutant concentration monitor exceeds the applicable specification in section 2.1.4 of appendix B to this part.

(2) For quarterly linearity checks, an out-of-control period occurs when the error in linearity at any of three gas concentrations (low, mid-range, and high) exceeds the applicable specification in appendix A to this part.

(3) For relative accuracy test audits, an out-of-control period occurs when the relative accuracy exceeds the applicable specification in appendix A to this part.

§ 75.24(b)

(b) When a monitor or continuous emission monitoring system is out-of-control, any data recorded by the monitor or monitoring system are not quality-assured and shall not be used in calculating monitor data availabilities pursuant to § 75.32 of this part.

§ 75.24(c)

(c) When a monitor or continuous emission monitoring system is out-of-control, the owner or operator shall take one of the following actions until the monitor or monitoring system has successfully met the relevant criteria in appendices A and B of this part as demonstrated by subsequent tests:

- (1) Apply the procedures for missing data substitution to emissions from affected unit(s); or
- (2) Use a certified backup monitoring system or a reference method for measuring and recording emissions from the affected unit(s); or

(3) Adjust the gas discharge paths from the affected unit(s) with emissions normally observed by the out-of-control monitor or monitoring system so that all exhaust gases are monitored by a certified monitor or monitoring system meeting the requirements of appendices A and B of this part.

- § 75.24(d) (d) When the bias test indicates that an SO₂ monitor, a flow monitor, a NO_x-diluent continuous emission monitoring system, or a NO_x concentration monitoring system used to determine NO_x mass emissions, as defined in § 75.71(a)(2), a Hg concentration monitoring system or a sorbent trap monitoring system is biased low (i.e., the arithmetic mean of the differences between the reference method value and the monitor or monitoring system measurements in a relative accuracy test audit exceed the bias statistic in section 7 of appendix A to this part), the owner or operator shall adjust the monitor or continuous emission monitoring system to eliminate the cause of bias such that it passes the bias test or calculate and use the bias adjustment factor as specified in section 2.3.4 of appendix B to this part.
- § 75.24(e) (e) The owner or operator shall determine if a continuous opacity monitoring system is out-of-control and shall take appropriate corrective actions according to the procedures specified for State Implementation Plans, pursuant to appendix M of part 51 of this chapter. The owner or operator shall comply with the monitor data availability requirements of the State. If the State has no monitor data availability requirements for continuous opacity monitoring systems, then the owner or operator shall comply with the monitor data availability requirements as stated in the data capture provisions of appendix M, part 51 of this chapter.

Subpart D -- Missing Data Substitution Procedures

§ 75.30

§ 75.30 General provisions.

- § 75.30(a) (a) Except as provided in § 75.34, the owner or operator shall provide substitute data for each affected unit using a continuous emission monitoring system according to the missing data procedures in this subpart whenever the unit combusts any fuel and:
- (1) A valid, quality-assured hour of SO₂ concentration data (in ppm) has not been measured and recorded for an affected unit by a certified SO₂ pollutant concentration monitor, or by an approved alternative monitoring method under subpart E of this part, except as provided in paragraph (d) of this section; or
 - (2) A valid, quality-assured hour of flow data (in scfh) has not been measured and recorded for an affected unit from a certified flow monitor, or by an approved alternative monitoring system under subpart E of this part; or
 - (3) A valid, quality-assured hour of NO_x emission rate data (in lb/mmBtu) has not been measured or recorded for an affected unit, either by a certified NO_x-diluent continuous emission monitoring system, or by an approved alternative monitoring system under subpart E of this part; or
 - (4) A valid, quality-assured hour of CO₂ concentration data (in percent CO₂, or percent O₂ converted to percent CO₂ using the procedures in appendix F to this part) has not been measured and recorded for an affected unit, either by a certified CO₂ continuous emission monitoring system or by an approved alternative monitoring method under subpart E of this part; or
 - (5) A valid, quality-assured hour of NO_x concentration data (in ppm) has not been measured or recorded for an affected unit, either by a certified NO_x concentration monitoring system used to determine NO_x mass emissions, as defined in § 75.71(a)(2), or by an approved alternative monitoring system under subpart E of this part; or
 - (6) A valid, quality-assured hour of CO₂ or O₂ concentration data (in percent CO₂, or percent O₂) used for the determination of heat input has not been measured and recorded for an affected unit, either by a certified CO₂ or O₂ diluent monitor, or by an approved alternative monitoring method under subpart E of this part; or
 - (7) A valid, quality-assured hour of moisture data (in percent H₂O) has not been measured or recorded for an affected unit, either by a certified moisture monitoring system or an approved alternative monitoring method under subpart E of this part. This requirement does not apply when a default percent moisture value, as provided in §§ 75.11(b) or 75.12(b), is used to account for the hourly moisture content of the stack gas; or
 - (8) A valid, quality-assured hour of heat input rate data (in mmBtu/hr) has not been measured and recorded for a unit from a certified flow monitor and a certified diluent (CO₂ or O₂) monitor or by an approved alternative monitoring system under subpart E of this part.
- § 75.30(b) (b) However, the owner or operator shall have no need to provide substitute data according

to the missing data procedures in this subpart if the owner or operator uses SO₂, CO₂, NO_x, or O₂ concentration, flow rate, percent moisture, or NO_x emission rate data recorded from either a certified redundant or regular non-redundant backup CEMS, a like-kind replacement non-redundant backup analyzer, or a backup reference method monitoring system when the certified primary monitor is not operating or is out-of-control. A redundant or non-redundant backup continuous emission monitoring system must have been certified according to the procedures in § 75.20 prior to the missing data period. Non-redundant backup continuous emission monitoring system must pass a linearity check (for pollutant concentration monitors) or a calibration error test (for flow monitors) prior to each period of use of the certified backup monitor for recording and reporting emissions. Use of a certified backup monitoring system or backup reference method monitoring system is optional and at the discretion of the owner or operator.

§ 75.30(c) (c) When the certified primary monitor is not operating or out-of-control, then data recorded for an affected unit from a certified backup continuous emission monitor or backup reference method monitoring system are used, as if such data were from the certified primary monitor, to calculate monitor data availability in § 75.32, and to provide the quality-assured data used in the missing data procedures in §§ 75.31 and 75.33, such as the "hour after" value.

§ 75.30(d) (d) The owner or operator shall comply with the applicable provisions of this paragraph during hours in which a unit with an SO₂ continuous emission monitoring system combusts only gaseous fuel.

(1) Whenever a unit with an SO₂ CEMS combusts only natural gas or pipeline natural gas (as defined in § 72.2 of this chapter) and the owner or operator is using the procedures in section 7 of appendix F to this part to determine SO₂ mass emissions pursuant to § 75.11(e)(1), the owner or operator shall, for purposes of reporting heat input data under § 75.57(b)(5), and for the calculation of SO₂ mass emissions using Equation F-23 in section 7 of appendix F to this part, substitute for missing data from a flow monitoring system, CO₂ diluent monitor or O₂ diluent monitor using the missing data substitution procedures in § 75.36.

(2) Whenever a unit with an SO₂ CEMS combusts gaseous fuel and the owner or operator uses the gas sampling and analysis and fuel flow procedures in appendix D to this part to determine SO₂ mass emissions pursuant to § 75.11(e)(2), the owner or operator shall substitute for missing total sulfur content, gross calorific value, and fuel flowmeter data using the missing data procedures in appendix D to this part and shall also, for purposes of reporting heat input data under § 75.57(b)(5), substitute for missing data from a flow monitoring system, CO₂ diluent monitor or O₂ diluent monitor using the missing data substitution procedures in § 75.36.

(3) The owner or operator of a unit with an SO₂ monitoring system shall not include hours when the unit combusts only gaseous fuel in the SO₂ data availability calculations in § 75.32 or in the calculations of substitute SO₂ data using the procedures of either § 75.31 or § 75.33, for hours when SO₂ emissions are determined in accordance with § 75.11(e)(1) or (e)(2). For the purpose of the missing data and availability procedures for SO₂ pollutant concentration monitors in §§ 75.31 and 75.33 only, all hours during which the unit combusts only gaseous fuel shall be excluded from the definition of "monitor operating hour," "quality assured monitor operating hour," "unit operating hour," and "unit operating day," when SO₂ emissions are determined in accordance with § 75.11(e)(1) or (e)(2).

(4) During all hours in which a unit with an SO₂ continuous emission monitoring system combusts only gaseous fuel and the owner or operator uses the SO₂ monitoring system to determine SO₂ mass emissions pursuant to § 75.11(e)(3), the owner or operator shall determine the percent monitor data availability for SO₂ in accordance with § 75.32 and shall use the standard SO₂ missing data procedures of § 75.33.

§ 75.31

§ 75.31 Initial missing data procedures.

§ 75.31(a) (a) During the first 720 quality-assured monitor operating hours following initial certification of the required SO₂, CO₂, O₂, Hg concentration or moisture monitoring system(s) at a particular unit or stack location (i.e., the date and time at which quality assured data begins to be recorded by CEMS(s) installed at that location), and during the first 2,160 quality-assured monitor operating hours following initial certification of the required NO_x-diluent, NO_x concentration, or flow monitoring system(s) at the unit or stack location, the owner or operator shall provide substitute data required under this subpart according to the procedures in paragraphs (b) and (c) of this section. The owner or operator of a unit shall use these procedures for no longer than three years (26,280 clock hours) following initial certification.

§ 75.31(b)

(b) *SO₂, CO₂, or O₂ concentration data, Hg concentration data and moisture data.* For each hour of missing SO₂, Hg, or CO₂ emissions concentration data (including CO₂ data converted from O₂ data using the procedures in appendix F of this part), or missing O₂ or CO₂ diluent concentration data used to calculate heat input, or missing moisture data, the owner or operator shall calculate the substitute data as follows:

(1) Whenever prior quality-assured data exist, the owner or operator shall substitute, by means of the data acquisition and handling system, for each hour of missing data, the average of the hourly SO₂, CO₂, Hg, or O₂ concentrations or moisture percentages recorded by a certified monitor for the unit operating hour immediately before and the unit operating hour immediately after the missing data period.

(2) Whenever no prior quality assured SO₂, CO₂, Hg, or O₂ concentration data or moisture data exist, the owner or operator shall substitute, as applicable, for each hour of missing data, the maximum potential SO₂ concentration or the maximum potential CO₂ concentration or the minimum potential O₂ concentration or (unless Equation 19-3, 19-4 or 19-8 in Method 19 in appendix A to part 60 of this chapter is used to determine NO_x emission rate) the minimum potential moisture percentage, or the maximum potential Hg concentration, as specified, respectively, in sections 2.1.1.1, 2.1.3.1, 2.1.3.2 and 2.1.5 of appendix A to this part. If Equation 19-3, 19-4 or 19-8 in Method 19 in appendix A to part 60 of this chapter is used to determine NO_x emission rate, substitute the maximum potential moisture percentage, as specified in section 2.1.6 of appendix A to this part.

§ 75.31(c)

(c) *Volumetric flow and NO_x emission rate or NO_x concentration data (load ranges or operational bins used).* The procedures in this paragraph apply to affected units for which load-based ranges or non-load-based operational bins, as defined, respectively, in sections 2 and 3 of appendix C to this part are used to provide substitute NO_x and flow rate data. For each hour of missing volumetric flow rate data, NO_x emission rate data, or NO_x concentration data used to determine NO_x mass emissions:

(1) Whenever prior quality-assured data exist in the load range (or operational bin) corresponding to the operating load (or operating conditions) at the time of the missing data period, the owner or operator shall substitute, by means of the automated data acquisition and handling system, for each hour of missing data, the arithmetic average of all of the prior quality-assured hourly flow rates, NO_x emission rates, or NO_x concentrations in the corresponding load range (or operational bin) as determined using the procedure in appendix C to this part. When non-load-based operational bins are used, if essential operating or parametric data are unavailable for any hour in the missing data period, such that the operational bin cannot be determined, the owner or operator shall, for that hour, substitute (as applicable) the maximum potential flow rate as specified in section 2.1.4.1 of appendix A to this part or the maximum potential NO_x emission rate or the maximum potential NO_x concentration as specified in section 2.1.2.1 of appendix A to this part.

(2) This paragraph (c)(2) does not apply to non-load-based units using operational bins. Whenever no prior quality-assured flow or NO_x emission rate or NO_x concentration data exist for the corresponding load range, the owner or operator shall substitute, for each hour of missing data, the average hourly flow rate or the average hourly NO_x emission rate or NO_x concentration at the next higher level load range for which quality-assured data are available.

(3) Whenever no prior quality assured flow rate or NO_x emission rate or NO_x concentration data exist for the corresponding load range, or any higher load range (or for non-load-based units using operational bins, when no prior quality-assured data exist in the corresponding operational bin), the owner or operator shall, as applicable, substitute, for each hour of missing data, the maximum potential flow rate as specified in section 2.1.4.1 of appendix A to this part or shall substitute the maximum potential NO_x emission rate or the maximum potential NO_x concentration, as specified in section 2.1.2.1 of appendix A to this part.

§ 75.31(d)

(d) *Non-load-based volumetric flow and NO_x emission rate or NO_x concentration data (operational bins not used).* The procedures in this paragraph, (d), apply only to affected units that do not produce electrical output (in megawatts) or thermal output (in klb/hr of steam) and for which operational bins are not used. For each hour of missing volumetric flow rate data, NO_x emission rate data, or NO_x concentration data used to determine NO_x mass emissions:

(1) Whenever prior quality-assured data exist at the time of the missing data period, the owner or operator shall substitute, by means of the automated data acquisition and handling system, for each hour of missing data, the arithmetic average of all of the prior quality-assured hourly average flow rates or NO_x emission rates or NO_x concentrations.

(2) Whenever no prior quality-assured flow rate, NO_x emission rate, or NO_x concentration

data exist, the owner or operator shall, as applicable, substitute for each hour of missing data, the maximum potential flow rate as specified in section 2.1.4.1 of appendix A to this part or the maximum potential NO_x emission rate or the maximum potential NO_x concentration as specified in section 2.1.2.1 of appendix A to this part.

§ 75.32

§ 75.32 Determination of monitor data availability for standard missing data procedures.

§ 75.32(a)

(a) Following initial certification of the required SO₂, CO₂, O₂, or Hg concentration, or moisture monitoring system(s) at a particular unit or stack location (i.e., the date and time at which quality assured data begins to be recorded by CEMS(s) at that location), the owner or operator shall begin calculating the percent monitor data availability as described in paragraph (a)(1) of this section, and shall, upon completion of the first 720 quality-assured monitor operating hours, record, by means of the automated data acquisition and handling system, the percent monitor data availability for each monitored parameter. Similarly, following initial certification of the required NO_x-diluent, NO_x concentration, or flow monitoring system(s) at a unit or stack location, the owner or operator shall begin calculating the percent monitor data availability as described in paragraph (a)(1) of this section, and shall, upon completion of the first 2,160 quality-assured monitor operating hours, record, by means of the automated data acquisition and handling system, the percent monitor data availability for each monitored parameter. Notwithstanding these requirements, if three years (26,280 clock hours) have elapsed since the date and hour of initial certification and fewer than 720 (or 2,160, as applicable) quality-assured monitor operating hours have been recorded, the owner or operator shall begin recording the percent monitor data availability. The percent monitor data availability shall be calculated for each monitored parameter at each unit or stack location, as follows:

§ 75.32(a)(1)

(1) Prior to completion of 8,760 unit (or stack) operating hours following initial certification, the owner or operator shall, for the purpose of applying the standard missing data procedures of § 75.33, use Equation 8 to calculate, hourly, percent monitor data availability.

$$\text{Percent monitor data availability} = \frac{\text{Total unit operating hours for which quality - assured data were recorded since certification}}{\text{Total unit operating hours since certification}} \times 100$$

(Eq. 8)

§ 75.32(a)(2)

(2) Upon completion of 8,760 unit (or stack) operating hours following initial certification and thereafter, the owner or operator shall, for the purpose of applying the standard missing data procedures of § 75.33, use Equation 9 to calculate, hourly, percent monitor data availability. Notwithstanding this requirement, if three years (26,280 clock hours) have elapsed since initial certification and fewer than 8,760 unit or stack operating hours have been accumulated, the owner or operator shall begin using a modified version of Equation 9, as described in paragraph (a)(3) of this section.

$$\text{Percent monitor data availability} = \frac{\text{Total unit operating hours for which quality - assured data were recorded during previous 8,760 unit operating hours}}{8,760} \times 100$$

(Eq. 9)

§ 75.32(a)(3)

(3) When calculating percent monitor data availability using Equation 8 or 9, the owner or operator shall include all unit operating hours, and all monitor operating hours for which

quality-assured data were recorded by a certified primary monitor; a certified redundant or non-redundant backup monitor or a reference method for that unit; or by an approved alternative monitoring system under subpart E of this part. No hours from more than three years (26,280 clock hours) earlier shall be used in Equation 9. For a unit that has accumulated fewer than 8,760 unit operating hours in the previous three years (26,280 clock hours), replace the words "during previous 8,760 unit operating hours" in the numerator of Equation 9 with "in the previous three years" and replace "8,760" in the denominator of Equation 9 with "total unit operating hours in the previous three years". The owner or operator of a unit with an SO₂ monitoring system shall, when SO₂ emissions are determined in accordance with § 75.11(e)(1) or (e)(2), exclude hours in which a unit combusts only gaseous fuel from calculations of percent monitor data availability for SO₂ pollutant concentration monitors, as provided in § 75.30(d).

§ 75.32(b)

(b) The monitor data availability ~~need not~~ shall be calculated for each hour during ~~the each~~ missing data period. The owner or operator shall record the percent monitor data availability for the ~~last each~~ hour of each missing data period ~~as the monitor availability used~~ to implement the missing data substitution procedures.

§ 75.33

§ 75.33 Standard missing data procedures for SO₂, NO_x, Hg and flow rate.

§ 75.33(a)

(a) Following initial certification of the required SO₂, NO_x, and flow rate monitoring system(s) at a particular unit or stack location (i.e., the date and time at which quality assured data begins to be recorded by CEMS(s) at that location) and upon completion of the first 720 quality-assured monitor operating hours (for SO₂) or the first 2,160 quality assured monitor operating hours (for flow, NO_x emission rate, or NO_x concentration), the owner or operator shall provide substitute data required under this subpart according to the procedures in paragraphs (b) and (c) of this section and depicted in Table 1 (SO₂) and Table 2 of this section (NO_x, flow). The owner or operator may either implement the provisions of paragraphs (b) and (c) of this section on a non-fuel-specific basis, or may, as described in paragraphs (b)(5), (b)(6), (c)(7) and (c)(8) of this section, provide fuel-specific substitute data values. Notwithstanding these requirements, if three years (26,280 clock hours) have elapsed since the date and hour of initial certification, and fewer than 720 (or 2,160, as applicable) quality assured monitor operating hours have been recorded, the owner or operator shall begin using the missing data procedures of this section. The owner or operator of a unit shall substitute for missing data using quality-assured monitor operating hours of data from no earlier than three years (26,280 clock hours) prior to the date and time of the missing data period.

§ 75.33(b)

(b) *SO₂ concentration data.* For each hour of missing SO₂ concentration data,

§ 75.33(b)(1)

(1) ~~Whenever If~~ the monitor data availability is equal to or greater than 95.0 percent, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for ~~each that~~ hour of ~~each the~~ missing data period according to the following procedures:

(i) For a missing data period less than or equal to 24 hours, substitute the average of the hourly SO₂ concentrations recorded by an SO₂ pollutant concentration monitor for the hour before and the hour after the missing data period.

(ii) For a missing data period greater than 24 hours, substitute the greater of:

- (A) The 90th percentile hourly SO₂ concentration recorded by an SO₂ pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or
- (B) The average of the hourly SO₂ concentrations recorded by an SO₂ pollutant concentration monitor for the hour before and the hour after the missing data period.

§ 75.33(b)(2)

(2) ~~Whenever If~~ the monitor data availability is at least 90.0 percent but less than 95.0 percent, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for ~~each that~~ hour of ~~each the~~ missing data period according to the following procedures:

(i) For a missing data period of less than or equal to 8 hours, substitute the average of the hourly SO₂ concentrations recorded by an SO₂ pollutant concentration monitor for the hour before and the hour after the missing data period.

(ii) For a missing data period of more than 8 hours, substitute the greater of:

- (A) the 95th percentile hourly SO₂ concentration recorded by an SO₂ pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or
- (B) The average of the hourly SO₂ concentrations recorded by an SO₂ pollutant

concentration monitor for the hour before and the hour after the missing data period.

§ 75.33(b)(3)

(3) ~~Whenever If~~ the monitor data availability is at least 80.0 percent but less than 90.0 percent, the owner or operator shall substitute for ~~each that hour of the~~ missing data period the maximum hourly SO₂ concentration recorded by an SO₂ pollutant concentration monitor during the previous 720 quality-assured monitor operating hours.

§ 75.33(b)(4)

(4) ~~Whenever If~~ the monitor data availability is less than 80.0 percent, the owner or operator shall substitute for ~~each that hour of the~~ missing data period the maximum potential SO₂ concentration, as defined in section 2.1.1.1 of appendix A to this part.

§ 75.33(b)(5)

(5) For units that combust more than one type of fuel, the owner or operator may opt to implement the missing data routines in paragraphs (b)(1) through (b)(4) of this section on a fuel-specific basis. If this option is selected, the owner or operator shall document this in the monitoring plan required under § 75.53.

§ 75.33(b)(6)

(6) Use the following guidelines to implement paragraphs (b)(1) through (b)(4) of this section on a fuel-specific basis:

(i) Separate the historical, quality-assured SO₂ concentration data according to the type of fuel combusted;

(ii) For units that co-fire different types of fuel, either group the co-fired hours with the historical data for the fuel with the highest SO₂ emission rate (e.g., if diesel oil and pipeline natural gas are co-fired, count co-fired hours as oil-burning hours), or separate the co-fired hours from the single-fuel hours;

(iii) For the purposes of providing substitute data under paragraph (b)(4) of this section, determine a separate, fuel-specific maximum potential SO₂ concentration (MPC) value for each type of fuel combusted in the unit, in a manner consistent with section 2.1.1.1 of appendix A to this part. For fuel that qualifies as pipeline natural gas or natural gas (as defined in § 72.2 of this chapter), the owner or operator shall, for the purposes of determining the MPC, either determine the maximum total sulfur content and minimum gross calorific value (GCV) of the gas by fuel sampling and analysis or shall use a default total sulfur content of 0.05 percent by weight (dry basis) and a default GCV value of 950 Btu/scf. For co-firing, the MPC value shall be based on the fuel with the highest SO₂ emission rate. The exact methodology used to determine each fuel-specific MPC value shall be documented in the monitoring plan for the unit or stack; and

(iv) For missing data periods that require 720-hour (or, if applicable, 3-year) lookbacks, use historical data for the type of fuel combusted during each hour of the missing data period to determine the appropriate substitute data value for that hour. For co-fired missing data hours, if the historical data are separated into single-fuel and co-fired hours, use co-fired data to provide the substitute data values. Otherwise, use data for the fuel with the highest SO₂ emission rate to provide substitute data values for co-fired missing data hours.

§ 75.33(b)(7)

(7) Table 1 summarizes the provisions of paragraphs (b)(1) through (b)(6) of this section.

§ 75.33(c)

(c) *Volumetric flow rate, NO_x emission rate and NO_x concentration data.* Use the procedures in this paragraph to provide substitute NO_x and flow rate data for all affected units for which load-based ranges have been defined in accordance with section 2 of appendix C to this part. For units that do not produce electrical or thermal output (i.e., non-load-based units), use the procedures in this paragraph only to provide substitute data for volumetric flow rate, and only if operational bins have been defined for the unit, as described in section 3 of appendix C to this part. Otherwise, use the applicable missing data procedures in paragraph (d) or (e) of this section for non-load-based units. For each hour of missing volumetric flow rate data, NO_x emission rate data, or NO_x concentration data used to determine NO_x mass emissions:

§ 75.33(c)(1)

(1) ~~Whenever If~~ the monitor data availability is equal to or greater than 95.0 percent, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for ~~each that~~ hour of ~~each the~~ missing data period according to the following procedures:

(i) For a missing data period less than or equal to 24 hours, substitute, as applicable, for each missing hour, the arithmetic average of the flow rates or NO_x emission rates or NO_x concentrations recorded by a monitoring system during the previous 2,160 quality assured monitor operating hours at the corresponding unit load range or operational bin, as determined using the procedure in appendix C to this part.

(ii) For a missing data period greater than 24 hours, substitute, as applicable, for each missing hour, the greater of:

(A) The 90th percentile hourly flow rate or the 90th percentile NO_x emission rate or the 90th percentile NO_x concentration recorded by a monitoring system during the previous 2,160 quality-assured monitor operating hours at the corresponding unit load range or operational bin, as determined using the procedure in appendix C to this part; or

(B) The average of the recorded hourly flow rates, NO_x emission rates or NO_x concentrations recorded by a monitoring system for the hour before and the hour after the missing data period.

§ 75.33(c)(2)

(2) ~~Whenever If~~ the monitor data availability is at least 90.0 percent but less than 95.0 percent, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for ~~each-that~~ hour of ~~each-the~~ missing data period according to the following procedures:

(i) For a missing data period of less than or equal to 8 hours, substitute, as applicable, the arithmetic average hourly flow rate or NO_x emission rate or NO_x concentration recorded by a monitoring system during the previous 2,160 quality-assured monitor operating hours at the corresponding unit load range or operational bin, as determined using the procedure in appendix C to this part.

(ii) For a missing data period greater than 8 hours, substitute, as applicable, for each missing hour, the greater of:

(A) The 95th percentile hourly flow rate or the 95th percentile NO_x emission rate or the 95th percentile NO_x concentration recorded by a monitoring system during the previous 2,160 quality-assured monitor operating hours at the corresponding unit load range or operational bin, as determined using the procedure in appendix C to this part; or

(B) The average of the hourly flow rates, NO_x emission rates or NO_x concentrations recorded by a monitoring system for the hour before and the hour after the missing data period.

§ 75.33(c)(3)

(3) ~~Whenever If~~ the monitor data availability is at least 80.0 percent but less than 90.0 percent, the owner or operator shall, by means of the automated data acquisition and handling system, substitute, as applicable, for ~~each-that~~ hour of ~~each-the~~ missing data period, the maximum hourly flow rate or the maximum hourly NO_x emission rate or the maximum hourly NO_x concentration recorded during the previous 2,160 quality-assured monitor operating hours at the corresponding unit load range or operational bin, as determined using the procedure in appendix C to this part.

§ 75.33(c)(4)

(4) ~~Whenever If~~ the monitor data availability is less than 80.0 percent, the owner or operator shall substitute, as applicable, for ~~each-that~~ hour of ~~each-the~~ missing data period, the maximum potential flow rate, as defined in section 2.1.4.1 of appendix A to this part, or the maximum NO_x emission rate, as defined in section 2.1.2.1 of appendix A to this part, or the maximum potential NO_x concentration, as defined in section 2.1.2.1 of appendix A to this part. In addition, when non-load-based operational bins are used, the owner or operator shall substitute the maximum potential flow rate for any hour in the missing data period in which essential operating or parametric data are unavailable and the operational bin cannot be determined.

§ 75.33(c)(5)

(5) This paragraph, (c)(5), does not apply to non-load-based affected units using operational bins. Whenever no prior quality-assured flow rate data, NO_x concentration data or NO_x emission rate data exist for the corresponding load range, the owner or operator shall substitute, as applicable, for each hour of missing data, the maximum hourly flow rate or the maximum hourly NO_x concentration or maximum hourly NO_x emission rate at the next higher level load range for which quality-assured data are available.

§ 75.33(c)(6)

(6) Whenever no prior quality-assured flow rate data, NO_x concentration data or NO_x emission rate data exist at either the corresponding load range (or a higher load range) or at the corresponding operational bin, the owner or operator shall substitute, as applicable, either the maximum potential NO_x emission rate or the maximum potential NO_x concentration, as defined in section 2.1.2.1 of appendix A to this part or the maximum potential flow rate, as defined in section 2.1.4.1 of appendix A to this part.

§ 75.33(c)(7)

(7) This paragraph (c)(7) does not apply to affected units using non-load-based operational bins. For units that combust more than one type of fuel, the owner or operator may opt to implement the missing data routines in paragraphs (c)(1) through (c)(6) of this section on a fuel-

specific basis. If this option is selected, the owner or operator shall document this in the monitoring plan required under § 75.53.

§ 75.33(c)(8)

(8) This paragraph, (c)(8), does not apply to affected units using non-load-based operational bins. Use the following guidelines to implement paragraphs (c)(1) through (c)(6) of this section on a fuel-specific basis:

(i) Separate the historical, quality-assured NO_x emission rate, NO_x concentration, or flow rate data according to the type of fuel combusted;

(ii) For units that co-fire different types of fuel, either group the co-fired hours with the historical data for the fuel with the highest NO_x emission rate, NO_x concentration or flow rate, or separate the co-fired hours from the single-fuel hours;

(iii) For the purposes of providing substitute data under paragraph (c)(4) of this section, a separate, fuel-specific maximum potential concentration (MPC), maximum potential NO_x emission rate (MER), or maximum potential flow rate (MPF) value (as applicable) shall be determined for each type of fuel combusted in the unit, in a manner consistent with § 72.2 of this chapter and with section 2.1.2.1 or 2.1.4.1 of appendix A to this part. For co-firing, the MPC, MER or MPF value shall be based on the fuel with the highest emission rate or flow rate (as applicable). The exact methodology used to determine each fuel-specific MPC, MER or MPF value shall be documented in the monitoring plan for the unit or stack.

(iv) For missing data periods that require 2,160-hour (or, if applicable, 3-year) lookbacks, use historical data for the type of fuel combusted during each hour of the missing data period to determine the appropriate substitute data value for that hour. For co-fired missing data hours, if the historical data are separated into single-fuel and co-fired hours, use co-fired data to provide the substitute data values. Otherwise, use data for the fuel with the highest NO_x emission rate, NO_x concentration or flow rate (as applicable) to provide substitute data values for co-fired missing data hours. Tables 1 and 2 follow.

Table 1. -- Missing Data Procedure for SO₂ CEMS, CO₂ CEMS, Moisture CEMS, Hg CEMS, and Diluent (CO₂ or O₂) Monitors for Heat Input Determination

| Trigger conditions | | Calculation routines | |
|--|--|---|---|
| Monitor data availability (percent) | Duration (N) of CEMS outage (hours) ² | Method | Lookback period |
| 95 or more (90 or more for Hg).... | N ≤ 24 | Average..... | HB/HA |
| | N > 24 | For SO ₂ , CO ₂ , Hg, and H ₂ O**, the greater of: Average..... 90th percentile..... For O ₂ and H ₂ O ^x , the lesser of: 10th percentile..... | HB/HA 720 hours* HB/HA. 720 hours* |
| 90 or more, but below 95 (> 80 but < 90 for Hg)..... | N ≤ 8 | Average..... | HB/HA |
| | N > 8 | For SO ₂ , CO ₂ , Hg, and H ₂ O**, the greater of: Average..... 95th percentile..... For O ₂ and H ₂ O ^x , the lesser of: Average..... 5th Percentile..... | HB/HA 720 hours* HB/HA 720 hours* |
| 80 or more, but below 90 (> 70 but < 80 for Hg)..... | N > 0 | For SO ₂ , CO ₂ , Hg, and H ₂ O**, Maximum value ¹ | 720 hours* |
| | | For O ₂ and H ₂ O ^x : Minimum value ¹ | 720 hours* |
| Below 80 (Below 70 for Hg)..... | N > 0 | Maximum potential concentration ³ or % (for SO ₂ , CO ₂ , Hg, and H ₂ O**) <i>or</i> Minimum potential concentration or % (for O ₂ and H ₂ O ^x) | None |

HB/HA = hour before and hour after the CEMS outage.

* Quality-assured, monitor operating hours, during unit operation. May be either fuel-specific or non-fuel-specific. For units that report data only for the ozone season, include only quality assured monitor operating hours within the ozone season in the lookback period. Use data from no earlier than 3 years prior to the missing data period.

¹ Where a unit with add-on SO₂ or Hg emission controls can demonstrate that the controls are operating properly, as provided in § 75.34, the unit may, upon approval, use the maximum controlled emission rate from the previous 720 quality-assured monitor operating hours.

² During unit operating hours.

³ Alternatively, where a unit with add-on SO₂ or Hg emission controls can demonstrate that the controls are operating properly, as provided in § 75.34, the unit may report the greater of: (a) the maximum expected SO₂ or Hg concentration or (b) 1.25 times the maximum controlled value from the previous 720 quality-assured monitor operating hours.

^x Use this algorithm for moisture except when Equation 19-3, 19-4 or 19-8 in Method 19 in appendix A to part 60 of this chapter is used for NO_x emission rate.

** Use this algorithm for moisture *only* when Equation 19-3, 19-4 or 19-8 in Method 19 in appendix A to part 60 of this chapter is used for NO_x emission rate.

Table 2. -- Load-Based Missing Data Procedure for NO_x-Diluent CEMS, NO_x Concentration CEMS and Flow Rate CEMS

| Trigger conditions | | Calculation routines | | |
|-------------------------------------|--|---|-------------------|-------------|
| Monitor data availability (percent) | Duration (N) of CEMS outage (hours) ² | Method | Lookback period | Load ranges |
| 95 or more..... | N ≤ 24 | Average | 2160 hours* | Yes |
| | N > 24 | The greater of: Average | HB/HA..... | No |
| 90 or more, but below 95..... | N ≤ 8 | 90th percentile..... | 2160 hours* | Yes |
| | N > 8 | Average | 2160 hours* | Yes |
| 80 or more, but below 90..... | N ≤ 8 | The greater of: Average | HB/HA..... | No |
| | N > 8 | 95th percentile..... | 2160 hours* | Yes |
| Below 80..... | N > 0 | Maximum value ¹ | 2160 hours* | Yes |
| | N > 0 | Maximum potential NO _x emission rate ³ ; or maximum potential NO _x concentration ³ ; or maximum potential flow rate. | None..... | No |

HB/HA = hour before and hour after the CEMS outage.

* Quality-assured, monitor operating hours, using data at the corresponding load range ("load bin") for each hour of the missing data period. May be either fuel-specific or non-fuel-specific. For units that report data only for the ozone season, include only quality assured monitor operating hours within the ozone season in the lookback period. Use data from no earlier than three years prior to the missing data period.

¹ Where a unit with add-on NO_x emission controls can demonstrate that the controls are operating properly, as provided in § 75.34, the unit may, upon approval, use the maximum controlled emission rate from the previous ~~720~~**2160 quality-assured monitor** operating hours. Alternatively, units with add-on controls that report NO_x mass emissions on a year-round basis under subpart H of this part may use separate ozone season and non-ozone season databases to provide substitute data values, as described in § 75.34 (a)(2).

² During unit operating hours.

³ Alternatively, where a unit with add-on NO_x emission controls can demonstrate that the controls are operating properly, as provided in § 75.34, the unit may report the greater of: (a) the maximum expected NO_x concentration (or maximum controlled NO_x emission rate, as applicable); or (b) 1.25 times the maximum controlled value at the corresponding load bin, from the previous 2160 quality-assured monitor operating hours.

§ 75.33(c)(9)

(9) The load-based provisions of paragraphs (c)(1) through (c)(8) of this section are summarized in Table 2 of this section. The non-load-based provisions for volumetric flow rate, found in paragraphs (c)(1) through (c)(4), and (c)(6) of this section, are presented in Table 4 of this section.

§ 75.33(d)

(d) *Non-load-based NO_x emission rate and NO_x concentration data.* Use the procedures in this paragraph to provide substitute NO_x data for affected units that do not produce electrical output (in megawatts) or thermal output (in klb/hr of steam). For each hour of missing NO_x emission rate data, or NO_x concentration data used to determine NO_x mass emissions:

§ 75.33(d)(1)

(1) ~~Whenever~~**If** the monitor data availability is equal to or greater than 95.0 percent, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for ~~each~~**that** hour of ~~each~~**the** missing data period according to the following procedures:

(i) For a missing data period less than or equal to 24 hours, substitute, as applicable, for each missing hour, the arithmetic average of the NO_x emission rates or NO_x concentrations recorded by a monitoring system in a 2,160 hour lookback period. The lookback period may be comprised of either:

(A) The previous 2,160 quality assured monitor operating hours, or

(B) The previous 2,160 quality-assured monitor operating hours at the corresponding operational bin, if operational bins, as defined in section 3 of appendix C to this part, are used.

(ii) For a missing data period greater than 24 hours, substitute, for each missing hour, the 90th percentile NO_x emission rate or the 90th percentile NO_x concentration recorded by a monitoring system during the previous 2,160 quality assured monitor operating hours (or during the previous 2,160 quality-assured monitor operating hours at the corresponding operational bin, if operational bins are used).

§ 75.33(d)(2)

(2) ~~Whenever-If~~ the monitor data availability is at least 90.0 percent but less than 95.0 percent, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for ~~each-that~~ hour of ~~each-the~~ missing data period according to the following procedures:

(i) For a missing data period of less than or equal to eight hours, substitute, as applicable, the arithmetic average of the hourly NO_x emission rates or NO_x concentrations recorded by a monitoring system during the previous 2,160 quality-assured monitor operating hours (or during the previous 2,160 quality-assured monitor operating hours at the corresponding operational bin, if operational bins are used).

(ii) For a missing data period greater than eight hours, substitute, for each missing hour, the 95th percentile hourly flow rate or the 95th percentile NO_x emission rate or the 95th percentile NO_x concentration recorded by a monitoring system during the previous 2,160 quality-assured monitor operating hours (or during the previous 2,160 quality-assured monitor operating hours at the corresponding operational bin, if operational bins are used).

§ 75.33(d)(3)

(3) ~~Whenever-If~~ the monitor data availability is at least 80.0 percent but less than 90.0 percent, the owner or operator shall, by means of the automated data acquisition and handling system, substitute, as applicable, for ~~each-that~~ hour of ~~each-the~~ missing data period, the maximum hourly NO_x emission rate or the maximum hourly NO_x concentration recorded during the previous 2,160 quality-assured monitor operating hours (or during the previous 2,160 quality-assured monitor operating hours at the corresponding operational bin, if operational bins are used).

§ 75.33(d)(4)

(4) ~~Whenever-If~~ the monitor data availability is less than 80.0 percent, the owner or operator shall substitute, as applicable, for ~~each-that~~ hour of ~~each-the~~ missing data period, the maximum NO_x emission rate, as defined in § 72.2 of this chapter, or the maximum potential NO_x concentration, as defined in section 2.1.2.1 of appendix A to this part. In addition, when operational bins are used, the owner or operator shall substitute (as applicable) the maximum potential NO_x emission rate or the maximum potential NO_x concentration for any hour in the missing data period in which essential operating or parametric data are unavailable and the operational bin cannot be determined.

§ 75.33(d)(5)

(5) If operational bins are used and no prior quality-assured NO_x concentration data or NO_x emission rate data exist for the corresponding operational bin, the owner or operator shall substitute, as applicable, either the maximum potential NO_x emission rate, as defined in § 72.2 of this chapter, or the maximum potential NO_x concentration, as defined in section 2.1.2.1 of appendix A to this part.

§ 75.33(d)(6)

(6) Table 3 of this section summarizes the provisions of paragraphs (d)(1) through (d)(5) of this section.

§ 75.33(e)

(e) *Non-load-based volumetric flow rate data.*

(1) If operational bins, as defined in section 3 of appendix C to this part, are used for a unit that does not produce electrical or thermal output, use the missing data procedures in paragraph (c) of this section to provide substitute volumetric flow rate data for the unit.

(2) If operational bins are not used, modify the procedures in paragraph (c) of this section as follows:

(i) In paragraphs (c)(1) through (c)(3), the words "previous 2,160 quality-assured monitor operating hours" shall apply rather than "previous 2,160 quality-assured monitor operating hours at the corresponding unit load range or operational bin, as determined using the procedure in appendix C to this part;"

(ii) The last sentence in paragraph (c)(4) does not apply;

(iii) Paragraphs (c)(5), (c)(7), and (c)(8) are not applicable; and

(iv) In paragraph (c)(6), the words, "for either the corresponding load range (or a higher load range) or at the corresponding operational bin" do not apply.

(3) Table 4 of this section summarizes the provisions of paragraphs (e)(1) and (e)(2) of this section. Tables 3 and 4 follow:

Table 3. -- Non-load-based Missing Data Procedure for NO_x-Diluent CEMS and NO_x Concentration CEMS

| Trigger conditions | | Calculation routines | |
|--|--|---|-----------------|
| Monitor data availability (percent) | Duration (N) of CEMS outage (hours) ¹ | Method | Lookback period |
| 95 or more..... | N ≤ 24 | Average..... | 2160 hours* |
| | N > 24 | 90th percentile..... | 2160 hours* |
| 90 or more, but below 95 | N ≤ 8 | Average..... | 2160 hours* |
| | N > 8 | 95th percentile..... | 2160 hours* |
| 80 or more, but below 90 | N > 0 | Maximum value..... | 2160 hours* |
| Below 80, or operational bin indeterminable..... | N > 0 | Maximum <u>potential</u> NO _x emission rate ² or maximum potential NO _x concentration ² | None |

* If operational bins are used, the lookback period is 2,160 quality-assured, monitor operating hours, and data at the corresponding operational bin are used to provide substitute data values. If operational bins are not used, the lookback period is the previous 2,160 quality-assured monitor operating hours. For units that report data only for the ozone season, include only quality-assured monitor operating hours within the ozone season in the lookback period. Use data from no earlier than three years prior to the missing data period.

¹ During unit operation.

² Alternatively, where a unit with add-on NO_x emission controls can demonstrate that the controls are operating properly, as provided in § 75.34, the unit may report the greater of: (a) the maximum expected NO_x concentration, (or maximum controlled NO_x emission rate, as applicable); or (b) 1.25 times the maximum controlled value at the corresponding operational bin (if applicable), from the previous 2160 quality-assured monitor operating hours.

Table 4. -- Non-load-based Missing Data Procedure
for Flow Rate CEMS

| Trigger conditions | | Calculation routines | |
|--|--|--|----------------------|
| Monitor data availability (percent) | Duration (N) of CEMS outage (hours) ¹ | Method | Lookback period |
| 95 or more | N ≤ 24 | Average | 2160 hours* |
| | N > 24 | The greater of: Average 90th percentile..... | HB/HA 2160 hours* |
| 90 or more, but below 95 | N ≤ 8 | Average | 2160 hours* |
| | N > 8 | The greater of: Average 95th percentile..... | HB/HA 2160 hours* |
| 80 or more, but below 90 | N > 0 | Maximum value | 2160 hours* |
| Below 80, or operational bin indeterminable | N > 0 | Maximum potential flow rate | None |

* If operational bins are used, the lookback period is the previous 2,160 quality-assured, monitor operating hours and data at the corresponding operational bin are used to provide substitute data values. If operational bins are not used, the lookback period is the previous 2,160 quality-assured, monitor operating hours. For units that report data only for the ozone season, include only quality assured monitor operating hours within the ozone season in the lookback period. Use data from no earlier than three years prior to the missing data period.

¹ During unit operation.

§ 75.34

§ 75.34 Units with add-on emission controls.

§ 75.34(a)

(a) The owner or operator of an affected unit equipped with add-on SO₂ and/or NO_x emission controls shall ~~use one of the options in~~ provide substitute data in accordance with paragraphs (a)(1) ~~-(a)(2) or (a)(4) through (a)(5)~~ of this section for each hour in which quality-assured data from the outlet SO₂ and/or NO_x monitoring system(s) are not obtained, ~~and shall document which option is selected in the monitoring plan required under § 75.53. If the option in paragraph (a)(1) or (a)(2) is selected, the owner or operator may also use the petition provision in paragraph (a)(3) of this section.~~

§ 75.34(a)(1)

(1) The owner or operator may use the missing data substitution procedures specified in §§ 75.31 through 75.33 to provide substitute data for any missing data hour(s) in which the add-on emission controls are documented to be operating properly, as described in the quality assurance/quality control program for the unit, required by section 1 in appendix B of this part. To provide the necessary documentation, the owner or operator shall, for each missing data period, record parametric data to verify the proper operation of the SO₂ or NO_x add-on emission controls during each hour, as described in paragraph (d) of this section. For any missing data hour(s) in which such parametric data are either not provided or, if provided, do not demonstrate that proper operation of the SO₂ or NO_x add-on emission controls has been maintained, the owner or operator shall substitute (as applicable) the maximum potential NO_x concentration (MPC) as defined in section 2.1.2.1 of appendix A to this part, the maximum potential NO_x emission rate, as defined in § 72.2 of this chapter, or the maximum potential concentration for SO₂, as defined by section 2.1.1.1. Alternatively, for SO₂ or NO_x, the owner or operator may substitute, if available, the hourly SO₂ or NO_x concentration recorded by a certified inlet monitor, in lieu of the MPC. For each hour in which data from an inlet monitor are reported, the owner or operator shall use a method of determination code (MODC) of "22" (see Table 4a in § 75.57). In addition, under § 75.64(c), the designated representative shall submit as part of each electronic quarterly report, a certification statement, verifying the proper operation of the SO₂ or NO_x add-on emission control for each missing data period in which the missing data procedures of §§ 75.31 through 75.33 were applied; or

§ 75.34(a)(2)

(2) This paragraph, (a)(2), applies only to a unit which, as provided in § 75.74 (a) or § 75.74 (b)(1), reports NO_x mass emissions on a year-round basis under a state or Federal NO_x mass emissions reduction program that adopts the emissions monitoring provisions of this part. If the add-on NO_x emission controls installed on such a unit are operated only during the ozone season or are operated in a more efficient manner during the ozone season than outside the ozone season, the owner or operator may implement the missing data provisions of paragraph (a)(1) of this section in the following alternative manner:

(i) The historical, quality-assured NO_x emission rate or NO_x concentration data may be separated into two categories, i.e., data recorded inside the ozone season and data recorded outside the ozone season;

(ii) For the purposes of the missing data lookback periods described under §§ 75.33 (c)(1), (c)(2) ~~and (c)(3), (c)(3) and (c)(5) and § 75.38(c)~~, the substitute data values shall be taken from the appropriate database, depending on the date(s) and hour(s) of the missing data period. That is, if the missing data period occurs inside the ozone season, the ozone season data shall be used to provide substitute data. If the missing data period occurs outside the ozone season, data from outside the ozone season shall be used to provide substitute data.

(iii) A missing data period that begins outside the ozone season and continues into the ozone season shall be considered to be two separate missing data periods, one ending on April 30, hour 23, and the other beginning on May 1, hour 00;

(iv) For missing data hours outside the ozone season, the procedures of § 75.33 may be applied unconditionally, i.e., documentation of the operational status of the emission controls is not required in order to apply the standard missing data routines.

§ 75.34(a)(3)

~~_____ (3) The designated representative may petition the Administrator under § 75.66 to replace the maximum recorded value in the last 720 quality-assured monitor operating hours with a value corresponding to the maximum controlled emission rate (an emission rate recorded when the add-on emission controls were operating) recorded during the last 720 quality-assured monitor operating hours. For such a petition, the designated representative must demonstrate that the following conditions are met: the monitor data availability, calculated in accordance with § 75.32, for the affected unit is below 90.0 percent and parametric data establish that the add-on emission controls were operating properly (i.e., within the range of operating parameters provided in the quality assurance/quality control program) during the time period under petition. _____ For each missing data hour in which the percent monitor data availability for SO₂ or NO_x, calculated in accordance with § 75.32, is less than 90.0 percent and is greater than or equal to 80.0 percent; and parametric data establishes that the add-on emission controls were operating properly (i.e., within the range of operating parameters provided in the quality assurance/quality control program) during the hour, the owner or operator may:~~

~~_____ (i) Replace the maximum SO₂ concentration recorded in the 720 quality-assured monitor operating hours immediately preceding the missing data period, with the maximum controlled SO₂ concentration recorded in the previous 720 quality-assured monitor operating hours; or~~

~~_____ (ii) Replace the maximum NO_x concentration(s) or NO_x emission rate(s) from the appropriate load bin(s) (based on a lookback through the 2,160 quality-assured monitor operating hours immediately preceding the missing data period), with the maximum controlled NO_x concentration(s) or emission rate(s) from the appropriate load bin(s) in the same 2,160 quality-assured monitor operating hour lookback period.~~

§ 75.34(a)(4)

(4) The designated representative may petition the Administrator under § 75.66 for approval of site-specific parametric monitoring procedure(s) for calculating substitute data for missing SO₂ pollutant concentration, NO_x pollutant concentration, and NO_x emission rate data in accordance with the requirements of paragraphs (b) and (c) of this section and appendix C to this part. The owner or operator shall record the data required in appendix C to this part, pursuant to § 75.58(b).

§ 75.34(a)(5)

_____ (5) For each missing data hour in which the percent monitor data availability for SO₂ or NO_x, calculated in accordance with § 75.32, is below 80.0 percent and parametric data establish that the add-on emission controls were operating properly (i.e. within the range of operating parameters provided in the quality assurance/quality control program), in lieu of reporting the maximum potential value, the owner or operator may substitute, as applicable, the greater of:

_____ (i) The maximum expected SO₂ concentration or 1.25 times the maximum hourly controlled SO₂ concentration recorded in the previous 720 quality-assured monitor operating hours;

(ii) The maximum expected NO_x concentration or 1.25 times the maximum hourly controlled NO_x concentration recorded in the previous 2,160 quality-assured monitor operating hours at the corresponding unit load range or operational bin;

(iii) The maximum hourly controlled NO_x emission rate (MCR) or 1.25 times the maximum hourly controlled NO_x emission rate recorded in the previous 2,160 quality-assured monitor operating hours at the corresponding unit load range or operational bin;

(iv) For the purposes of implementing the missing data options in paragraphs (a)(5)(i) through (a)(5)(iii) of this section, the maximum expected SO₂ and NO_x concentrations shall be determined, respectively, according to sections 2.1.1.2 and 2.1.2.2 of appendix A to this part. The MCR shall be calculated according to the basic procedure described in section 2.1.2.1(b) of appendix A to this part, except that the words “maximum potential NO_x emission rate (MER)” shall be replaced with the words “maximum controlled NO_x emission rate (MCR)” and the NO_x MEC shall be used instead of the NO_x MPC.

§ 75.34(b)

(b) For an affected unit equipped with add-on SO₂ emission controls, the designated representative may petition the Administrator to approve a parametric monitoring procedure, as described in appendix C of this part, for calculating substitute SO₂ concentration data for missing data periods. The owner or operator shall use the procedures in §§ 75.31, 75.33, or 75.34(a) for providing substitute data for missing SO₂ concentration data unless a parametric monitoring procedure has been approved by the Administrator.

(1) Where the monitor data availability is 90.0 percent or more for an outlet SO₂ pollutant concentration monitor, the owner or operator may calculate substitute data using an approved parametric monitoring procedure.

(2) Where the monitor data availability for an outlet SO₂ pollutant concentration monitor is less than 90.0 percent, the owner or operator shall calculate substitute data using the procedures in § 75.34(a) (1) or (2), even if the Administrator has approved a parametric monitoring procedure.

§ 75.34(c)

(c) For an affected unit with NO_x add-on emission controls, the designated representative may petition the Administrator to approve a parametric monitoring procedure, as described in appendix C of this part, in order to calculate substitute NO_x emission rate data for missing data periods. The owner or operator shall use the procedures in § 75.31 or 75.33 for providing substitute data for missing NO_x emission rate data prior to receiving the Administrator's approval for a parametric monitoring procedure.

(1) Where monitor data availability for a NO_x continuous emission monitoring system is 90.0 percent or more, the owner or operator may calculate substitute data using an approved parametric monitoring procedure.

(2) Where monitor data availability for a NO_x continuous emission monitoring system is less than 90.0 percent, the owner or operator shall calculate substitute data using the procedure in § 75.34(a) (1) or (2), even if the Administrator has approved a parametric monitoring procedure.

§ 75.34(d)

(d) In order to implement the options in paragraphs (a)(1) ~~and~~, (a)(3) ~~and~~ (a)(5) of this section, ~~and § 75.38(c)~~, the owner or operator shall keep records of information as described in § 75.58(b)(3) to verify the proper operation of all add-on SO₂ or NO_x emission controls, during all periods of SO₂ or NO_x emission missing data. If the owner or operator elects to implement the missing data option in paragraph (a)(2) of this section, the records in § 75.58 (b)(3) are required to be kept only for the ozone season. The owner or operator shall document in the quality assurance/quality control (QA/QC) program required by section 1 of appendix B to this part, the parameters monitored and (as applicable) the ranges and combinations of parameters that indicate proper operation of the controls. The owner or operator shall provide the information recorded under § 75.58(b)(3) and the related QA/QC program information to the Administrator, to the EPA Regional Office, or to the appropriate State or local agency, upon request.

§ 75.35

§ 75.35 Missing data procedures for CO₂.

§ 75.35(a)

(a) The owner or operator of a unit with a CO₂ continuous emission monitoring system for determining CO₂ mass emissions in accordance with § 75.10 (or an O₂ monitor that is used to determine CO₂ concentration in accordance with appendix F to this part) shall substitute for missing CO₂ pollutant concentration data using the procedures of paragraphs (b) and (d) of this section.

§ 75.35(b)

(b) During the first 720 quality assured monitor operating hours following initial

certification at a particular unit or stack location (i.e., the date and time at which quality assured data begins to be recorded by a CEMS at that location), or (when implementing these procedures for a previously certified CO₂ monitoring system) during the 720 quality assured monitor operating hours preceding implementation of the standard missing data procedures in paragraph (d) of this section, the owner or operator shall provide substitute CO₂ pollutant concentration data or substitute CO₂ data for heat input determination, as applicable, according to the procedures in § 75.31(b).

§ 75.35(c) (c) [Reserved]

§ 75.35(d) (d) Upon completion of 720 quality assured monitor operating hours using the initial missing data procedures of § 75.31(b), the owner or operator shall provide substitute data for CO₂ concentration or substitute CO₂ data for heat input determination, as applicable, in accordance with the procedures in § 75.33(b) except that the term "CO₂ concentration" shall apply rather than "SO₂ concentration," the term "CO₂ pollutant concentration monitor" or "CO₂ diluent monitor" shall apply rather than "SO₂ pollutant concentration monitor," and the term "maximum potential CO₂ concentration, as defined in section 2.1.3.1 of appendix A to this part" shall apply, rather than "maximum potential SO₂ concentration."

§ 75.36 § 75.36 Missing data procedures for heat input rate determinations.

§ 75.36(a) (a) When hourly heat input rate is determined using a flow monitoring system and a diluent gas (O₂ or CO₂) monitor, substitute data must be provided to calculate the heat input whenever quality assured data are unavailable from the flow monitor, the diluent gas monitor, or both. When flow rate data are unavailable, substitute flow rate data for the heat input rate calculation shall be provided according to § 75.31 or § 75.33, as applicable. When diluent gas data are unavailable, the owner or operator shall provide substitute O₂ or CO₂ data for the heat input rate calculations in accordance with paragraphs (b) and (d) of this section.

§ 75.36(b) (b) During the first 720 quality assured monitor operating hours following initial certification at a particular unit or stack location (i.e., the date and time at which quality assured data begins to be recorded by a CEMS at that location), or (when implementing these procedures for a previously certified CO₂ or O₂ monitor) during the 720 quality assured monitor operating hours preceding implementation of the standard missing data procedures in paragraph (d) of this section, the owner or operator shall provide substitute CO₂ or O₂ data, as applicable, for the calculation of heat input (under section 5.2 of appendix F to this part) according to § 75.31(b).

§ 75.36(c) (c) [Reserved]

§ 75.36(d) (d) Upon completion of 720 quality-assured monitor operating hours using the initial missing data procedures of § 75.31(b), the owner or operator shall provide substitute data for CO₂ or O₂ concentration to calculate heat input rate, as follows. Substitute CO₂ data for heat input rate determinations shall be provided according to § 75.35(d). Substitute O₂ data for the heat input rate determinations shall be provided in accordance with the procedures in § 75.33(b), except that the term "O₂ concentration" shall apply rather than the term "SO₂ concentration" and the term "O₂ diluent monitor" shall apply rather than the term "SO₂ pollutant concentration monitor." In addition, the term "substitute the lesser of" shall apply rather than "substitute the greater of;" the terms "minimum hourly O₂ concentration" and "minimum potential O₂ concentration, as determined under section 2.1.3.2 of appendix A to this part" shall apply rather than, respectively, the terms "maximum hourly SO₂ concentration" and "maximum potential SO₂ concentration, as determined under section 2.1.1.1 of appendix A to this part;" and the terms "10th percentile" and "5th percentile" shall apply rather than, respectively, the terms "90th percentile" and "95th percentile" (see Table 1 of § 75.33).

§ 75.37 § 75.37 Missing data procedures for moisture.

§ 75.37(a) (a) The owner or operator of a unit with a continuous moisture monitoring system shall substitute for missing moisture data using the procedures of this section.

§ 75.37(b) (b) Where no prior quality assured moisture data exist, substitute the minimum potential moisture percentage, from section 2.1.5 of appendix A to this part, except when Equation 19-3, 19-4 or 19-8 in Method 19 in appendix A to part 60 of this chapter is used to determine NO_x

emission rate. If Equation 19-3, 19-4 or 19-8 in Method 19 in appendix A to part 60 of this chapter is used to determine NO_x emission rate, substitute the maximum potential moisture percentage, as specified in section 2.1.6 of appendix A to this part.

§ 75.37(c) (c) During the first 720 quality assured monitor operating hours following initial certification at a particular unit or stack location (i.e., the date and time at which quality assured data begins to be recorded by a moisture monitoring system at that location), the owner or operator shall provide substitute data for moisture according to § 75.31(b).

§ 75.37(d) (d) Upon completion of the first 720 quality-assured monitor operating hours following initial certification, the owner or operator shall provide substitute data for moisture as follows:

(1) Unless Equation 19-3, 19-4 or 19-8 in Method 19 in appendix A to part 60 of this chapter is used to determine NO_x emission rate, follow the missing data procedures in § 75.33(b), except that the term, "moisture percentage" shall apply rather than "SO₂ concentration;" the term "moisture monitoring system" shall apply rather than the term "SO₂ pollutant concentration monitor;" the term "substitute the lesser of" shall apply rather than "substitute the greater of;" the terms "minimum hourly moisture percentage" and "minimum potential moisture percentage, as determined under section 2.1.5 of appendix A to this part" shall apply rather than, respectively, the terms "maximum hourly SO₂ concentration" and "maximum potential SO₂ concentration, as determined under section 2.1.1.1 of appendix A to this part;" and the terms "10th percentile" and "5th percentile" shall apply rather than, respectively, the terms "90th percentile" and "95th percentile" (see Table 1 of § 75.33). (2) When Equation 19-3, 19-4 or 19-8 in Method 19 in appendix A to part 60 of this chapter is used to determine NO_x emission rate:

(i) Provided that none of the following equations is used to determine SO₂ emissions, CO₂ emissions or heat input: Equation F-2, F-14b, F-16, F-17, or F-18 in appendix F to this part, or Equation 19-5 or 19-9 in Method 19 in appendix A to part 60 of this chapter, use the missing data procedures in § 75.33(b), except that the term "moisture percentage" shall apply rather than "SO₂ concentration," the term "moisture monitoring system" shall apply rather than "SO₂ pollutant concentration monitor," and the term "maximum potential moisture percentage, as defined in section 2.1.6 of appendix A to this part" shall apply, rather than "maximum potential SO₂ concentration;" or

(ii) If any of the following equations is used to determine SO₂ emissions, CO₂ emissions or heat input: Equation F-2, F-14b, F-16, F-17, or F-18 in appendix F to this part, or Equation 19-5 or 19-9 in Method 19 in appendix A to part 60 of this chapter, the owner or operator shall petition the Administrator under § 75.66(l) for permission to use an alternative moisture missing data procedure.

§ 75.38

§ 75.38 Standard missing data procedures for Hg CEMS.

§ 75.38(a) (a) Once 720 quality assured monitor operating hours of Hg concentration data have been obtained following initial certification, the owner or operator shall provide substitute data for Hg concentration in accordance with the procedures in §§ 75.33(b)(1) through (b)(4), except that the term "Hg concentration" shall apply rather than "SO₂ concentration," the term "Hg concentration monitoring system" shall apply rather than "SO₂ pollutant concentration monitor," ~~and the term "maximum potential Hg concentration, as defined in section 2.1.7 of appendix A to this part" shall apply, rather than "maximum potential SO₂ concentration-"~~, and the percent monitor data availability trigger conditions prescribed for Hg in Table 1 of §75.33 shall apply rather than the trigger conditions prescribed for SO₂.

§ 75.38(b) (b) For a unit equipped with a flue gas desulfurization (FGD) system that significantly reduces the concentration of Hg emitted to the atmosphere (including circulating fluidized bed units that use limestone injection), or for a unit equipped with add-on Hg emission controls (e.g., carbon injection), the standard missing data procedures in paragraph (a) of this section may only be used for hours in which the SO₂ or Hg emission controls are documented to be operating properly, as described in § 75.58(b)(3). For any hour(s) in the missing data period for which this documentation is unavailable, the owner or operator shall report, as applicable, the maximum potential Hg concentration, as defined in section 2.1.7 of appendix A to this part. In addition, under § 75.64(c), the designated representative shall submit as part of each electronic quarterly report, a certification statement, verifying the proper operation of the SO₂ or Hg emission controls for each missing data period in which the procedures in paragraph (a) of this section are applied.

§ 75.38(c) (c) For units with FGD systems or add-on Hg controls, when the percent monitor data

availability is less than 80.0 percent and is greater than or equal to 70.0 percent, and a missing data period occurs, consistent with §75.34(a)(3), for each missing data hour in which the FGD or Hg emission controls are documented to be operating properly, the owner or operator may ~~petition to report the maximum controlled Hg concentration in the previous 720 quality-assured monitor operating hours, consistent with § 75.34(a)(3).~~ In addition, when the percent monitor data availability is less than 70.0 percent and a missing data period occurs, consistent with §75.34(a)(5), for each missing data hour in which the FGD or Hg emission controls are documented to be operating properly, the owner or operator may report the greater of the maximum expected Hg concentration (MEC) or 1.25 times the maximum controlled Hg concentration recorded in the previous 720 quality-assured monitor operating hours. The MEC shall be determined in accordance with section 2.1.7.1 of appendix A to this part.

§ 75.39

§ 75.39 Missing data procedures for sorbent trap monitoring systems.

§ 75.39(a)

(a) If a primary sorbent trap monitoring system has not been certified by the applicable compliance date specified under a State or Federal Hg mass emission reduction program that adopts the requirements of subpart I of this part, and if quality-assured Hg concentration data from a certified backup Hg monitoring system, reference method, or approved alternative monitoring system are unavailable, the owner or operator shall report the maximum potential Hg concentration, as defined in section 2.1.7 of appendix A to this part, until the primary system is certified.

§ 75.39(b)

(b) For a certified sorbent trap system, a missing data period will occur in the following circumstances, unless quality-assured Hg concentration data from a certified backup Hg CEMS, sorbent trap system, reference method, or approved alternative monitoring system are available ~~whenever~~:

(1) A gas sample is not extracted from the stack during unit operation (e.g. during a monitoring system malfunction or when the system undergoes maintenance); or

(2) The results of the Hg analysis for the paired sorbent traps are missing or invalid (as determined using the quality assurance procedures in appendix K to this part). The missing data period begins with the hour in which the paired sorbent traps for which the Hg analysis is missing or invalid were put into service. The missing data period ends at the first hour in which valid Hg concentration data are obtained with another pair of sorbent traps (i.e., the hour at which this pair of traps was placed in service), or with a certified backup Hg CEMS, reference method, or approved alternative monitoring system.

§ 75.39(c)

(c) *Initial missing data procedures.* Use ~~the these~~ missing data procedures in §75.31(b) until 720 hours of quality-assured Hg concentration data have been collected with the sorbent trap monitoring system(s), following initial certification. ~~For each hour of the missing data period, the substitute data value for Hg concentration shall be the average Hg concentration from all valid sorbent trap analyses to date, including data from the initial certification test runs.~~

§ 75.39(d)

(d) *Standard missing data procedures.* Once 720 quality-assured hours of data have been obtained with the sorbent trap system(s), begin reporting the percent monitor data availability in accordance with § 75.32 and switch from the initial missing data procedures in paragraph (c) of this section to the ~~following~~ standard missing data procedures:

~~(1) If the percent monitor data availability (PMA) is > 90.0 percent, report the average Hg concentration for all valid sorbent trap analyses in the previous 12 months.~~

~~(2) If the PMA is > 80.0 percent, but < 90.0 percent, report the 95th percentile Hg concentration obtained from all of the valid sorbent trap analyses in the previous 12 months.~~

~~(3) If the PMA is > 70.0 percent, but < 80.0 percent, report the maximum Hg concentration obtained from all of the valid sorbent trap analyses in the previous 12 months.~~

~~(4) If the PMA is < 70.0 percent, report the maximum potential Hg concentration, as defined in section 2.1.7 of appendix A to this part.~~

~~(5) For the purposes of paragraphs (d)(1), (d)(2), and (d)(3) of this section, if fewer than 12 months have elapsed since initial certification, use whatever valid sorbent trap analyses are available to determine the appropriate substitute data values. in §75.38.~~

§ 75.39(e)

(e) Notwithstanding the requirements of paragraphs (c) and (d) of this section, if the unit has add-on Hg emission controls or is equipped with a flue gas desulfurization system that significantly reduces Hg emissions, the owner or operator shall report the maximum potential Hg concentration, as defined in section 2.1.7 of appendix A to this part, for any hour(s) in the missing

data period for which proper operation of the Hg emission controls or FGD system is not documented according to § 75.58(b)(3).

§75.39(f)

(f) In cases where the owner or operator elects to use a primary Hg CEMS and a redundant backup sorbent trap monitoring system (or vice-versa), when both monitoring systems are out-of-service and quality-assured Hg concentration data from a reference method or approved alternative monitoring system are unavailable, the previous 720 quality-assured monitor operating hours reported in the electronic quarterly report under §75.64 shall be used for the required missing data lookback, irrespective of whether these data were recorded by the Hg CEMS, the sorbent trap system, a reference method, or an approved alternative monitoring system.

Subpart E -- Alternative Monitoring Systems

§ 75.40

§ 75.40 General demonstration requirements.

§ 75.40(a)

(a) The owner or operator of an affected unit, or the owner or operator of an affected unit and representing a class of affected units which meet the criteria specified in § 75.47, required to install a continuous emission monitoring system may apply to the Administrator for approval of an alternative monitoring system (or system component) to determine average hourly emission data for SO₂, NO_x, and/or volumetric flow by demonstrating that the alternative monitoring system has the same or better precision, reliability, accessibility, and timeliness as that provided by the continuous emission monitoring system.

§ 75.40(b)

(b) The requirements of this subpart shall be met by the alternative monitoring system when compared to a contemporaneously operating, fully certified continuous emission monitoring system or a contemporaneously operating reference method, where the appropriate reference methods are listed in § 75.22.

§ 75.41

§ 75.41 Precision criteria.

§ 75.41(a)

(a) *Data collection and analysis.* To demonstrate precision equal to or better than the continuous emission monitoring system, the owner or operator shall conduct an F-test, a correlation analysis, and a t-test for bias as described in this section. The t-test shall be performed only on sample data at the normal operating level and primary fuel supply, whereas the F-test and the correlation analysis must be performed on each of the data sets required under paragraphs (a)(4) and (a)(5) of this section. The owner or operator shall collect and analyze data according to the following requirements:

§ 75.41(a)(1)

(1) Data from the alternative monitoring system and the continuous emission monitoring system shall be collected and paired in a manner that ensures each pair of values applies to hourly average emissions during the same hour.

§ 75.41(a)(2)

(2) An alternative monitoring system that directly measures emissions shall have probes or other measuring devices in locations that are in proximity to the continuous emission monitoring system and shall provide data on the same parameters as those measured by the continuous emission monitoring system. Data from the alternative monitoring system shall meet the statistical tests for precision in paragraph (c) of this section and the t-test for bias in appendix A of this part.

§ 75.41(a)(3)

(3) An alternative monitoring system that indirectly quantifies emission values by measuring inputs, operating characteristics, or outputs and then applying a regression or another quantitative technique to estimate emissions, shall meet the statistical tests for precision in paragraph (c) of this section and the t-test for bias in appendix A of this part.

§ 75.41(a)(4)

(4) For flow monitor alternatives, the alternative monitoring system must provide sample data for each of three different exhaust gas velocities while the unit or units, if more than one unit exhausts into the stack or duct, is burning its primary fuel at:

(i) A frequently used low operating level, selected within the range between the minimum safe and stable operating level and 50 percent of the maximum operating level,

(ii) A frequently used high operating level, selected within the range between 80 percent of the maximum operating level and the maximum operating level, and

(iii) The normal operating level, or an evenly spaced intermediary level between low and high levels used if the normal operating level is within a specified range (10.0 percent of the

maximum operating level), of either paragraphs (a)(4) (i) or (ii) of this section.

- § 75.41(a)(5) (5) For pollutant concentration monitor alternatives, the alternative monitoring system shall provide sample data for the primary fuel supply and for all alternative fuel supplies that have significantly different sulfur content.
- § 75.41(a)(6) (6) For the normal unit operating level and primary fuel supply, paired hourly sample data shall be provided for at least 90.0 percent of the hours during 720 unit operating hours. For each of the remaining two operating levels for flow monitor alternatives, and for each alternative fuel supply for pollutant concentration monitor alternatives, paired hourly sample data shall be provided for at least 24 successive unit operating hours.
- § 75.41(a)(7) (7) The owner or operator shall not use missing data substitution procedures to provide sample data.
- § 75.41(a)(8) (8) If the collected data meet the requirements of the F-test, the correlation test, and the t-test at one or more, but not all, of the operating levels or fuel supplies, the owner or operator may elect to continue collecting the paired data for up to 1,440 additional operating hours and repeat the statistical tests using the data for the entire 30- to 90-day period.
- § 75.41(a)(9) (9) The owner or operator shall provide two separate time series data plots for the data at each operating level or fuel supply described in paragraphs (a)(4) and (a)(5) of this section. Each data plot shall have a horizontal axis that represents the clock hour and calendar date of the readings and shall contain a separate data point for every hour for the duration of the performance evaluation. The data plots shall show the following:
- (i) Percentage difference versus time where the vertical axis represents the percentage difference between each paired hourly reading generated by the continuous emission monitoring system (or reference method) and the alternative emission monitoring system as calculated using the following equation:

$$\Delta e = \frac{e_p - e_v}{e_v} \times 100 \%$$

(Eq. 10)where,

Δe =Percentage difference between the readings generated by the alternative monitoring system and the continuous emission monitoring system.

e_p =Measured value from the alternative monitoring system.

e_v =Measured value from the continuous emission monitoring system.

(ii) Alternative monitoring system readings and continuous emission monitoring system (or reference method) readings versus time where the vertical axis represents hourly pollutant concentrations or volumetric flow, as appropriate, and two different symbols are used to represent the readings from the alternative monitoring system and the continuous emission monitoring system (or reference method), respectively.

- § 75.41(b) (b) *Data screening and calculation adjustments.* In preparation for conducting the statistical tests described in paragraph (c) of this section, the owner or operator may screen the data for lognormality and time dependency autocorrelation. If either is detected, the owner or operator shall make the following calculation adjustments:

- § 75.41(b)(1) (1) *Lognormality.* The owner or operator shall conduct any screening and adjustment for lognormality according to the following procedures.

- § 75.41(b)(1)(i) (i) Apply the log transformation to each measured value of either the certified continuous emissions monitoring system or certified flow monitor, using the following equation:

$$I_v = \ln e_v$$

(Eq. 11)

where,

e_v = Hourly value generated by the certified continuous emissions monitoring system or certified flow monitoring system
 l_v = Hourly lognormalized data values for the certified monitoring system,

and to each measured value, e_p , of the proposed alternative monitoring system, using the following equation to obtain the lognormalized data values,
 $l_p \leq$

$$l_p = \ln e_p$$

(Eq. 12)

where,

e_p = Hourly value generated by the proposed alternative monitoring system.

l_p = Hourly lognormalized data values for the proposed alternative monitoring system.

- § 75.41(b)(1)(ii) (ii) Separately test each set of transformed data, l_v and l_p , for normality, using the following:
 (A) Shapiro-Wilk test;
 (B) Histogram of the transformed data; and
 (C) Quantile-Quantile plot of the transformed data.
- § 75.41(b)(1)(iii) (iii) The transformed data in a data set will be considered normally distributed if all of the following conditions are satisfied:
 (A) The Shapiro-Wilk test statistic, W , is greater than or equal to 0.75 or is not statistically significant at $\alpha=0.05$.
 (B) The histogram of the data is unimodal and symmetric.
 (C) The Quantile-Quantile plot is a diagonal straight line.
- § 75.41(b)(1)(iv) (iv) If both of the transformed data sets, l_v and l_p , meet the conditions for normality, specified in paragraphs (b)(1)(iii) (A) through (C) of this section, the owner or operator may use the transformed data, l_v and l_p , in place of the original measured data values in the statistical tests for alternative monitoring systems as described in paragraph (c) of this section and in appendix A of this part.
- § 75.41(b)(1)(v) (v) If the transformed data are used in the statistical tests in paragraph (c) of this section and in appendix A of this part, the owner or operator shall provide the following:
 (A) Copy of the original measured values and the corresponding transformed data in printed and electronic format.
 (B) Printed copy of the test results and plots described in paragraphs (b)(1) (i) through (iii) of this section.
- § 75.41(b)(2) (2) *Time dependency (autocorrelation)*. The screening and adjustment for time dependency are conducted according to the following procedures:
- § 75.41(b)(2)(i) (i) Calculate the degree of autocorrelation of the data on their LAG1 values, where the degree of autocorrelation is represented by the Pearson autocorrelation coefficient, ρ , computed from an AR(1) autoregression model, such that:

$$r = \frac{COV(x'_i, x''_i)}{Sx'_i Sx''_i}$$

(Eq. 13)

where,

x'_i = The original data value at hour i .

x''_i = The LAG1 data value at hour i .

$COV(x'_i, x''_i)$ = The autocovariance of x'_i and defined by

$$COV(x_i, x_i) = \frac{\sum_{i=1}^n (x_i - \bar{x})(x_i - \bar{x})}{(n-1)}$$

(Eq. 14)

where,

n = The total number of observations in which both the original value, x_i , and the lagged value, x_i' , are available in the data set.

S_{x_i} = The standard deviation of the original data values, x_i , defined by

$$S_{x_i} = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n-1}}$$

(Eq. 15)

where,

$S_{x_i'}$ = The standard deviation of the LAG1 data values, x_i' , defined by

$$S_{x_i'} = \sqrt{\frac{\sum_{i=1}^n (x_i' - \bar{x}')^2}{n-1}}$$

(Eq. 16) where,

\bar{x}' = The mean of the original data values, x_i , defined by

$$\bar{x}' = \frac{\sum_{i=1}^n x_i}{n}$$

(Eq. 17)

where,

\bar{x}'' = The mean of the LAG1 data values, x_i' , defined by

$$\bar{x}'' = \frac{\sum_{i=1}^n x_i'}{n}$$

(Eq. 18)

where,

§ 75.41(b)(2)(ii)

(ii) The data in a data set will be considered autocorrelated if the autocorrelation coefficient, ρ , is significant at the 5 percent significance level. To determine if this condition is satisfied, calculate Z using the following equation:

$$Z = 0.5 \left[\ln \left(\frac{1+r}{1-r} \right) \right] \sqrt{n-3}$$

(Eq. 19)

If $Z > 1.96$, then the autocorrelation coefficient, ρ , is significant at the 5 percent significance level ($\alpha = 0.05$).

§ 75.41(b)(2)(iii)

(iii) If the data in a data set satisfy the conditions for autocorrelation, specified in paragraph (b)(2)(ii) of this section, the variance of the data, S^2 , may be adjusted using the following equation:

$$S^2_{ADJ} = VIF \times S^2$$

(Eq. 20)

where,

S^2 = The original, unadjusted variance of the data set.

VIF = The variance inflation factor, defined by

$$VIF = \frac{1}{\left[1 - \frac{2r}{(n-1)(1-r)} + \frac{2r(1-r^n)}{n(n-1)(1-r)^2} \right]}$$

(Eq. 21) S^2_{ADJ} = The autocorrelation-adjusted variance for the data set.

§ 75.41(b)(2)(iv)

(iv) The procedures described in paragraphs (b)(2)(i)-(iii) of this section may be separately applied to the following data sets in order to derive distinct autocorrelation coefficients and variance inflation factors for each data set:

(A) The set of measured hourly values, e_v , generated by the certified continuous emissions monitoring system or certified flow monitoring system.

(B) The set of hourly values, e_p , generated by the proposed alternative monitoring system,

(C) The set of hourly differences, $e_v - e_p$, between the hourly values, e_v , generated by the certified continuous emissions monitoring system or certified flow monitoring system and the hourly values, e_p , generated by the proposed alternative monitoring system.

§ 75.41(b)(2)(v)

(v) For any data set, listed in paragraph (b)(2)(iv) of this section, that satisfies the conditions for autocorrelation specified in paragraph (b)(2)(ii) of this section, the owner or operator may adjust the variance of that data set, using equation 20 of this section.

(A) The adjusted variance may be used in place of the corresponding original variance, as calculated using equation 23 of this section, in the F-test (Equation 24) of this section.

(B) In place of the standard error of the mean,

$$\frac{S_d}{\sqrt{n}}$$

in the bias test Equation A-9 of Appendix A of this part the following adjusted standard error of the mean may be used:

$$\left(\frac{S_d}{\sqrt{n}} \right)_{adj} = \left[\sqrt{\left(\frac{1+r}{1-r} \right) - \left(\frac{2r(1-r^n)}{n(1-r)^2} \right)} \right] \times \sqrt{VIF} \times \left(\frac{S_d}{\sqrt{n}} \right)$$

(Eq. 22)

where,

$$\left(\frac{S_d}{\sqrt{n}} \right)_{adj} = \text{The autocorrelation - adjusted standard error of the mean.}$$

§ 75.41(b)(2)(vi)

(vi) For each data set in which a variance adjustment is used, the owner or operator shall provide the following:

(A) All values in the data set in printed and electronic format.

(B) Values of the autocorrelation coefficient, its level of significance, the variance inflation factor, and the unadjusted original and adjusted values found in equations 20 and 22 of this

section.

(C) Equation and related statistics of the AR(1) autoregression model of the data set.

(D) Printed documentation of the intermediate calculations used to derive the autocorrelation coefficient and the Variance Inflation Factor.

§ 75.41(c)

(c) *Statistical Tests.* The owner or operator shall perform the F-test and correlation analysis as described in this paragraph and the t-test for bias described in appendix A of this part to demonstrate the precision of the alternative monitoring system.

§ 75.41(c)(1)

(1) *F-test.* The owner or operator shall conduct the F-test according to the following procedures.

(i) Calculate the variance of the certified continuous emission monitoring system or certified flow monitor as applicable, S_v^2 , and the proposed method, S_p^2 , using the following equation.

$$S^2 = \frac{\sum_{i=1}^n (e_i - e_m)^2}{n - 1}$$

(Eq. 23)

where,

e_i = Measured values of either the certified continuous emission monitoring system or certified flow monitor, as applicable, or proposed method.

e_m = Mean of either the certified continuous emission monitoring system or certified flow monitor, as applicable, or proposed method values.

n = Total number of paired samples.

(ii) Determine if the variance of the proposed method is significantly different from that of the certified continuous emission monitoring system or certified flow monitor, as applicable, by calculating the F-value using the following equation.

$$F = \frac{S_p^2}{S_v^2}$$

(Eq. 24)

Compare the experimental F-value with the critical value of F at the 95-percent confidence level with $n-1$ degrees of freedom. The critical value is obtained from a table for F-distribution. If the calculated F-value is greater than the critical value, the proposed method is unacceptable.

§ 75.41(c)(2)

(2) *Correlation analysis.* The owner or operator shall conduct the correlation analysis according to the following procedures.

§ 75.41(c)(2)(i)

(i) Plot each of the paired emissions readings as a separate point on a graph where the vertical axis represents the value (pollutant concentration or volumetric flow, as appropriate) generated by the alternative monitoring system and the horizontal axis represents the value (pollutant concentration or volumetric flow, as appropriate) generated by the continuous emission monitoring system (or reference method). On the graph, draw a horizontal line representing the mean value, e_p , for the alternative monitoring system and a vertical line representing the mean value, e_v , for the continuous emission monitoring system where,

$$e_p = \frac{\sum e_p}{n}$$

(Eq. 25)

$$e_v = \frac{\sum e_v}{n}$$

(Eq. 26)

where,

e_p = Hourly value generated by the alternative monitoring system.

e_v = Hourly value generated by the continuous emission monitoring system.
 n = Total number of hours for which data were generated for the tests.

A separate graph shall be produced for the data generated at each of the operating levels or fuel supplies described in paragraphs (a)(4) and (a)(5) of this section.

§ 75.41(c)(2)(ii)

(ii) Use the following equation to calculate the coefficient of correlation, r , between the emissions data from the alternative monitoring system and the continuous emission monitoring system using all hourly data for which paired values were available from both monitoring systems.

$$r = \frac{\sum e_p e_v - (\sum e_p)(\sum e_v)/n}{\left(\left[\sum e_p^2 - (\sum e_p)^2/n \right] \left[\sum e_v^2 - (\sum e_v)^2/n \right] \right)^{1/2}}$$

(Eq. 27)

§ 75.41(c)(2)(iii)

(iii) If the calculated r -value is less than 0.8, the proposed method is unacceptable.

§ 75.42

§ 75.42 Reliability criteria.

To demonstrate reliability equal to or better than the continuous emission monitoring system, the owner or operator shall demonstrate that the alternative monitoring system is capable of providing valid 1-hr averages for 95.0 percent or more of unit operating hours over a 1-yr period and that the system meets the applicable requirements of appendix B of this part.

§ 75.43

§ 75.43 Accessibility criteria.

To demonstrate accessibility equal to or better than the continuous emission monitoring system, the owner or operator shall provide reports and onsite records of emission data to demonstrate that the alternative monitoring system provides data meeting the requirements of subparts F and G of this part.

§ 75.44

§ 75.44 Timeliness criteria.

To demonstrate timeliness equal to or better than the continuous emission monitoring system, the owner or operator shall demonstrate that the alternative monitoring system can meet the requirements of subparts F and G of this part; can provide a continuous, quality-assured, permanent record of certified emissions data on an hourly basis; and can issue a record of data for the previous day within 24 hours.

§ 75.45

§ 75.45 Daily quality assurance criteria.

The owner or operator shall either demonstrate that daily tests equivalent to those specified in appendix B of this part can be performed on the alternative monitoring system or demonstrate and document that such tests are unnecessary for providing quality-assured data.

§ 75.46

§ 75.46 Missing data substitution criteria.

The owner or operator shall demonstrate that all missing data can be accounted for in a manner consistent with the applicable missing data procedures in subpart D of this part.

§ 75.47

§ 75.47 Criteria for a class of affected units.

§ 75.47(a)

(a) The owner or operator of an affected unit may represent a class of affected units for the purpose of applying to the Administrator for a class-approved alternative monitoring system.

§ 75.47(b)

(b) The owner or operator of an affected unit representing a class of affected units shall provide the following information:

- (1) A description of the affected unit and how it appropriately represents the class of affected units;
- (2) A description of the class of affected units, including data describing all the affected units

which will comprise the class; and

(3) A demonstration that the magnitude of emissions of all units which will comprise the class of affected units are *de minimis*.

§ 75.47(c)

(c) If the Administrator determines that the emissions from all affected units which will comprise the class of units are *de minimis*, then the Administrator shall publish notice in the Federal Register, providing a 30-day period for public comment, prior to granting a class-approved alternative monitoring system.

§ 75.48

§ 75.48 Petition for an alternative monitoring system.

§ 75.48(a)

(a) The designated representative shall submit the following information in the application for certification or recertification of an alternative monitoring system.

§ 75.48(a)(1)

(1) Source identification information.

§ 75.48(a)(2)

(2) A description of the alternative monitoring system.

§ 75.48(a)(3)

(3) Data, calculations, and results of the statistical tests, specified in § 75.41(c) of this part, including:

(i) Date and hour.

(ii) Hourly test data for the alternative monitoring system at each required operating level and fuel type. The fuel type, operating level and gross unit load shall be recorded.

(iii) Hourly test data for the continuous emissions monitoring system at each required operating level and fuel type. The fuel type, operating level and gross unit load shall be recorded.

(iv) Arithmetic mean of the alternative monitoring system measurement values, as specified in Equation 25 in § 75.41(c) of this part, of the continuous emission monitoring system values, as specified on Equation 26 in § 75.41(c) of this part, and of their differences.

(v) Standard deviation of the difference, as specified in equation A-8 in appendix A of this part.

(vi) Confidence coefficient, as specified in equation A-9 in appendix A of this part.

(vii) The bias test results as specified in § 7.6.4 in appendix A of this part.

(viii) Variance of the measured values for the alternative monitoring system and of the measured values for the continuous emission monitoring system, as specified in Equation 23 in § 75.41(c) of this part.

(ix) F-statistic, as specified in Equation 24 in § 75.41(c) of this part.

(x) Critical value of F at the 95-percent confidence level with n-1 degrees of freedom.

(xi) Coefficient of correlation, r, as specified in Equation 27 in § 75.41(c) of this part.

§ 75.48(a)(4)

(4) Data plots, specified in §§ 75.41(a)(9) and 75.41(c)(2)(i) of this part.

§ 75.48(a)(5)

(5) Results of monitor reliability analysis.

§ 75.48(a)(6)

(6) Results of monitor accessibility analysis.

§ 75.48(a)(7)

(7) Results of monitor timeliness analysis.

§ 75.48(a)(8)

(8) A detailed description of the process used to collect data, including location and method of ensuring an accurate assessment of operating hourly conditions on a real-time basis.

§ 75.48(a)(9)

(9) A detailed description of the operation, maintenance, and quality assurance procedures for the alternative monitoring system as required in appendix B of this part.

§ 75.48(a)(10)

(10) A description of methods used to calculate heat input or diluent gas concentration, if applicable.

§ 75.48(a)(11)

(11) Results of tests and measurements (including the results of all reference method field test sheets, charts, laboratory analyses, example calculations, or other data as appropriate) necessary to substantiate that the alternative monitoring system is equivalent in performance to an appropriate, certified operating continuous emission monitoring system.

§ 75.48(b)

(b) [Reserved]

Subpart F -- Recordkeeping Requirements

§ 75.50 - § 75.52

§ 75.50 - 75.52 [Reserved]

§ 75.53

§ 75.53 Monitoring plan.

§ 75.53(a)

(a) *General provisions.*

(1) The provisions of paragraphs (e) and (f) of this section shall remain in effect through December 31, 2008. The owner or operator shall meet the requirements of paragraphs (a), (b), (e), and (f) of this section through December 31, 2008, except as otherwise provided in paragraph (g) of this section. On and after January 1, 2009, the owner or operator shall meet the requirements of paragraphs (a), (b), (g), and (h) of this section only. In addition, the provisions in paragraphs (g) and (h) of this section that support a regulatory option provided in another section of this part must be followed if the regulatory option is used prior to January 1, 2009.

~~(1) The owner or operator shall meet the requirements of paragraphs (a), (b), (e), and (f) of this section.~~

(2) The owner or operator of an affected unit shall prepare and maintain a monitoring plan. Except as provided in paragraphs ~~(d) or~~ (f) or (h) of this section (as applicable), a monitoring plan shall contain sufficient information on the continuous emission or opacity monitoring systems, excepted methodology under § 75.19, or excepted monitoring systems under appendix D or E to 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.

§ 75.53(b)

(b) Whenever the owner or operator makes a replacement, modification, or change in the certified CEMS, continuous opacity monitoring system, excepted methodology under § 75.19, excepted monitoring system under appendix D or E to this part, or alternative monitoring system under subpart E of this part, including a change in the automated data acquisition and handling system or in the flue gas handling system, that affects information reported in the monitoring plan (e.g., a change to a serial number for a component of a monitoring system), then the owner or operator shall update the monitoring plan, by the applicable deadline specified in § 75.62 or elsewhere in this part.

§ 75.53(c)

(c) [Reserved]

§ 75.53(d)

(d) [Reserved]

§ 75.53(e)

(e) *Contents of the monitoring plan.* Each monitoring plan shall contain the information in paragraph (e)(1) of this section in electronic format and the information in paragraph (e)(2) of this section in hardcopy format. Electronic storage of all monitoring plan information, including the hardcopy portions, is permissible provided that a paper copy of the information can be furnished upon request for audit purposes.

§ 75.53(e)(1)

(1) *Electronic.*

§ 75.53(e)(1)(i)

(i) ORISPL numbers developed by the Department of Energy and used in the National Allowance Data Base (or equivalent facility ID number assigned by EPA, if the facility does not have an ORISPL number), for all affected units involved in the monitoring plan, with the following information for each unit:

(A) Short name;

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

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

(D) Type of fuel(s) fired by boiler, fuel type start and end dates, primary/secondary/emergency/startup fuel indicator, and, if more than one fuel, the fuel classification of the boiler;

(E) Type(s) of emission controls for SO₂, NO_x, Hg, and particulates installed or to be installed, including specifications of whether such controls are pre-combustion, post-combustion, or integral to the combustion process; control equipment code, installation date, and optimization

date; control equipment retirement date (if applicable); primary/secondary controls indicator; and an indicator for whether the controls are an original installation;

(F) Maximum hourly heat input capacity;

(G) Date of first commercial operation;

(H) Unit retirement date (if applicable);

(I) Maximum hourly gross load (in MW, rounded to the nearest MW, or steam load in 1000 lb/hr, rounded to the nearest 100 lb/hr);

(J) Identification of all units using a common stack;

(K) Activation date for the stack/pipe;

(L) Retirement date of the stack/pipe (if applicable); and

(M) Indicator of whether the stack is a bypass stack.

§ 75.53(e)(1)(ii)

(ii) For each unit and parameter required to be monitored, identification of monitoring methodology information, consisting of monitoring methodology, type of fuel associated with the methodology, primary/secondary methodology indicator, missing data approach for the methodology, methodology start date, and methodology end date (if applicable).

§ 75.53(e)(1)(iii)

(iii) The following information:

(A) Program(s) for which the EDR is submitted;

(B) Unit classification;

(C) Reporting frequency;

(D) Program participation date;

(E) State regulation code (if applicable); and

(F) State or local regulatory agency code.

§ 75.53(e)(1)(iv)

(iv) Identification and description of each monitoring component (including each monitor and its identifiable components, such as analyzer and/or probe) in the CEMS (e.g., SO₂ pollutant concentration monitor, flow monitor, moisture monitor; NO_x pollutant concentration monitor, Hg monitor, and diluent gas monitor), the sorbent trap monitoring system, the continuous opacity monitoring system, or the excepted monitoring system (e.g., fuel flowmeter, data acquisition and handling system), including:

(A) Manufacturer, model number and serial number;

(B) Component/system identification code assigned by the utility to each identifiable monitoring component (such as the analyzer and/or probe). Each code shall use a three-digit format, unique to each monitoring component and unique to each monitoring system;

(C) Designation of the component type and method of sample acquisition or operation, (e.g., in situ pollutant concentration monitor or thermal flow monitor);

(D) Designation of the system as a primary, redundant backup, non-redundant backup, data backup, or reference method backup system, as provided in § 75.10(e);

(E) First and last dates the system reported data;

(F) Status of the monitoring component; and

(G) Parameter monitored.

§ 75.53(e)(1)(v)

(v) Identification and description of all major hardware and software components of the automated data acquisition and handling system, including:

(A) Hardware components that perform emission calculations or store data for quarterly reporting purposes (provide the manufacturer and model number); and

(B) Software components (provide the identification of the provider and model/version number).

§ 75.53(e)(1)(vi)

(vi) Explicit formulas for each measured emission parameter, using component/system identification codes for the primary system used to measure the parameter that links CEMS or excepted monitoring system observations with reported concentrations, mass emissions, or emission rates, according to the conversions listed in appendix D or E to this part. Formulas for backup monitoring systems are required only if different formulas for the same parameter are used for the primary and backup monitoring systems (e.g., if the primary system measures pollutant concentration on a different moisture basis from the backup system). The formulas must contain all constants and factors required to derive mass emissions or emission rates from component/system code observations and an indication of whether the formula is being added, corrected, deleted, or is unchanged. Each emissions formula is identified with a unique three digit code. The owner or operator of a low mass emissions unit for which the owner or operator is using the optional low mass emissions excepted methodology in § 75.19(c) is not required to

report such formulas.

- § 75.53(e)(1)(vii) (vii) Inside cross-sectional area (ft²) at flue exit (for all units) and at flow monitoring location (for units with flow monitors, only).
- § 75.53(e)(1)(viii) (viii) Stack exit height (ft) above ground level and ground level elevation above sea level.
- § 75.53(e)(1)(ix) (ix) Monitoring location identification, facility identification code as assigned by the Administrator for use under the Acid Rain Program or this part, and the following information, as reported to the Energy Information Administration (EIA): facility identification number, flue identification number, boiler identification number, ARP/Subpart H facility ID number or ORISPL number (as applicable), reporting year, and 767 reporting indicator (or equivalent).
- § 75.53(e)(1)(x) (x) For each parameter monitored: Scale, maximum potential concentration (and method of calculation), maximum expected concentration (if applicable) (and method of calculation), maximum potential flow rate (and method of calculation), maximum potential NO_x emission rate, span value, full-scale range, daily calibration units of measure, span effective date/hour, span inactivation date/hour, indication of whether dual spans are required, default high range value, flow rate span, and flow rate span value and full scale value (in scfh) for each unit or stack using SO₂, NO_x, CO₂, Hg, O₂, or flow component monitors.
- § 75.53(e)(1)(xi) (xi) If the monitoring system or excepted methodology provides for the use of a constant, assumed, or default value for a parameter under specific circumstances, then include the following information for each such value for each parameter:
- (A) Identification of the parameter;
 - (B) Default, maximum, minimum, or constant value, and units of measure for the value;
 - (C) Purpose of the value;
 - (D) Indicator of use during controlled/uncontrolled hours;
 - (E) Type of fuel;
 - (F) Source of the value;
 - (G) Value effective date and hour;
 - (H) Date and hour value is no longer effective (if applicable); and
 - (I) For units using the excepted methodology under § 75.19, the applicable SO₂ emission factor.
- § 75.53(e)(1)(xii) (xii) Unless otherwise specified in section 6.5.2.1 of appendix A to this part, for each unit or common stack on which hardware CEMS are installed:
- (A) The upper and lower boundaries of the range of operation (as defined in section 6.5.2.1 of appendix A to this part), expressed in megawatts, or thousands of lb/hr of steam, or ft/sec (as applicable);
 - (B) The load (or operating) level(s) designated as normal in section 6.5.2.1 of appendix A to this part, expressed in megawatts, or thousands of lb/hr of steam, or ft/sec (as applicable);
 - (C) The two load (or operating) levels (i.e., low, mid, or high) identified in section 6.5.2.1 of appendix A to this part as the most frequently used;
 - (D) The date of the data analysis used to determine the normal load (or operating) level(s) and the two most frequently-used load (or operating) levels; and
 - (E) Activation and deactivation dates, when the normal load (or operating) level(s) or two most frequently-used load (or operating) levels change and are updated.
- § 75.53(e)(1)(xiii) (xiii) For each unit for which the optional fuel flow-to-load test in section 2.1.7 of appendix D to this part is used:
- (A) The upper and lower boundaries of the range of operation (as defined in section 6.5.2.1 of appendix A to this part), expressed in megawatts or thousands of lb/hr of steam;
 - (B) The load level designated as normal, pursuant to section 6.5.2.1 of appendix A to this part, expressed in megawatts or thousands of lb/hr of steam; and
 - (C) The date of the load analysis used to determine the normal load level.
- § 75.53(e)(1)(xiv) (xiv) For each unit with a flow monitor installed on a rectangular stack or duct, if a wall effects adjustment factor (WAF) is determined and applied to the hourly flow rate data:
- (A) Stack or duct width at the test location, ft;
 - (B) Stack or duct depth at the test location, ft;
 - (C) Wall effects adjustment factor (WAF), to the nearest 0.0001;
 - (D) Method of determining the WAF;

- (E) WAF Effective date and hour;
- (F) WAF no longer effective date and hour (if applicable);
- (G) WAF determination date;
- (H) Number of WAF test runs;
- (I) Number of Method 1 traverse points in the WAF test;
- (J) Number of test ports in the WAF test; and
- (K) Number of Method 1 traverse points in the reference flow RATA.

- § 75.53(e)(2) (2) *Hardcopy.*
- § 75.53(e)(2)(i) (i) Information, including (as applicable): identification of the test strategy; protocol for the relative accuracy test audit; other relevant test information; calibration gas levels (percent of span) for the calibration error test and linearity check; calculations for determining maximum potential concentration, maximum expected concentration (if applicable), maximum potential flow rate, maximum potential NO_x emission rate, and span; and apportionment strategies under §§ 75.10 through 75.18.
- § 75.53(e)(2)(ii) (ii) 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 (e)(2)(iv) and (e)(2)(v) of this section and any other documentation that demonstrates each monitor location meets the appropriate siting criteria.
- § 75.53(e)(2)(iii) (iii) A data flow diagram denoting the complete information handling path from output signals of CEMS components to final reports.
- § 75.53(e)(2)(iv) (iv) 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 (e)(1)(i), (e)(1)(iv), (e)(1)(vi), and (e)(1)(ix) 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.
- § 75.53(e)(2)(v) (v) 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 that affects the monitoring system location, performance, or quality control checks.
- § 75.53(f) (f) *Contents of monitoring plan for specific situations.* The following additional information shall be included in the monitoring plan for the specific situations described:
- § 75.53(f)(1) (1) For each gas-fired unit or oil-fired unit for which the owner or operator uses the optional protocol in appendix D to this part for estimating heat input and/or SO₂ mass emissions, or for each gas-fired or oil-fired peaking unit for which the owner/operator uses the optional protocol in appendix E to this part for estimating NO_x emission rate (using a fuel flowmeter), the designated representative shall include the following additional information in the monitoring plan:
- § 75.53(f)(1)(i) (i) *Electronic.*
- (A) Parameter monitored;
 - (B) Type of fuel measured, maximum fuel flow rate, units of measure, and basis of maximum fuel flow rate (i.e., upper range value or unit maximum) for each fuel flowmeter;
 - (C) Test method used to check the accuracy of each fuel flowmeter;
 - (D) Submission status of the data;
 - (E) Monitoring system identification code; and
 - (F) The method used to demonstrate that the unit qualifies for monthly GCV sampling or for daily or annual fuel sampling for sulfur content, as applicable.
- § 75.53(f)(1)(ii) (ii) *Hardcopy.*
- (A) A schematic diagram identifying the relationship between the unit, all fuel supply lines, the fuel flowmeter(s), and the stack(s). The schematic diagram must depict the installation location of each fuel flowmeter and the fuel sampling location(s). Comprehensive and/or separate schematic diagrams shall be used to describe groups of units using a common pipe;

- (B) For units using the optional default SO₂ emission rate for "pipeline natural gas" or "natural gas" in appendix D to this part, the information on the sulfur content of the gaseous fuel used to demonstrate compliance with either section 2.3.1.4 or 2.3.2.4 of appendix D to this part;
- (C) For units using the 720 hour test under 2.3.6 of Appendix D of this part to determine the required sulfur sampling requirements, report the procedures and results of the test; and
- (D) For units using the 720 hour test under 2.3.5 of Appendix D of this part to determine the appropriate fuel GCV sampling frequency, report the procedures used and the results of the test;

- § 75.53(f)(2) (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 to this part for estimating NO_x emission rate, the designated representative shall include in the monitoring plan:
- § 75.53(f)(2)(i) (i) *Electronic*. Unit operating and capacity factor information demonstrating that the unit qualifies as a peaking unit or gas-fired unit, as defined in § 72.2 of this chapter, and NO_x correlation test information, including:
- (A) Test date;
 - (B) Test number;
 - (C) Operating level;
 - (D) Segment ID of the NO_x correlation curve;
 - (E) NO_x monitoring system identification;
 - (F) Low and high heat input rate values and corresponding NO_x emission rates;
 - (G) Type of fuel; and
 - (H) To document the unit qualifies as a peaking unit, current calendar year or ozone season, capacity factor data as specified in the definition of peaking unit in § 72.2 of this chapter, and an indication of whether the data are actual or projected data.
- § 75.53(f)(2)(ii) (ii) *Hardcopy*.
- (A) A protocol containing methods used to perform the baseline or periodic NO_x emission test; and
 - (B) Unit operating parameters related to NO_x formation by the unit.
- § 75.53(f)(3) (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 hardcopy monitoring plan the information specified under § 75.14(b), (c), or (d), demonstrating that the unit qualifies for the exemption.
- § 75.53(f)(4) (4) For each monitoring system recertification, maintenance, or other event, the designated representative shall include the following additional information in electronic format in the monitoring plan:
- (i) Component/system identification code;
 - (ii) Event code or code for required test;
 - (iii) Event begin date and hour;
 - (iv) Conditionally valid data period begin date and hour (if applicable);
 - (v) Date and hour that last test is successfully completed; and
 - (vi) Indicator of whether conditionally valid data were reported at the end of the quarter.
- § 75.53(f)(5) (5) For each unit using the low mass emissions excepted methodology under § 75.19 the designated representative shall include the following additional information in the monitoring plan that accompanies the initial certification application:
- § 75.53(f)(5)(i) (i) *Electronic*. For each low mass emissions unit, report the results of the analysis performed to qualify as a low mass emissions unit under § 75.19(c). This report will include either the previous three years actual or projected emissions. The following items should be included:
- (A) Current calendar year of application;
 - (B) Type of qualification;
 - (C) Years one, two, and three;
 - (D) Annual or ozone season measured, estimated or projected NO_x mass emissions for years one, two, and three;
 - (E) Annual measured, estimated or projected SO₂ mass emissions for years one, two, and three; and
 - (F) Annual or ozone season operating hours for years one, two, and three.

§ 75.53(f)(5)(ii)

(ii) *Hardcopy.*

(A) A schematic diagram identifying the relationship between the unit, all fuel supply lines and tanks, any fuel flowmeter(s), and the stack(s). Comprehensive and/or separate schematic diagrams shall be used to describe groups of units using a common pipe;

(B) For units which use the long term fuel flow methodology under § 75.19(c)(3), the designated representative must provide a diagram of the fuel flow to each affected unit or group of units and describe in detail the procedures used to determine the long term fuel flow for a unit or group of units for each fuel combusted by the unit or group of units;

(C) A statement that the unit burns only gaseous fuel(s) and/or fuel oil and a list of the fuels that are burned or a statement that the unit is projected to burn only gaseous fuel(s) and/or fuel oil and a list of the fuels that are projected to be burned;

(D) A statement that the unit meets the applicability requirements in §§ 75.19(a) and (b); and

(E) Any unit historical actual, estimated and projected emissions data and calculated emissions data demonstrating that the affected unit qualifies as a low mass emissions unit under §§ 75.19(a) and 75.19(b).

§ 75.53(f)(6)

(6) For each gas-fired unit the designated representative shall include in the monitoring plan, in electronic format, the following: current calendar year, fuel usage data as specified in the definition of gas-fired in § 72.2 of this part, and an indication of whether the data are actual or projected data.

75.53(g)

(g) Contents of the monitoring plan. The requirements of paragraphs (g) and (h) of this section shall be met on and after January 1, 2009. Notwithstanding this requirement, the provisions of paragraphs (g) and (h) of this section may be implemented prior to January 1, 2009, as follows. In 2008, the owner or operator may opt to record and report the monitoring plan information in paragraphs (g) and (h) of this section, in lieu of recording and reporting the information in paragraphs (e) and (f) of this section. Each monitoring plan shall contain the information in paragraph (g)(1) of this section in electronic format and the information in paragraph (g)(2) of this section in hardcopy format. Electronic storage of all monitoring plan information, including the hardcopy portions, is permissible provided that a paper copy of the information can be furnished upon request for audit purposes.

§ 75.53(g)(1)

(1) Electronic.

§ 75.53(g)(1)(i)

(i) The facility ORISPL number developed by the Department of Energy and used in the National Allowance Data Base (or equivalent facility ID number assigned by EPA, if the facility does not have an ORISPL number). Also provide the following information for each unit and (as applicable) for each common stack and/or pipe, and each multiple stack and/or pipe involved in the monitoring plan:

(A) A representation of the exhaust configuration for the units in the monitoring plan. Provide the ID number of each unit and assign a unique ID number to each common stack, common pipe multiple stack and/or multiple pipe associated with the unit(s) represented in the monitoring plan. For common and multiple stacks and/or pipes, provide the activation date and deactivation date (if applicable) of each stack and/or pipe.

(B) Identification of the monitoring system location(s) (e.g., at the unit-level, on the common stack, at each multiple stack, etc.). Provide an indicator ("flag") if the monitoring location is at a bypass stack or in the ductwork (breeching);

(C) The stack exit height (ft) above ground level and ground level elevation above sea level, and the inside cross-sectional area (ft²) at the flue exit and at the flow monitoring location (for units with flow monitors, only). Also use appropriate codes to indicate the material(s) of construction and the shape(s) of the stack or duct cross-section(s) at the flue exit and (if applicable) at the flow monitor location.

- (D) The type(s) of fuel(s) fired by each unit. Indicate the start and (if applicable) end date of combustion for each type of fuel, and whether the fuel is the primary, secondary, emergency, or startup fuel ;

- (E) The type(s) of emission controls that are used to reduce SO₂, NO_x, Hg, and particulate emissions from each unit. Also provide the installation date, optimization date, and retirement date (if applicable) of the emission controls, and indicate whether the controls are an original

installation;

(F) Maximum hourly heat input capacity of each unit; and

(G) A non-load based unit indicator (if applicable) for units that do not produce electrical or thermal output.

§ 75.53(g)(1)(ii)

(ii) For each monitored parameter (e.g., SO₂, NO_x, flow, etc.) at each monitoring location, specify the monitoring methodology and the missing data approach for the parameter. If the unmonitored bypass stack approach is used for a particular parameter, indicate this by means of an appropriate code. Provide the activation date/hour, and deactivation date/hour (if applicable) for each monitoring methodology and each missing data approach.

§ 75.53(g)(1)(iii)

(iii) For each required continuous emission monitoring system, each fuel flowmeter system, each continuous opacity monitoring system, and each sorbent trap monitoring system (as defined in § 72.2 of this chapter), identify and describe the major monitoring components in the monitoring system (e.g., gas analyzer, flow monitor, opacity monitor, moisture sensor, fuel flowmeter, DAHS software, etc.). Other important components in the system (e.g., sample probe, PLC, data logger, etc.) may also be represented in the monitoring plan, if necessary. Provide the following specific information about each component and monitoring system:

(A) For each required monitoring system:

(1) Assign a unique, 3-character alphanumeric identification code to the system;

(2) Indicate the parameter monitored by the system;

(3) Designate the system as a primary, redundant backup, non-redundant backup, data backup, or reference method backup system, as provided in § 75.10(e); and

(4) Indicate the system activation date/hour and deactivation date/hour (as applicable).

(B) For each component of each monitoring system represented in the monitoring plan:

(1) Assign a unique, 3-character alphanumeric identification code to the component;

(2) Indicate the manufacturer, model and serial number;

(3) Designate the component type;

(4) For dual-span applications, indicate whether the analyzer component ID represents a high measurement scale, a low scale, or a dual range;

(5) For gas analyzers, indicate the moisture basis of measurement;

(6) Indicate the method of sample acquisition or operation, (e.g., extractive pollutant concentration monitor or thermal flow monitor); and

(7) Indicate the component activation date/hour and deactivation date/hour (as applicable).

§ 75.53(g)(1)(iv)

(iv) Explicit formulas, using the component and system identification codes for the primary monitoring system, and containing all constants and factors required to derive the required mass emissions, emission rates, heat input rates, etc. from the hourly data recorded by the monitoring systems. Formulas using the system and component ID codes for backup monitoring systems are required only if different formulas for the same parameter are used for the primary and backup monitoring systems (e.g., if the primary system measures pollutant concentration on a different moisture basis from the backup system). Provide the equation number or other appropriate code for each emissions formula (e.g., use code F-1 if Equation F-1 in appendix F to this part is used to calculate SO₂ mass emissions). Also identify each emissions formula with a unique three character alphanumeric code. The formula effective start date/hour and inactivation date/hour (as

applicable) shall be included for each formula. The owner or operator of a unit for which the optional low mass emissions excepted methodology in § 75.19 is being used is not required to report such formulas.

§ 75.53(g)(1)(v)

(v) For each parameter monitored with CEMS, provide the following information:

- (A) Measurement scale (high or low);
- (B) Maximum potential value (and method of calculation). If NO_x emission rate in lb/mmBtu is monitored, calculate and provide the maximum potential NO_x emission rate in addition to the maximum potential NO_x concentration;
- (C) Maximum expected value (if applicable) and method of calculation;
- (D) Span value(s) and full-scale measurement range(s);
- (E) Daily calibration units of measure;
- (F) Effective date/hour, and (if applicable) inactivation date/hour of each span value;
- (G) An indication of whether dual spans are required; and
- (H) The default high range value (if applicable) and the maximum allowable low-range value for this option;

§ 75.53(g)(1)(vi)

(vi) If the monitoring system or excepted methodology provides for the use of a constant, assumed, or default value for a parameter under specific circumstances, then include the following information for each such value for each parameter:

- (A) Identification of the parameter;
- (B) Default, maximum, minimum, or constant value, and units of measure for the value;
- (C) Purpose of the value;
- (D) Indicator of use, i.e., during controlled hours, uncontrolled hours, or all operating hours;
- (E) Type of fuel;
- (F) Source of the value;
- (G) Value effective date and hour;
- (H) Date and hour value is no longer effective (if applicable); and
- (I) For units using the excepted methodology under § 75.19, the applicable SO₂ emission factor.

§ 75.53(g)(1)(vii)

(vii) Unless otherwise specified in section 6.5.2.1 of appendix A to this part, for each unit or common stack on which hardware CEMS are installed:

- (A) Maximum hourly gross load (in MW, rounded to the nearest MW, or steam load in 1000 lb/hr (i.e., klb/hr), rounded to the nearest klb/hr, or thermal output in mmBtu/hr, rounded to the nearest mmBtu/hr), for units that produce electrical or thermal output;
- (B) The upper and lower boundaries of the range of operation (as defined in section 6.5.2.1 of appendix A to this part), expressed in megawatts, thousands of lb/hr of steam, mmBtu/hr of thermal output, or ft/sec (as applicable);
- (C) Except for peaking units, identify the most frequently and second most frequently used load (or operating) levels (i.e., low, mid, or high) in accordance with section 6.5.2.1 of appendix A to this part, expressed in megawatts, thousands of lb/hr of steam, mmBtu/hr of thermal output, or ft/sec (as applicable);
- (D) Except for peaking units, an indicator of whether the second most frequently used load (or operating) level is designated as normal in section 6.5.2.1 of appendix A to this part;
- (E) The date of the data analysis used to determine the normal load (or operating) level(s) and the two most frequently-used load (or operating) levels (as applicable); and
- (F) Activation and deactivation dates and hours, when the maximum hourly gross load, boundaries of the range of operation, normal load (or operating) level(s) or two most frequently-used load (or operating) levels change and are updated.

§ 75.53(g)(1)(viii)

(viii) For each unit for which CEMS are not installed:

- (A) Maximum hourly gross load (in MW, rounded to the nearest MW, or steam load in klb/hr, rounded to the nearest klb/hr, or steam load in mmBtu/hr, rounded to the nearest mmBtu/hr);
- (B) The upper and lower boundaries of the range of operation (as defined in section 6.5.2.1 of appendix A to this part), expressed in megawatts, mmBtu/hr of thermal output, or thousands of lb/hr of steam;

(C) Except for peaking units and units using the low mass emissions excepted methodology under § 75.19, identify the load level designated as normal, pursuant to section 6.5.2.1 of appendix A to this part, expressed in megawatts, mmBtu/hr of thermal output, or thousands of lb/hr of steam;

(D) The date of the load analysis used to determine the normal load level (as applicable); and

(E) Activation and deactivation dates and hours, when the maximum hourly gross load, boundaries of the range of operation, or normal load level change and are updated.

§ 75.53(g)(1)(ix)

(ix) For each unit with a flow monitor installed on a rectangular stack or duct, if a wall effects adjustment factor (WAF) is determined and applied to the hourly flow rate data:

(A) Stack or duct width at the test location, ft;

(B) Stack or duct depth at the test location, ft;

(C) Wall effects adjustment factor (WAF), to the nearest 0.0001;

(D) Method of determining the WAF;

(E) WAF Effective date and hour;

(F) WAF no longer effective date and hour (if applicable);

(G) WAF determination date;

(H) Number of WAF test runs;

(I) Number of Method 1 traverse points in the WAF test;

(J) Number of test ports in the WAF test; and

(K) Number of Method 1 traverse points in the reference flow RATA.

§ 75.53(g)(2)

(2) *Hardcopy.*

§ 75.53(g)(2)(i)

(i) Information, including (as applicable): identification of the test strategy; protocol for the relative accuracy test audit; other relevant test information; calibration gas levels (percent of span) for the calibration error test and linearity check; calculations for determining maximum potential concentration, maximum expected concentration (if applicable), maximum potential flow rate, maximum potential NO_x emission rate, and span; and apportionment strategies under §§ 75.10 through 75.18.

§ 75.53(g)(2)(ii)

(ii) 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 (e)(2)(iv) and (e)(2)(v) of this section and any other documentation that demonstrates each monitor location meets the appropriate siting criteria.

§ 75.53(g)(2)(iii)

(iii) A data flow diagram denoting the complete information handling path from output signals of CEMS components to final reports.

§ 75.53(g)(2)(iv)

(iv) 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, monitoring systems and components, and stacks corresponding to the identification numbers provided in paragraphs (g)(1)(i) and (g)(1)(iii) 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.

§ 75.53(g)(2)(v)

(v) 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 that affects the monitoring system location, performance, or quality control checks.

§ 75.53(h)

(h) *Contents of monitoring plan for specific situations.* The following additional information shall be included in the monitoring plan for the specific situations described:

§ 75.53(h)(1)

(1) For each gas-fired unit or oil-fired unit for which the owner or operator uses the optional protocol in appendix D to this part for estimating heat input and/or SO₂ mass emissions, or for each gas-fired or oil-fired peaking unit for which the owner/operator uses the optional protocol in

appendix E to this part for estimating NO_x emission rate (using a fuel flowmeter), the designated representative shall include the following additional information for each fuel flowmeter system in the monitoring plan:

§ 75.53(h)(1)(i)

(i) *Electronic.*

(A) Parameter monitored;

(B) Type of fuel measured, maximum fuel flow rate, units of measure, and basis of maximum fuel flow rate (i.e., upper range value or unit maximum) for each fuel flowmeter;

(C) Test method used to check the accuracy of each fuel flowmeter;

(D) Monitoring system identification code;

(E) The method used to demonstrate that the unit qualifies for monthly GCV sampling or for daily or annual fuel sampling for sulfur content, as applicable; and

(F) Activation date/hour and (if applicable) inactivation date/hour for the fuel flowmeter system ;

§ 75.53(h)(1)(ii)

(ii) *Hardcopy.*

(A) A schematic diagram identifying the relationship between the unit, all fuel supply lines, the fuel flowmeter(s), and the stack(s). The schematic diagram must depict the installation location of each fuel flowmeter and the fuel sampling location(s). Comprehensive and/or separate schematic diagrams shall be used to describe groups of units using a common pipe;

(B) For units using the optional default SO₂ emission rate for "pipeline natural gas" or "natural gas" in appendix D to this part, the information on the sulfur content of the gaseous fuel used to demonstrate compliance with either section 2.3.1.4 or 2.3.2.4 of appendix D to this part;

(C) For units using the 720 hour test under 2.3.6 of Appendix D of this part to determine the required sulfur sampling requirements, report the procedures and results of the test; and

(D) For units using the 720 hour test under 2.3.5 of Appendix D of this part to determine the appropriate fuel GCV sampling frequency, report the procedures used and the results of the test.

§ 75.53(h)(2)

(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 to this part for estimating NO_x emission rate, the designated representative shall include in the monitoring plan:

§ 75.53(h)(2)(i)

(i) *Electronic.* Unit operating and capacity factor information demonstrating that the unit qualifies as a peaking unit, as defined in § 72.2 of this chapter for the current calendar year or ozone season, including: capacity factor data for three calendar years (or ozone seasons) as specified in the definition of peaking unit in § 72.2 of this chapter; the method of qualification used; and an indication of whether the data are actual or projected data.

§ 75.53(h)(2)(ii)

(ii) *Hardcopy.*

(A) A protocol containing methods used to perform the baseline or periodic NO_x emission test; and

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

§ 75.53(h)(3)

(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 hardcopy monitoring plan the information specified under § 75.14(b), (c), or (d), demonstrating that the unit qualifies for the exemption.

§ 75.53(h)(4)

(4) For each unit using the low mass emissions excepted methodology under § 75.19 the designated representative shall include the following additional information in the monitoring plan that accompanies the initial certification application:

§ 75.53(h)(4)(i)

(i) *Electronic.* For each low mass emissions unit, report the results of the analysis performed to qualify as a low mass emissions unit under § 75.19(c). This report will include either the previous three years actual or projected emissions. The following items should be included:

(A) Current calendar year of application;

(B) Type of qualification;

- (C) Years one, two, and three;
- (D) Annual and/or ozone season measured, estimated or projected NO_x mass emissions for years one, two, and three;
- (E) Annual measured, estimated or projected SO₂ mass emissions (if applicable) for years one, two, and three; and
- (F) Annual or ozone season operating hours for years one, two, and three.

§ 75.53(h)(4)(ii)

- (ii) *Hardcopy.*
- (A) A schematic diagram identifying the relationship between the unit, all fuel supply lines and tanks, any fuel flowmeter(s), and the stack(s). Comprehensive and/or separate schematic diagrams shall be used to describe groups of units using a common pipe;
- (B) For units which use the long term fuel flow methodology under § 75.19(c)(3), the designated representative must provide a diagram of the fuel flow to each affected unit or group of units and describe in detail the procedures used to determine the long term fuel flow for a unit or group of units for each fuel combusted by the unit or group of units;
- (C) A statement that the unit burns only gaseous fuel(s) and/or fuel oil and a list of the fuels that are burned or a statement that the unit is projected to burn only gaseous fuel(s) and/or fuel oil and a list of the fuels that are projected to be burned;
- (D) A statement that the unit meets the applicability requirements in §§ 75.19(a) and (b); and
- (E) Any unit historical actual, estimated and projected emissions data and calculated emissions data demonstrating that the affected unit qualifies as a low mass emissions unit under §§ 75.19(a) and 75.19(b).

§ 75.53(h)(5)

(5) For qualification as a gas-fired unit, as defined in § 72.2 of this part, the designated representative shall include in the monitoring plan, in electronic format, the following: current calendar year, fuel usage data for three calendar years (or ozone seasons) as specified in the definition of gas-fired in § 72.2 of this part, the method of qualification used, and an indication of whether the data are actual or projected data.

§ 75.53(h)(6)

(6) For each monitoring location with a stack flow monitor that is exempt from performing 3-load flow RATAs (peaking units, bypass stacks, or by petition) the designated representative shall include in the monitoring plan an indicator of exemption from 3-load flow RATA using the appropriate exemption code.

§ 75.54

§ 75.54 [Reserved]

§ 75.55

§ 75.55 [Reserved]

§ 75.56

§ 75.56 [Reserved]

§ 75.57

§ 75.57 General recordkeeping provisions.

The owner or operator shall meet all of the applicable recordkeeping requirements of this section.

§ 75.57(a)

(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 nonaffected units utilizing a common stack and common monitoring systems, 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:

§ 75.57(a)(1)

(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);

§ 75.57(a)(2)

(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);

- § 75.57(a)(3) (3) The data and information required in § 75.58 for specific situations, beginning with the earlier of the date of provisional certification or the deadline in § 75.4(a), (b), or (c);
- § 75.57(a)(4) (4) The certification test data and information required in § 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 § 75.59 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;
- § 75.57(a)(5) (5) The current monitoring plan as specified in § 75.53, beginning with the initial submission required by § 75.62; and
- § 75.57(a)(6) (6) The quality control plan as described in section 1 of appendix B to this part, beginning with the date of provisional certification.
- § 75.57(b) (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:
- § 75.57(b)(1) (1) Date and hour;
- § 75.57(b)(2) (2) Unit operating time (rounded up to the nearest fraction of an hour (in equal increments that can range from one hundredth to one quarter of an hour, at the option of the owner or operator));
- § 75.57(b)(3) (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, or steam load in mmBtu/hr of thermal output, rounded to the nearest mmBtu/hr, if elected in the monitoring plan);
- § 75.57(b)(4) (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;
- § 75.57(b)(5) (5) Hourly heat input rate (mmBtu/hr, rounded to the nearest tenth);
- § 75.57(b)(6) (6) Identification code for formula used for heat input, as provided in § 75.53; and
- § 75.57(b)(7) (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.
- § 75.57(c) (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:
- § 75.57(c)(1) (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 percent), 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.

§ 75.57(c)(2)

(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.

§ 75.57(c)(3)

(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.

§ 75.57(c)(4)

(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 | Initial missing data procedures used. Either: (a) the average of the hourly SO ₂ concentration, CO ₂ concentration, O ₂ concentration, or moisture percentage for the hour before and the hour following a missing data period; or (b) the arithmetic average of all NO _x concentration, NO _x emission rate, or flow rate values at the corresponding load range (or a higher load range), or at the corresponding operational bin (non-load-based units, only); or (c) the arithmetic average of all previous NO _x concentration, NO _x emission rate, or flow rate values (non-load-based units, only). |
| 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 in the applicable lookback period (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 in the applicable lookback period (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. For non-load-based units, report either the average flow rate, NO _x concentration or NO _x emission rate in the applicable lookback period, or the average flow rate or NO _x value at the corresponding operational bin (if operational bins are used). |
| 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 § 72.2 of this chapter and 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 | <u>Maximum expected concentration of SO₂, maximum expected concentration of NO_x, maximum expected Hg concentration, or maximum controlled NO_x emission rate. (See §75.34(a)(5)).</u> Reserved |
| 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 | <u>1.25 times the maximum hourly controlled SO₂ concentration, Hg concentration, NO_x concentration at the corresponding load or operational bin, or NO_x emission rate at the corresponding load or operational bin, in the applicable lookback period (See §75.34(a)(5)).</u> Reserved |
| 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 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). |
| 21 | Negative hourly SO ₂ concentration, NO _x concentration, percent moisture, or NO _x emission rate replaced with zero. |
| 22 | Hourly average SO ₂ or NO _x concentration, measured by a certified monitor at the control device inlet (units with add-on emission controls only). |
| 23 | Maximum potential SO ₂ concentration, NO _x concentration, CO ₂ concentration, NO _x emission rate or flow rate, or minimum potential O ₂ concentration or moisture percentage, for an hour in which flue gases are discharged through an unmonitored bypass stack. |
| <u>24</u> | <u>Maximum expected NO_x concentration, or maximum controlled NO_x emission rate for an hour in which flue gases are discharged downstream of the NO_x emission controls through an unmonitored bypass stack, and the add-on NO_x emission controls are confirmed to be operating properly.</u> |
| 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.) |
| <u>26</u> | <u>1.0 mmBtu/hr substituted for Heat Input Rate for an operating hour in which the calculated Heat Input Rate is zero or negative.</u> |
| <u>32</u> | <u>Hourly Hg concentration determined from analysis of a single trap multiplied by a factor of 1.222 when one of the paired traps is invalidated or damaged (See Appendix K §8).</u> |
| <u>33</u> | <u>Hourly Hg concentration determined from the trap resulting in the higher Hg concentration when the relative deviation between the paired traps is greater than 10 percent (See Appendix K §8).</u> |
| 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. |

§ 75.57(d)

(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:

§ 75.57(d)(1)

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

§ 75.57(d)(2)

(2) Date and hour;

§ 75.57(d)(3)

(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);

§ 75.57(d)(4)

(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);

§ 75.57(d)(5)

(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);

§ 75.57(d)(6)

(6) Hourly average NO_x emission rate (for NO_x-diluent monitoring systems only, in units of

lb/mmBtu, rounded to the nearest thousandth);

- § 75.57(d)(7) (7) Hourly average NO_x emission rate (for NO_x-diluent monitoring systems only, in units of lb/mmBtu, rounded to the nearest thousandth), 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;
- § 75.57(d)(8) (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;
- § 75.57(d)(9) (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
- § 75.57(d)(10) (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.
- § 75.57(e) (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:
- § 75.57(e)(1) (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 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.
- § 75.57(e)(2) (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 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 the sum of combustion-

formed emissions and sorbent-related emissions.

§ 75.57(f)

(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.

§ 75.57(g)

(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:

- (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.

§ 75.57(h)

(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.

§ 75.57(i)

(i) *Hg emission record provisions (CEMS).* The owner or operator shall record for each hour the information required by this paragraph for each affected unit using Hg CEMS in combination with flow rate, and (in certain cases) moisture, and diluent gas monitors, to determine Hg mass emissions and (if applicable) unit heat input under a State or Federal Hg mass emissions reduction program that adopts the requirements of subpart I of this part.

§ 75.57(i)(1)

(1) For Hg 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 Hg concentration (µg/scm, rounded to the nearest tenth). For a particular pair of sorbent traps, this will be the flow-proportional average concentration for the data collection period;
- (iv) The bias-adjusted hourly average Hg concentration (µg/scm, rounded to the nearest hundredth) if a bias adjustment factor is required, as provided in § 75.24(d);
- (v) Method of determination for hourly Hg concentration using Codes 1–55 in Table 4a of this section; and
- (vi) The percent monitor data availability (to the nearest tenth of a percent), calculated pursuant to § 75.32.

§ 75.57(i)(2)

(2) For flue gas moisture content during unit operation (if required), as measured and reported from each certified primary monitor, certified back-up monitor, or other approved method of emissions determination (except where a default moisture value is used in accordance with § 75.11(b), § 75.12(b), or approved under § 75.66):

- (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.

§ 75.57(i)(3)

(3) For diluent gas (O₂ or CO₂) concentration during unit operation (if required), 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 diluent gas (O₂ or CO₂) concentration (in percent, rounded to the nearest tenth);

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

(v) The percent monitor data availability (to the nearest tenth of a percent) for the O₂ or CO₂ monitoring system (if a separate O₂ or CO₂ monitoring system is used for heat input determination), calculated pursuant to § 75.32.

§ 75.57(i)(4)

(4) For stack gas volumetric 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, record the information required under paragraphs (c)(2)(i) through (c)(2)(vi) of this section.

§ 75.57(i)(5)

(5) For Hg mass emissions during unit operation, as measured and reported from the certified primary monitoring system(s), certified redundant or nonredundant back-up monitoring system(s), or other approved method(s) of emissions determination:

(i) Date and hour;

(ii) Hourly Hg mass emissions (ounces, rounded to three decimal places);

(iii) Hourly Hg mass emissions (ounces, rounded to three decimal places), adjusted for bias if a bias adjustment factor is required, as provided in § 75.24(d); and

(iv) Identification code for emissions formula used to derive hourly Hg mass emissions from Hg concentration, flow rate and moisture data, as provided in § 75.53.

§ 75.57(j)

(j) *Hg emission record provisions (sorbent trap systems)*. The owner or operator shall record for each hour the information required by this paragraph, for each affected unit using sorbent trap monitoring systems in combination with flow rate, moisture, and (in certain cases) diluent gas monitors, to determine Hg mass emissions and (if required) unit heat input under a State or Federal Hg mass emissions reduction program that adopts the requirements of subpart I of this part.

§ 75.57(j)(1)

(1) For Hg 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 Hg concentration (µg/dscm, rounded to the nearest tenth). For a particular pair of sorbent traps, this will be the flow-proportional average concentration for the data collection period;

(iv) The bias-adjusted hourly average Hg concentration (µg/dscm, rounded to the nearest tenth) if a bias adjustment factor is required, as provided in § 75.24(d);

(v) Method of determination for hourly average Hg concentration using Codes 1–55 in Table 4a of this section; and

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

§ 75.57(j)(2)

(2) For flue gas moisture content during unit operation, as measured and reported from each certified primary monitor, certified back-up monitor, or other approved method of emissions determination (except where a default moisture value is used in accordance with § 75.11(b), § 75.12(b), or approved under § 75.66), record the information required under paragraphs (i)(2)(i)

through (i)(2)(v) of this section;

- § 75.57(j)(3) (3) For diluent gas (O₂ or CO₂) concentration during unit operation (if required for heat input determination), record the information required under paragraphs (i)(3)(i) through (i)(3)(v) of this section.
- § 75.57(j)(4) (4) For stack gas volumetric 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, record the information required under paragraphs (c)(2)(i) through (c)(2)(vi) of this section.
- § 75.57(j)(5) (5) For Hg mass emissions during unit operation, as measured and reported from the certified primary monitoring system(s), certified redundant or nonredundant back-up monitoring system(s), or other approved method(s) of emissions determination, record the information required under paragraph (i)(5) of this section.
- § 75.57(j)(6) (6) Record the average flow rate of stack gas through each sorbent trap (in appropriate units, e.g., liters/min, cc/ min, dscm/min).
- § 75.57(j)(7) (7) Record the dry gas meter reading (in dscm, rounded to the nearest hundredth), at the beginning and end of the collection period and at least once in each unit operating hour during the collection period.
- § 75.57(j)(8) (8) Calculate and record the ratio of the bias-adjusted stack gas flow rate to the sample flow rate, as described in section 11.2 of appendix K to this part.

§ 75.58

§ 75.58 General recordkeeping provisions for specific situations.

The owner or operator shall meet all of the applicable recordkeeping requirements of this section.

- § 75.58(a) (a) [Reserved]
- § 75.58(b) (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:
- § 75.58(b)(1) (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:
- (i) The information required in § 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 1-55 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.

§ 75.58(b)(2)

(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);
- (vii) Method of determination of NO_x emission rate using Codes 1-55 in Table 4a of § 75.57; 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.

§ 75.58(b)(3)

(3) Except as otherwise provided in § 75.34 (d), for units with add-on SO₂ or NO_x emission controls following the provisions of § 75.34(a)(1), (a)(2), ~~or (a)(3)~~ or (a)(5), or for units with add-on Hg emission controls, the owner or operator shall record:

(i) Parametric data which demonstrate, for each hour of missing SO₂, Hg, or NO_x emission data, the proper operation of the add-on emission controls, as described in the quality assurance/quality control program for the unit. The parametric data shall be maintained on site and shall be submitted, upon request, to the Administrator, EPA Regional office, State, or local agency. Alternatively, for units equipped with flue gas desulfurization (FGD) systems, the owner or operator may use quality-assured data from a certified SO₂ monitor to demonstrate proper operation of the emission controls during periods of missing Hg data;

(ii) A flag indicating, for each hour of missing SO₂, Hg, or NO_x emission data, either that the add-on emission controls are operating properly, as evidenced by all parameters being within the ranges specified in the quality assurance/quality control program, or that the add-on emission controls are not operating properly;

~~(iii) For units substituting a representative SO₂ concentration during missing data periods under § 75.34(a)(3), any available inlet and outlet SO₂ concentration values recorded by an SO₂ continuous emission monitoring system; and~~

~~(iv) For units substituting a representative NO_x emission rate during missing data periods under § 75.34(a)(3), any available inlet and outlet NO_x emission rate values recorded by a continuous emission monitoring system.~~

§ 75.58(c)

(c) *Specific SO₂ emission record provisions for gas-fired or oil-fired units using optional protocol in appendix D to this part.* In lieu of recording the information in § 75.57(c), 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 to this part for estimating SO₂ mass emissions:

§ 75.58(c)(1)

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

- (i) Date and hour;
- (ii) Hourly average volumetric flow rate of oil, while the unit combusts oil, with the units in which oil flow is recorded (gal/hr, scf/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 emission rate (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) [Reserved];
- (v) Mass flow rate of oil combusted each hour and method of determination (lb/hr, rounded to the nearest tenth) (flag value if derived from missing data procedures);
- (vi) SO₂ mass emission rate from oil (lb/hr, rounded to the nearest tenth);
- (vii) For units using volumetric oil flowmeters, density of oil with the units in which oil density is recorded and method of determination (flag value if derived from missing data procedures);
- (viii) Gross calorific value of oil used to determine heat input and method of determination

(Btu/lb) (flag value if derived from missing data procedures);

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

(x) Fuel usage time for combustion of oil during the hour (rounded up to the nearest fraction of an hour (in equal increments that can range from one hundredth to one quarter of an hour, at the option of the owner or operator)) (flag to indicate multiple/single fuel types combusted);

(xi) Monitoring system identification code;

(xii) Operating load range corresponding to gross unit load (01-20); ~~and~~

(xiii) Type of oil combusted; ~~and~~

(xiv) Heat input formula ID and SO₂ Formula ID (required beginning January, 2009).

§ 75.58(c)(2)

(2) For gas-fired units or oil-fired units using the optional protocol in appendix D to this part for 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 the nearest tenth of a percent).

§ 75.58(c)(3)

(3) For gas-fired units or oil-fired units using the optional protocol in appendix D to this part, when either an assumed oil sulfur content or density value is used, or when as-delivered oil sampling is performed:

(i) Record the measured sulfur content, gross calorific value, and, if applicable, density from each fuel sample; and

(ii) Record and report the assumed sulfur content, gross calorific value, and, if applicable, density used to calculate SO₂ mass emission rate or heat input rate.

§ 75.58(c)(4)

(4) 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 to this part:

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

(B) Default SO₂ emission rate of 0.0006 lb/mmBtu for pipeline natural gas, or calculated SO₂ emission rate for natural gas from section 2.3.2.1.1 of appendix D to this part.

(iv) Hourly flow rate of gaseous fuel, while the unit combusts gas (100 scfh) and source of data code for gas flow rate.

(v) Gross calorific value of gaseous fuel used to determine heat input rate (Btu/100 scf) (flag value if derived from missing data procedures).

(vi) SO₂ mass emission rate due to the combustion of gaseous fuels (lb/hr).

(vii) Fuel usage time for combustion of gaseous fuel during the hour (rounded up to the nearest fraction of an hour (in equal increments that can range from one hundredth to one quarter of an hour, at the option of the owner or operator)) (flag to indicate multiple/single fuel types combusted).

(viii) Monitoring system identification code.

(ix) Operating load range corresponding to gross unit load (01-20).

(x) Type of gas combusted; ~~and~~

(xi) Heat input formula ID and SO₂ Formula ID (required beginning January 1, 2009).

§ 75.58(c)(5)

(5) For each oil sample or sample of diesel fuel:

(i) Date of sampling;

(ii) Sulfur content (percent, rounded to the nearest hundredth for diesel fuel and to the nearest tenth for other fuel oil);

(iii) Gross calorific value (Btu/lb); and

(iv) Density or specific gravity, if required to convert volume to mass.

§ 75.58(c)(6)

(6) For each sample of gaseous fuel for sulfur content:

(i) Date of sampling; and

(ii) Sulfur content (grains/100 scf, rounded to the nearest tenth).

§ 75.58(c)(7)

(7) For each sample of gaseous fuel for gross calorific value:

(i) Date of sampling; and

(ii) Gross calorific value (Btu/100 scf).

- § 75.58(c)(8) (8) For each oil sample or sample of gaseous fuel:
- (i) Type of oil or gas; and
 - (ii) Type of sulfur sampling (using codes in tables D-4 and D-5 of appendix D to this part) and value used in calculations, and type of GCV or density sampling (using codes in tables D-4 and D-5 of appendix D to this part).
- § 75.58(d) (d) *Specific NO_x emission record provisions for gas-fired peaking units or oil-fired peaking units using optional protocol in appendix E to this part.* In lieu of recording the information in § 75.57(d), the owner or operator shall record the applicable information in this paragraph for each affected 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. The owner or operator shall meet the requirements of this section, except that the requirements under paragraphs (d)(1)(vii) and (d)(2)(vii) of this section shall become applicable on the date on which the owner or operator is required to monitor, record, and report NO_x mass emissions under an applicable State or federal NO_x mass emission reduction program, if the provisions of subpart H of this part are adopted as requirements under such a program.
- § 75.58(d)(1) (1) For each hour when the unit is combusting oil:
- (i) Date and hour;
 - (ii) Hourly average mass flow rate of oil while the unit combusts oil with the units in which oil flow is recorded (lb/hr);
 - (iii) Gross calorific value of oil used to determine heat input (Btu/lb);
 - (iv) Hourly average NO_x emission rate from combustion of oil (lb/mmBtu, rounded to the nearest hundredth);
 - (v) Heat input rate of oil (mmBtu/hr, rounded to the nearest tenth);
 - (vi) Fuel usage time for combustion of oil during the hour (rounded up to the nearest fraction of an hour, in equal increments that can range from one hundredth to one quarter of an hour, at the option of the owner or operator);
 - (vii) NO_x mass emissions, calculated in accordance with section 8.1 of appendix F to this part;
 - (viii) NO_x monitoring system identification code;
 - (ix) Fuel flow monitoring system identification code; ~~and~~
 - (x) Segment identification of the correlation curve; ~~and~~
 - (xi) Heat input formula ID (required beginning January 1, 2009).
- § 75.58(d)(2) (2) For each hour when the unit is combusting gaseous fuel:
- (i) Date and hour;
 - (ii) Hourly average fuel flow rate of gaseous fuel, while the unit combusts gas (100 scfh);
 - (iii) Gross calorific value of gaseous fuel used to determine heat input (Btu/100 scf) (flag value if derived from missing data procedures);
 - (iv) Hourly average NO_x emission rate from combustion of gaseous fuel (lb/mmBtu, rounded to nearest hundredth);
 - (v) Heat input rate from gaseous fuel, while the unit combusts gas (mmBtu/hr, rounded to the nearest tenth);
 - (vi) Fuel usage time for combustion of gaseous fuel during the hour (rounded up to the nearest fraction of an hour, in equal increments that can range from one hundredth to one quarter of an hour, at the option of the owner or operator);
 - (vii) NO_x mass emissions, calculated in accordance with section 8.1 of appendix F to this part;
 - (viii) NO_x monitoring system identification code;
 - (ix) Fuel flow monitoring system identification code; ~~and~~
 - (x) Segment identification of the correlation curve; ~~and~~
 - (xi) Heat input formula ID (required beginning January 1, 2009).
- § 75.58(d)(3) (3) For each hour when the unit combusts multiple fuels:
- (i) Date and hour;
 - (ii) Hourly average heat input rate from all fuels (mmBtu/hr, rounded to the nearest tenth);
- and
- (iii) Hourly average NO_x emission rate for the unit for all fuels (lb/mmBtu, rounded to the nearest hundredth).
- § 75.58(d)(4) (4) For each hour when the unit combusts any fuel(s):

- (i) For stationary gas turbines and diesel or dual-fuel reciprocating engines, hourly averages of operating parameters under section 2.3 of appendix E to this part (flag if value is outside of manufacturer's recommended range); and
- (ii) For boilers, hourly average boiler O₂ reading (percent, rounded to the nearest tenth) (flag if value exceeds by more than 2 percentage points the O₂ level recorded at the same heat input during the previous NO_x emission rate test).

§ 75.58(d)(5)

- (5) For each fuel sample:
 - (i) Date of sampling;
 - (ii) Gross calorific value (Btu/lb for oil, Btu/100 scf for gaseous fuel); and
 - (iii) Density or specific gravity, if required to convert volume to mass.

§ 75.58(d)(6)

- (6) Flag to indicate multiple or single fuels combusted.

§ 75.58(e)

- (e) *Specific SO₂ emission record provisions during the combustion of gaseous fuel.*

§ 75.58(e)(1)

- (1) If SO₂ emissions are determined in accordance with the provisions in § 75.11(e)(2) during hours in which only gaseous fuel is combusted in a unit with an SO₂ CEMS, the owner or operator shall record the information in paragraph (c)(3) of this section in lieu of the information in §§ 75.57(c)(1), (c)(3), and (c)(4), for those hours.

§ 75.58(e)(2)

- (2) The provisions of this paragraph apply to a unit which, in accordance with the provisions of § 75.11(e)(3), uses an SO₂ CEMS to determine SO₂ emissions during hours in which only gaseous fuel is combusted in the unit. If the unit sometimes burns only gaseous fuel that is very low sulfur fuel (as defined in § 72.2 of this chapter) as a primary and/or backup fuel and at other times combusts higher sulfur fuels, such as coal or oil, as primary and/or backup fuel(s), then the owner or operator shall keep records on-site, in a form suitable for inspection, of the type(s) of fuel(s) burned during each period of missing SO₂ data and the number of hours that each type of fuel was combusted in the unit during each missing data period. This recordkeeping requirement does not apply to an affected unit that burns very low sulfur fuel exclusively, nor does it apply to a unit that burns such gaseous fuel(s) only during unit startup.

§ 75.58(f)

- (f) *Specific SO₂, NO_x, and CO₂ record provisions for gas-fired or oil-fired units using the optional low mass emissions excepted methodology in § 75.19.* In lieu of recording the information in §§ 75.57(b) through (e), the owner or operator shall record the following information for each affected low mass emissions unit for which the owner or operator is using the optional low mass emissions excepted methodology in § 75.19(c):

§ 75.58(f)(1)

- (1) All low mass emissions units shall report for each hour:
 - (i) Date and hour;
 - (ii) Unit operating time (units using the long term fuel flow methodology report operating time to be 1);
 - (iii) Fuel type (pipeline natural gas, natural gas, other gaseous fuel, residual oil, or diesel fuel) ~~(note: if more than one type of fuel is combusted in the hour, either: indicate the fuel type which results in the highest emission factors for NO_x;~~
 - (A) Indicate the fuel type which results in the highest emission factors for NO_x (this option is in effect through December 31, 2008); or
 - (B) Indicate the fuel type resulting in the highest emission factor for each parameter (SO₂, NO_x emission rate, and CO₂) separately (this option is required on and after January 1, 2009);
 - (iv) Average hourly NO_x emission rate (lb/mmBtu, rounded to the nearest thousandth);
 - (v) Hourly NO_x mass emissions (lbs, rounded to the nearest tenth);
 - (vi) Hourly SO₂ mass emissions (lbs, rounded to the nearest tenth);
 - (vii) Hourly CO₂ mass emissions (tons, rounded to the nearest tenth);
 - (viii) Hourly calculated unit heat input in mmBtu;
 - (ix) Hourly unit output in gross load or steam load;
 - (x) The method of determining hourly heat input: unit maximum rated heat input, unit long term fuel flow or group long term fuel flow;
 - (xi) The method of determining NO_x emission rate used for the hour: default based on fuel combusted, unit specific default based on testing or historical data, group default based on representative testing of identical units, unit specific based on testing of a unit with NO_x controls operating, or missing data value; ~~and~~
 - (xii) Control status of the unit;

(xiii) Base or peak load indicator (as applicable); and
(xiv) Multiple fuel flag

§ 75.58(f)(2) (2) low mass emissions units using the optional long term fuel flow methodology to determine unit heat input shall report for each quarter:

- (i) Type of fuel;
- (ii) Beginning date and hour of long term fuel flow measurement period;
- (iii) End date and hour of long term fuel flow period;
- (iv) Quantity of fuel measured; (v) Units of measure;
- (vi) Fuel GCV value used to calculate heat input;
- (vii) Units of GCV;
- (viii) Method of determining fuel GCV used;
- (ix) Method of determining fuel flow over period;
- (x) ~~Component Monitoring~~ system identification code;
- (xi) Quarter and year;
- (xii) Total heat input (mmBtu); and
- (xiii) Operating hours in period.

§ 75.59 § 75.59 Certification, quality assurance, and quality control record provisions.

The owner or operator shall meet all of the applicable recordkeeping requirements of this section.

§ 75.59(a) (a) *Continuous emission or opacity monitoring systems.* The owner or operator shall record the applicable information in this section for each certified monitor or certified monitoring system (including certified backup monitors) measuring and recording emissions or flow from an affected unit.

§ 75.59(a)(1) (1) For each SO₂ or NO_x pollutant concentration monitor, flow monitor, CO₂ emissions concentration monitor (including O₂ monitors used to determine CO₂ emissions), Hg monitor, or diluent gas monitor (including wet- and dry-basis O₂ monitors used to determine percent moisture), the owner or operator shall record the following for all daily and 7-day calibration error tests, all daily system integrity checks (Hg monitors only), and all off-line calibration demonstrations, including any follow-up tests after corrective action:

- (i) Component-system identification code; (on and after January 1, 2009, only the component identification code is required);
- (ii) Instrument span and span scale;
- (iii) Date and hour;
- (iv) Reference value (i.e., calibration gas concentration or reference signal value, in ppm or other appropriate units);
- (v) Observed value (monitor response during calibration, in ppm or other appropriate units);
- (vi) Percent calibration error (rounded to the nearest tenth of a percent) (flag if using alternative performance specification for low emitters or differential pressure flow monitors);
- (vii) Reference signal or calibration gas level;
- (viii) For 7-day calibration errors tests, a Test-test number and reason for test;
- (ix) For 7-day calibration tests for certification or recertification, a certification from the cylinder gas vendor or CEMS vendor that calibration gas, as defined in § 72.2 of this chapter and appendix A to this part, was used to conduct calibration error testing;
- (x) Description of any adjustments, corrective actions, or maintenance prior to a passed test or following a failed test; and
- (xi) ~~For the qualifying test for off line calibration, the owner or operator shall indicate~~Indication of whether the unit is off-line or on-line.

§ 75.59(a)(2) (2) For each flow monitor, the owner or operator shall record the following for all daily interference checks, including any follow-up tests after corrective action:

- (i) Component-system identification code; (after January 1, 2009, only the component identification is required);
- (ii) Date and hour;
- (iii) Code indicating whether monitor passes or fails the interference check; and
- (iv) Description of any adjustments, corrective actions, or maintenance prior to a passed test or following a failed test.

| | |
|--------------------|--|
| § 75.59(a)(3) | <p>(3) For each SO₂ or NO_x pollutant concentration monitor, CO₂ emissions concentration monitor (including O₂ monitors used to determine CO₂ emissions), Hg concentration monitor, or diluent gas monitor (including wet- and dry-basis O₂ monitors used to determine percent moisture), the owner or operator shall record the following for the initial and all subsequent linearity check(s) and 3-level system integrity checks (Hg monitors with converters, only), including any follow-up tests after corrective action.</p> <ul style="list-style-type: none"> (i) Component-system identification code <u>(on and after January 1, 2009, only the component identification code is required)</u>; (ii) Instrument span and span scale <u>(only span scale is required on and after January 1, 2009)</u>; (iii) Calibration gas level; (iv) Date and time (hour and minute) of each gas injection at each calibration gas level; (v) Reference value (i.e., reference gas concentration for each gas injection at each calibration gas level, in ppm or other appropriate units); (vi) Observed value (monitor response to each reference gas injection at each calibration gas level, in ppm or other appropriate units); (vii) Mean of reference values and mean of measured values at each calibration gas level; (viii) Linearity error at each of the reference gas concentrations (rounded to nearest tenth of a percent) (flag if using alternative performance specification); (ix) Test number and reason for test (flag if aborted test); and (x) Description of any adjustments, corrective action, or maintenance prior to a passed test or following a failed test. |
| § 75.59(a)(4) | <p>(4) For each differential pressure type flow monitor, the owner or operator shall record items in paragraphs (a)(4)(i) through (v) of this section, for all quarterly leak checks, including any follow-up tests after corrective action. For each flow monitor, the owner or operator shall record items in paragraphs (a)(4)(vi) and (vii) for all flow-to-load ratio and gross heat rate tests:</p> |
| § 75.59(a)(4)(i) | <p>(i) Component-system identification code <u>(on and after January 1, 2009, only the system identification code is required)</u>.</p> |
| § 75.59(a)(4)(ii) | <p>(ii) Date and hour.</p> |
| § 75.59(a)(4)(iii) | <p>(iii) Reason for test.</p> |
| § 75.59(a)(4)(iv) | <p>(iv) Code indicating whether monitor passes or fails the quarterly leak check.</p> |
| § 75.59(a)(4)(v) | <p>(v) Description of any adjustments, corrective actions, or maintenance prior to a passed test or following a failed test.</p> |
| § 75.59(a)(4)(vi) | <p>(vi) Test data from the flow-to-load ratio or gross heat rate (GHR) evaluation, including:</p> <ul style="list-style-type: none"> (A) Monitoring system identification code; (B) Calendar year and quarter; (C) Indication of whether the test is a flow-to-load ratio or gross heat rate evaluation; (D) Indication of whether bias adjusted flow rates were used; (E) Average absolute percent difference between reference ratio (or GHR) and hourly ratios (or GHR values); (F) Test result; (G) Number of hours used in final quarterly average; (H) Number of hours exempted for use of a different fuel type; (I) Number of hours exempted for load ramping up or down; (J) Number of hours exempted for scrubber bypass; (K) Number of hours exempted for hours preceding a normal-load flow RATA; (L) Number of hours exempted for hours preceding a successful diagnostic test, following a documented monitor repair or major component replacement; and (M) Number of hours excluded for flue gases discharging simultaneously thorough a main stack and a bypass stack; and <u>(N) Test number.</u> |
| § 75.59(a)(4)(vii) | <p>(vii) Reference data for the flow-to-load ratio or gross heat rate evaluation, including (as applicable):</p> <ul style="list-style-type: none"> (A) Reference flow RATA end date and time; |

- (B) Test number of the reference RATA;
- (C) Reference RATA load and load level;
- (D) Average reference method flow rate during reference flow RATA;
- (E) Reference flow/load ratio;
- (F) Average reference method diluent gas concentration during flow RATA and diluent gas units of measure;
- (G) Fuel specific F_d - or F_c -factor during flow RATA and F-factor units of measure;
- (H) Reference gross heat rate value;
- (I) Monitoring system identification code;
- (J) Average hourly heat input rate during RATA;
- (K) Average gross unit load; ~~and~~
- (L) Operating load level; ~~and~~
- (M) An indicator ("flag") if separate reference ratios are calculated for each multiple stack.

§ 75.59(a)(5)

(5) For each SO₂ pollutant concentration monitor, flow monitor, each CO₂ emissions concentration monitor (including any O₂ concentration monitor used to determine CO₂ mass emissions or heat input), each NO_x-diluent continuous emission monitoring system, each SO₂-diluent continuous emission monitoring system, each NO_x concentration monitoring system, each diluent gas (O₂ or CO₂) monitor used to determine heat input, each moisture monitoring system, each Hg concentration monitoring system, each sorbent trap monitoring system, and each approved alternative monitoring system, the owner or operator shall record the following information for the initial and all subsequent relative accuracy test audits:

§ 75.59(a)(5)(i)

(i) Reference method(s) used.

§ 75.59(a)(5)(ii)

(ii) Individual test run data from the relative accuracy test audit for the SO₂ concentration monitor, flow monitor, CO₂ emissions concentration monitor, NO_x-diluent continuous emission monitoring system, SO₂-diluent continuous emission monitoring system, diluent gas (O₂ or CO₂) monitor used to determine heat input, NO_x concentration monitoring system, moisture monitoring system, Hg concentration monitoring system, sorbent trap monitoring system, or approved alternative monitoring system, including:

- (A) Date, hour, and minute of beginning of test run;
- (B) Date, hour, and minute of end of test run;
- (C) Monitoring system identification code;
- (D) Test number and reason for test;
- (E) Operating level (low, mid, high, or normal, as appropriate) and number of operating levels comprising test;
- (F) Normal load (or operating level) indicator for flow RATAs (except for peaking units);
- (G) Units of measure;
- (H) Run number;
- (I) Run value from CEMS being tested, in the appropriate units of measure;
- (J) Run value from reference method, in the appropriate units of measure;
- (K) Flag value (0, 1, or 9, as appropriate) indicating whether run has been used in calculating relative accuracy and bias values or whether the test was aborted prior to completion;
- (L) Average gross unit load, expressed as a total gross unit load, rounded to the nearest MWe, or as steam load, rounded to the nearest thousand lb/hr, except for units that do not produce electrical or thermal output; and
- (M) Flag to indicate whether an alternative performance specification has been used.

§ 75.59(a)(5)(iii)

- (iii) Calculations and tabulated results, as follows:
 - (A) Arithmetic mean of the monitoring system measurement values, of the reference method values, and of their differences, as specified in Equation A-7 in appendix A to this part;
 - (B) Standard deviation, as specified in Equation A-8 in appendix A to this part;
 - (C) Confidence coefficient, as specified in Equation A-9 in appendix A to this part;
 - (D) Statistical "t" value used in calculations;
 - (E) Relative accuracy test results, as specified in Equation A-10 in appendix A to this part. For multi-level flow monitor tests the relative accuracy test results shall be recorded at each load (or operating) level tested. Each load (or operating) level shall be expressed as a total gross unit load, rounded to the nearest MWe, or as steam load, rounded to the nearest thousand lb/hr, or as otherwise specified by the Administrator, for units that do not produce electrical or thermal output;
 - (F) Bias test results as specified in section 7.6.4 in appendix A to this part; and

(G) Bias adjustment factor from Equation A-12 in appendix A to this part for any monitoring system that failed the bias test (except as otherwise provided in section 7.6.5 of appendix A to this part) and 1.000 for any monitoring system that passed the bias test.

§ 75.59(a)(5)(iv) (iv) Description of any adjustment, corrective action, or maintenance prior to a passed test or following a failed or aborted test.

§ 75.59(a)(5)(v) (v) 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.

§ 75.59(a)(5)(vi) (vi) For flow monitors, the equation used to linearize the flow monitor and the numerical values of the polynomial coefficients or K factor(s) of that equation.

§ 75.59(a)(5)(vii) (vii) For moisture monitoring systems, the coefficient or "K" factor or other mathematical algorithm used to adjust the monitoring system with respect to the reference method.

§ 75.59(a)(6) (6) For each SO₂, NO_x, Hg, or CO₂ ~~emissions~~ concentration monitor, each component of a NO_x-diluent continuous emission monitoring system, SO₂-diluent continuous emission monitoring system, NO_x concentration monitoring system, or diluent gas (O₂ or CO₂) and each CO₂ or O₂ monitor used to determine heat input, the owner or operator shall record the following information for the cycle time test:

(i) Component-system identification code (on and after January 1, 2009, only the component identification code is required);

(ii) Date;

(iii) Start and end times;

(iv) Upscale and downscale cycle times for each component;

(v) Stable start monitor value;

(vi) Stable end monitor value;

(vii) Reference value of calibration gas(es);

(viii) Calibration gas level;

(ix) Total Cycle time ~~result for the entire system;~~

(x) Reason for test; and

(xi) Test number.

§ 75.59(a)(7) (7) In addition to the information in paragraph (a)(5) of this section, the owner or operator shall record, for each relative accuracy test audit, supporting information sufficient to substantiate compliance with all applicable sections and appendices in this part. Unless otherwise specified in this part or in an applicable test method, the information in paragraphs (a)(7)(i) through (a)(7)(vi) of this section may be recorded either in hard copy format, electronic format or a combination of the two, and the owner or operator shall maintain this information in a format suitable for inspection and audit purposes. This RATA supporting information shall include, but shall not be limited to, the following data elements:

§ 75.59(a)(7)(i) (i) For each RATA using Reference Method 2 (or its allowable alternatives) in appendix A to part 60 of this chapter to determine volumetric flow rate:

(A) Information indicating whether or not the location meets requirements of Method 1 in appendix A to part 60 of this chapter; and

(B) Information indicating whether or not the equipment passed the required leak checks.

§ 75.59(a)(7)(ii) (ii) For each run of each RATA using Reference Method 2 (or its allowable alternatives in appendix A to part 60 of this chapter) to determine volumetric flow rate, record the following data elements (as applicable to the measurement method used):

(A) Operating level (low, mid, high, or normal, as appropriate);

(B) Number of reference method traverse points;

(C) Average stack gas temperature (°F);

(D) Barometric pressure at test port (inches of mercury);

(E) Stack static pressure (inches of H₂O);

(F) Absolute stack gas pressure (inches of mercury);

(G) Percent CO₂ and O₂ in the stack gas, dry basis;

(H) CO₂ and O₂ reference method used;

(I) Moisture content of stack gas (percent H₂O);

- (J) Molecular weight of stack gas, dry basis (lb/lb-mole);
- (K) Molecular weight of stack gas, wet basis (lb/lb-mole);
- (L) Stack diameter (or equivalent diameter) at the test port (ft);
- (M) Average square root of velocity head of stack gas (inches of H₂O) for the run;
- (N) Stack or duct cross-sectional area at test port (ft²); (O) Average velocity (ft/sec);
- (P) Average stack flow rate, adjusted, if applicable, for wall effects (scfh, wet basis);
- (Q) Flow rate reference method used;
- (R) Average velocity, adjusted for wall effects;
- (S) Calculated (site-specific) wall effects adjustment factor determined during the run, and, if different, the wall effects adjustment factor used in the calculations; and
- (T) Default wall effects adjustment factor used.

§ 75.59(a)(7)(iii)

- (iii) For each traverse point of each run of each RATA using Reference Method 2 (or its allowable alternatives in appendix A to part 60 of this chapter) to determine volumetric flow rate, record the following data elements (as applicable to the measurement method used):
 - (A) Reference method probe type;
 - (B) Pressure measurement device type;
 - (C) Traverse point ID;
 - (D) Probe or pitot tube calibration coefficient;
 - (E) Date of latest probe or pitot tube calibration;
 - (F) Average velocity differential pressure at traverse point (inches of H₂O) or the average of the square roots of the velocity differential pressures at the traverse point ((inches of H₂O)^{1/2});
 - (G) T_s, stack temperature at the traverse point (°F);
 - (H) Composite (wall effects) traverse point identifier;
 - (I) Number of points included in composite traverse point;
 - (J) Yaw angle of flow at traverse point (degrees);
 - (K) Pitch angle of flow at traverse point (degrees);
 - (L) Calculated velocity at traverse point both accounting and not accounting for wall effects (ft/sec); and
 - (M) Probe identification number.

§ 75.59(a)(7)(iv)

- (iv) For each RATA using Method 6C, 7E, or 3A in appendix A to part 60 of this chapter to determine SO₂, NO_x, CO₂, or O₂ concentration:
 - (A) Pollutant or diluent gas being measured;
 - (B) Span of reference method analyzer;
 - (C) Type of reference method system (e.g., extractive or dilution type);
 - (D) Reference method dilution factor (dilution type systems, only);
 - (E) Reference gas concentrations (zero, mid, and high gas levels) used for the 3-point pre-test analyzer calibration error test (or, for dilution type reference method systems, for the 3-point pre-test system calibration error test) and for any subsequent recalibrations;
 - (F) Analyzer responses to the zero-, mid-, and high-level calibration gases during the 3-point pre-test analyzer (or system) calibration error test and during any subsequent recalibration(s);
 - (G) Analyzer calibration error at each gas level (zero, mid, and high) for the 3-point pre-test analyzer (or system) calibration error test and for any subsequent recalibration(s) (percent of span value);
 - (H) Upscale gas concentration (mid or high gas level) used for each pre-run or post-run system bias check or (for dilution type reference method systems) for each pre-run or post-run system calibration error check;
 - (I) Analyzer response to the calibration gas for each pre-run or post-run system bias (or system calibration error) check;
 - (J) The arithmetic average of the analyzer responses to the zero-level gas, for each pair of pre- and post-run system bias (or system calibration error) checks;
 - (K) The arithmetic average of the analyzer responses to the upscale calibration gas, for each pair of pre- and post-run system bias (or system calibration error) checks;
 - (L) The results of each pre-run and each post-run system bias (or system calibration error) check using the zero-level gas (percentage of span value);
 - (M) The results of each pre-run and each post-run system bias (or system calibration error) check using the upscale calibration gas (percentage of span value);
 - (N) Calibration drift and zero drift of analyzer during each RATA run (percentage of span value);
 - (O) Moisture basis of the reference method analysis; (P) Moisture content of stack gas, in percent, during each test run (if needed to convert to moisture basis of CEMS being

tested);

- (Q) Unadjusted (raw) average pollutant or diluent gas concentration for each run;
- (R) Average pollutant or diluent gas concentration for each run, corrected for calibration bias (or calibration error) and, if applicable, corrected for moisture;
- (S) The F-factor used to convert reference method data to units of lb/mmBtu (if applicable);
- (T) Date(s) of the latest analyzer interference test(s);
- (U) Results of the latest analyzer interference test(s);
- (V) Date of the latest NO₂ to NO conversion test (Method 7E only);
- (W) Results of the latest NO₂ to NO conversion test (Method 7E only); and
- (X) For each calibration gas cylinder used during each RATA, record the cylinder gas vendor, cylinder number, expiration date, pollutant(s) in the cylinder, and certified gas concentration(s).

§ 75.59(a)(7)(v)

(v) For each test run of each moisture determination using Method 4 in appendix A to part 60 of this chapter (or its allowable alternatives), whether the determination is made to support a gas RATA, to support a flow RATA, or to quality assure the data from a continuous moisture monitoring system, record the following data elements (as applicable to the moisture measurement method used):

- (A) Test number;
- (B) Run number;
- (C) The beginning date, hour, and minute of the run;
- (D) The ending date, hour, and minute of the run;
- (E) Unit operating level (low, mid, high, or normal, as appropriate);
- (F) Moisture measurement method;
- (G) Volume of H₂O collected in the impingers (ml);
- (H) Mass of H₂O collected in the silica gel (g);
- (I) Dry gas meter calibration factor;
- (J) Average dry gas meter temperature (°F);
- (K) Barometric pressure (inches of mercury);
- (L) Differential pressure across the orifice meter (inches of H₂O);
- (M) Initial and final dry gas meter readings (ft³);
- (N) Total sample gas volume, corrected to standard conditions (dscf); and
- (O) Percentage of moisture in the stack gas (percent H₂O).

§ 75.59(a)(7)(vi)

(vi) The raw data and calculated results for any stratification tests performed in accordance with sections 6.5.6.1 through 6.5.6.3 of appendix A to this part.

§ 75.59(a)(7)(vii)

- (vii) For each RATA run using the Ontario Hydro Method to determine Hg concentration:
- (A) Percent CO₂ and O₂ in the stack gas, dry basis;
 - (B) Moisture content of the stack gas (percent H₂O);
 - (C) Average stack temperature (°F);
 - (D) Dry gas volume metered (dscm);
 - (E) Percent isokinetic;
 - (F) Particle-bound Hg collected by the filter, blank, and probe rinse (µg);
 - (G) Oxidized Hg collected by the KCl impingers (µg);
 - (H) Elemental Hg collected in the HNO₃/H₂O₂ impinger and in the KMnO₄/H₂SO₄ impingers (µg);
 - (I) Total Hg, including particle-bound Hg (µg); and
 - (J) Total Hg, excluding particle-bound Hg (µg)

§ 75.59(a)(7)(viii)

(viii) *Data elements for instrumental Hg reference method.* [Reserved]

(ix) For a unit with a flow monitor installed on a rectangular stack or duct, if a site-specific default or measured wall effects adjustment factor (WAF) is used to correct the stack gas volumetric flow rate data to account for velocity decay near the stack or duct wall, the owner or operator shall keep records of the following for each flow RATA performed with EPA Method 2, subsequent to the WAF determination:

- (A) Monitoring system ID;
- (B) Test number;
- (C) Operating level;
- (D) RATA end date and time;
- (E) Number of Method 1 traverse points; and

(F) Wall effects adjustment factor (WAF), to the nearest 0.0001.
(x) For each RATA run using Method 29 to determine Hg concentration:
(A) Percent CO₂ and O₂ in the stack gas, dry basis;
(B) Moisture content of the stack gas (percent H₂O);
(C) Average stack gas temperature (⁰F);
(D) Dry gas volume metered (dscm);
(E) Percent isokinetic;
(F) Particulate Hg collected in the front half of the sampling train, corrected for the front-half blank value (µg); and
(G) Total vapor phase Hg collected in the back half of the sampling train, corrected for the back-half blank value (µg).

- § 75.59(a)(8) (8) For each certified continuous emission monitoring system, continuous opacity monitoring system, excepted monitoring system, or alternative monitoring system, the date and description of each event which requires certification, recertification or certain diagnostic testing of the system and the date and type of each test performed to recertify the system in accordance with § 75.20(b). If the conditional data validation procedures of § 75.20(b)(3) are to be used to validate and report data prior to the completion of the required certification or diagnostic testing, the date and hour of the probationary calibration error test shall be reported to mark the beginning of conditional data validation.
- § 75.59(a)(9) (9) When hardcopy relative accuracy test reports, certification reports, recertification reports, or semiannual or annual reports for gas or flow rate CEMS, Hg CEMS, or sorbent trap monitoring systems are required or requested under § 75.60(b)(6) or § 75.63, the reports shall include, at a minimum, the following elements (as applicable to the type(s) of test(s) performed):
- § 75.59(a)(9)(i) (i) Summarized test results.
- § 75.59(a)(9)(ii) (ii) DAHS printouts of the CEMS data generated during the calibration error, linearity, cycle time, and relative accuracy tests.
- § 75.59(a)(9)(iii) (iii) For pollutant concentration monitor or diluent monitor relative accuracy tests at normal operating load:
 (A) The raw reference method data from each run, i.e., the data under paragraph (a)(7)(iv)(Q) of this section (usually in the form of a computerized printout, showing a series of one-minute readings and the run average);
 (B) The raw data and results for all required pre-test, post-test, pre-run and post-run quality assurance checks (i.e., calibration gas injections) of the reference method analyzers, i.e., the data under paragraphs (a)(7)(iv)(E) through (a)(7)(iv)(N) of this section;
 (C) The raw data and results for any moisture measurements made during the relative accuracy testing, i.e., the data under paragraphs (a)(7)(v)(A) through (a)(7)(v)(O) of this section; and
 (D) Tabulated, final, corrected reference method run data (i.e., the actual values used in the relative accuracy calculations), along with the equations used to convert the raw data to the final values and example calculations to demonstrate how the test data were reduced.
- § 75.59(a)(9)(iv) (iv) For relative accuracy tests for flow monitors:
 (A) The raw flow rate reference method data, from Reference Method 2 (or its allowable alternatives) under appendix A to part 60 of this chapter, including auxiliary moisture data (often in the form of handwritten data sheets), i.e., the data under paragraphs (a)(7)(ii)(A) through (a)(7)(ii)(T), paragraphs (a)(7)(iii)(A) through (a)(7)(iii)(M), and, if applicable, paragraphs (a)(7)(v)(A) through (a)(7)(v)(O) of this section; and
 (B) The tabulated, final volumetric flow rate values used in the relative accuracy calculations (determined from the flow rate reference method data and other necessary measurements, such as moisture, stack temperature and pressure), along with the equations used to convert the raw data to the final values and example calculations to demonstrate how the test data were reduced.
- § 75.59(a)(9)(v) (v) Calibration gas certificates for the gases used in the linearity, calibration error, and cycle time tests and for the calibration gases used to quality assure the gas monitor reference method data during the relative accuracy test audit.

- § 75.59(a)(9)(vi) (vi) Laboratory calibrations of the source sampling equipment. For sorbent trap monitoring systems, the laboratory analyses of all sorbent traps, and information documenting the results of all leak checks and other applicable quality control procedures.
- § 75.59(a)(9)(vii) (vii) A copy of the test protocol used for the CEMS certifications or recertifications, including narrative that explains any testing abnormalities, problematic sampling, and analytical conditions that required a change to the test protocol, and/or solutions to technical problems encountered during the testing program.
- § 75.59(a)(9)(viii) (viii) Diagrams illustrating test locations and sample point locations (to verify that locations are consistent with information in the monitoring plan). Include a discussion of any special traversing or measurement scheme. The discussion shall also confirm that sample points satisfy applicable acceptance criteria.
- § 75.59(a)(9)(ix) (ix) Names of key personnel involved in the test program, including test team members, plant contacts, agency representatives and test observers on site.
- § 75.59(a)(10) (10) Whenever reference methods are used as backup monitoring systems pursuant to § 75.20(d)(3), the owner or operator shall record the following information:
- § 75.59(a)(10)(i) (i) For each test run using Reference Method 2 (or its allowable alternatives in appendix A to part 60 of this chapter) to determine volumetric flow rate, record the following data elements (as applicable to the measurement method used):
- (A) Unit or stack identification number;
 - (B) Reference method system and component identification numbers;
 - (C) Run date and hour;
 - (D) The data in paragraph (a)(7)(ii) of this section, except for paragraphs (a)(7)(ii)(A), (F), (H), (L) and (Q) through (T); and
 - (E) The data in paragraph (a)(7)(iii), except on a run basis.
- § 75.59(a)(10)(ii) (ii) For each reference method test run using Method 6C, 7E, or 3A in appendix A to part 60 of this chapter to determine SO₂, NO_x, CO₂, or O₂ concentration:
- (A) Unit or stack identification number;
 - (B) The reference method system and component identification numbers;
 - (C) Run number;
 - (D) Run start date and hour;
 - (E) Run end date and hour;
 - (F) The data in paragraphs (a)(7)(iv)(B) through (I) and (L) through (O); and
 - (G) Stack gas density adjustment factor (if applicable).
- § 75.59(a)(10)(iii) (iii) For each hour of each reference method test run using Method 6C, 7E, or 3A in appendix A to part 60 of this chapter to determine SO₂, NO_x, CO₂, or O₂ concentration:
- (A) Unit or stack identification number;
 - (B) The reference method system and component identification numbers;
 - (C) Run number;
 - (D) Run date and hour;
 - (E) Pollutant or diluent gas being measured;
 - (F) Unadjusted (raw) average pollutant or diluent gas concentration for the hour; and
 - (G) Average pollutant or diluent gas concentration for the hour, adjusted as appropriate for moisture, calibration bias (or calibration error) and stack gas density.
- § 75.59(a)(11) (11) For each other quality-assurance test or other quality assurance activity, the owner or operator shall record the following (as applicable):
- (i) Component/system identification code;
 - (ii) Parameter;
 - (iii) Test or activity completion date and hour;
 - (iv) Test or activity description;
 - (v) Test result;
 - (vi) Reason for test; and
 - (vii) Test code.
- § 75.59(a)(12) (12) For each request for a quality assurance test extension or exemption, for any loss of

exempt status, and for each single-load flow RATA claim pursuant to section 2.3.1.3(c)(3) of appendix B to this part, the owner or operator shall record the following (as applicable):

- § 75.59(a)(12)(i) (i) For a RATA deadline extension or exemption request:
(A) Monitoring system identification code;
(B) Date of last RATA;
(C) RATA expiration date without extension;
(D) RATA expiration date with extension;
(E) Type of RATA extension or exemption claimed or lost;
(F) Year to date hours of usage of fuel other than very low sulfur fuel;
(G) Year to date hours of non-redundant back-up CEMS usage at the unit/stack; and
(H) Quarter and year.
- § 75.59(a)(12)(ii) (ii) For a linearity test or flow-to-load ratio test quarterly exemption:
(A) Component-system identification code;
(B) Type of test;
(C) Basis for exemption;
(D) Quarter and year; and (E) Span scale.
- § 75.59(a)(12)(iii) ~~(iii) For a quality assurance test extension claim based on a grace period:
(A) Component system identification code;
(B) Type of test;
(C) Beginning of grace period;
(D) Date and hour of completion of required quality assurance test;
(E) Number of unit or stack operating hours from the beginning of the grace period to the completion of the quality assurance test or the maximum allowable grace period; and
(F) Date and hour of end of grace period. [Reserved]~~
- § 75.59(a)(12)(iv) (iv) For a fuel flowmeter accuracy test extension:
(A) Component-system identification code;
(B) Date of last accuracy test;
(C) Accuracy test expiration date without extension;
(D) Accuracy test expiration date with extension;
(E) Type of extension; and
(F) Quarter and year.
- § 75.59(a)(12)(v) (v) For a single-load (or single-level) flow RATA claim:
(A) Monitoring system identification code;
(B) Ending date of last annual flow RATA;
(C) The relative frequency (percentage) of unit or stack operation at each load (or operating level (low, mid, and high) since the previous annual flow RATA, to the nearest 0.1 percent;
(D) End date of the historical load (or operating level) data collection period; and
(E) Indication of the load (or operating) level (low, mid or high) claimed for the single-load flow RATA.
- § 75.59(a)(13) (13) An indication that data have been excluded from a periodic span and range evaluation of an SO₂ or NO_x monitor under section 2.1.1.5 or 2.1.2.5 of appendix A to this part and the reason(s) for excluding the data. For purposes of reporting under § 75.64(a)(2), this information shall be reported with the quarterly report as descriptive text consistent with § 75.64(g).
- § 75.59(a)(14) (14) For the sorbent traps used in sorbent trap monitoring systems to quantify Hg concentration under subpart I of this part (including sorbent traps used for relative accuracy testing), the owner or operator shall keep records of the following:
(i) The ID number of the monitoring system in which each sorbent trap was used to collect Hg;
(ii) The unique identification number of each sorbent trap;
(iii) The beginning and ending dates and hours of the data collection period for each sorbent trap;
(iv) The average Hg concentration (in µg/dscm) for the data collection period;
(v) Information documenting the results of the required leak checks;
(vi) The analysis of the Hg collected by each sorbent trap; and
(vii) Information documenting the results of the other applicable quality control procedures

in § 75.15 and in appendices B and K to this part.

§ 75.59(b)

(b) *Excepted monitoring systems for gas-fired and oil-fired units.* The owner or operator shall record the applicable information in this section for each excepted monitoring system following the requirements of appendix D to this part or appendix E to this part for determining and recording emissions from an affected unit.

§ 75.59(b)(1)

(1) For certification and quality assurance testing of fuel flowmeters tested against a reference fuel flow rate (i.e., flow rate from another fuel flowmeter under section 2.1.5.2 of appendix D to this part or flow rate from a procedure according to a standard incorporated by reference under section 2.1.5.1 of appendix D to this part):

- (i) Unit or common pipe header identification code;
- (ii) Component and system identification codes of the fuel flowmeter being tested (on and after January 1, 2009, only the component identification code is required);
- (iii) Date and hour of test completion, for a test performed in-line at the unit;
- (iv) Date and hour of flowmeter reinstallation, for laboratory tests;
- (v) Test number;
- (vi) Upper range value of the fuel flowmeter;
- (vii) Flowmeter measurements during accuracy test (and mean of values), including units of measure;
- (viii) Reference flow rates during accuracy test (and mean of values), including units of measure;
- (ix) Level of fuel flowrate test during runs (low, mid or high);
- (x) Average flowmeter accuracy for low and high fuel flowrates and highest flowmeter accuracy of any level designated as mid, expressed as a percent of upper range value;
- (xi) Indicator of whether test method was a lab comparison to reference meter or an in-line comparison against a master meter;
- (xii) Test result (aborted, pass, or fail); and
- (xiii) Description of fuel flowmeter calibration specification or procedure (in the certification application, or periodically if a different method is used for annual quality assurance testing).

§ 75.59(b)(2)

(2) For each transmitter or transducer accuracy test for an orifice-, nozzle-, or venturi-type flowmeter used under section 2.1.6 of appendix D to this part:

- (i) Component and system identification codes of the fuel flowmeter being tested (on and after January 1, 2009, only the component identification code is required);
- (ii) Completion date and hour of test;
- (iii) For each transmitter or transducer: transmitter or transducer type (differential pressure, static pressure, or temperature); the full-scale value of the transmitter or transducer, transmitter input (pre-calibration) prior to accuracy test, including units of measure; and expected transmitter output during accuracy test (reference value from NIST-traceable equipment), including units of measure;
- (iv) For each transmitter or transducer tested: output during accuracy test, including units of measure; transmitter or transducer accuracy as a percent of the full-scale value; and transmitter output level as a percent of the full-scale value;
- (v) Average flowmeter accuracy at low and high level fuel flowrates and highest flowmeter accuracy of any level designated as mid fuel flowrate, expressed as a percent of upper range value;
- (vi) Test result (pass, fail, or aborted);
- (vii) Test number; and
- (viii) Accuracy determination methodology.

§ 75.59(b)(3)

(3) For each visual inspection of the primary element or transmitter or transducer accuracy test for an orifice-, nozzle-, or venturi-type flowmeter under sections 2.1.6.1 through 2.1.6.4 of appendix D to this part:

- (i) Date of inspection/test;
- (ii) Hour of completion of inspection/test;
- (iii) Component and system identification codes of the fuel flowmeter being inspected/tested; and
- (iv) Results of inspection/test (pass or fail).

§ 75.59(b)(4)

(4) For fuel flowmeters that are tested using the optional fuel flow-to-load ratio procedures of section 2.1.7 of appendix D to this part:

- § 75.59(b)(4)(i)
- (i) Test data for the fuel flowmeter flow-to-load ratio or gross heat rate check, including:
 - (A) Component/system identification code (on and after January 1, 2009, only the monitoring system identification code is required);
 - (B) Calendar year and quarter;
 - (C) Indication of whether the test is for fuel flow-to-load ratio or gross heat rate;
 - (D) Quarterly average absolute percent difference between baseline for fuel flow-to-load ratio (or baseline gross heat rate and hourly quarterly fuel flow-to-load ratios (or gross heat rate value));
 - (E) Test result;
 - (F) Number of hours used in the analysis;
 - (G) Number of hours excluded due to co-firing;
 - (H) Number of hours excluded due to ramping; ~~and~~
 - (I) Number of hours excluded in lower 25.0 percent range of and
 - (J) Test number.
- § 75.59(b)(4)(ii)
- (ii) Reference data for the fuel flowmeter flow-to-load ratio or gross heat rate evaluation, including:
 - (A) Completion date and hour of most recent primary element inspection; or test number of the most recent primary element inspection (as applicable); (on and after January 1, 2009, the test number of the most recent primary element inspection is required in lieu of the completion date and hour for the most recent primary element inspection);
 - (B) Completion date and hour of most recent flowmeter or transmitter accuracy test; or test number of the most recent flowmeter or transmitter accuracy test (as applicable); (on and after January 1, 2009, the test number of the most recent flowmeter or transmitter accuracy test is required in lieu of the completion date and hour for the most recent flowmeter or transmitter accuracy test);
 - (C) Beginning date and hour of baseline period;
 - (D) Completion date and hour of baseline period;
 - (E) Average fuel flow rate, in 100 scfh for gas and lb/hr for oil;
 - (F) Average load, in megawatts, ~~or~~ 1000 lb/hr of steam; or mmBtu/hr thermal output;
 - (G) Baseline fuel flow-to-load ratio, in the appropriate units of measure (if using fuel flow-to-load ratio);
 - (H) Baseline gross heat rate if using gross heat rate, in the appropriate units of measure (if using gross heat rate check);
 - (I) Number of hours excluded from baseline data due to ramping;
 - (J) Number of hours excluded from baseline data in lower 25.0 percent of range of operation;
 - (K) Average hourly heat input rate;
 - (L) Flag indicating baseline data collection is in progress and that fewer than four calendar quarters have elapsed since the quarter of the last flowmeter QA test; ~~and~~
 - (M) Number of hours excluded due to co-firing; and
 - (N) Monitoring system identification code.
- § 75.59(b)(5)
- (5) For gas-fired peaking units or oil-fired peaking units using the optional procedures of appendix E to this part, for each initial performance, periodic, or quality assurance/quality control-related test:
 - (i) For each run of emission data, record the following data:
 - (A) Unit or common pipe identification code;
 - (B) Monitoring system identification code for appendix E system (on and after January 1, 2009 component identification codes shall be reported in addition to the monitoring system identification code);
 - (C) Run start date and time;
 - (D) Run end date and time;
 - (E) Total heat input during the run (mmBtu);
 - (F) NO_x emission rate (lb/mmBtu) from reference method;
 - (G) Response time of the O₂ and NO_x reference method analyzers;
 - (H) Type of fuel(s) combusted during the run. This requirement remains in effect through December 31, 2008;
 - (I) Heat input rate (mmBtu/hr) during the run;
 - (J) Test number;
 - (K) Run number;

- (L) Operating level during the run;
- (M) NO_x concentration recorded by the reference method during the run;
- (N) Diluent concentration recorded by the reference method during the run;
- (O) Moisture measurement for the run (if applicable).

§ 75.59(b)(5)(ii)

- (ii) For each run during which oil or mixed fuels are combusted record the following data:
 - (A) Unit or common pipe identification code;
 - (B) Monitoring system identification code for oil monitoring system; (on and after January 1, 2009 component identification codes shall be reported in addition to the monitoring system identification code);
 - (C) Run start date and time;
 - (D) Run end date and time;
 - (E) Mass flow or volumetric flow of oil, in the units of measure for the type of fuel flowmeter;
 - (F) Gross calorific value of oil in the appropriate units of measure;
 - (G) Density of fuel oil in the appropriate units of measure (if density is used to convert oil volume to mass);
 - (H) Hourly heat input (mmBtu) during run from oil;
 - (I) Test number;
 - (J) Run number; and
 - (K) Operating level during the run.

§ 75.59(b)(5)(iii)

- (iii) For each run during which gas or mixed fuels are combusted record the following data:
 - (A) Unit or common pipe identification code;
 - (B) Monitoring system identification code for gas monitoring system; (on and after January 1, 2009 component identification codes shall be reported in addition to the monitoring system identification code);
 - (C) Run start date and time;
 - (D) Run end date and time;
 - (E) Volumetric flow of gas (100 scf);
 - (F) Gross calorific value of gas (Btu/100 scf);
 - (G) Hourly heat input (mmBtu) during run from gas;
 - (H) Test number;
 - (I) Run number; and
 - (J) Operating level during the run.

§ 75.59(b)(5)(iv)

- (iv) For each operating level at which runs were performed:
 - (A) Completion date and time of last run for operating level (as applicable); ~~(This requirement remains in effect through December 31, 2008);~~
 - (B) Type of fuel(s) combusted during test;
 - (C) Average heat input rate at that operating level (mmBtu/hr);
 - (D) Arithmetic mean of NO_x emission rates from reference method run at this level;
 - (E) F-factor used in calculations of NO_x emission rate at that operating level;
 - (F) Unit operating parametric data related to NO_x formation for that unit type (e.g., excess O₂ level, water/fuel ratio);
 - (G) Test number; ~~and~~
 - (H) Operating level for runs; and
 - (I) Component identification code (required on and after January 1, 2009).

§ 75.59(c)

- (c) Except as otherwise provided in § 75.58(b)(3)(i), units with add-on SO₂ or NO_x emission controls following the provisions of § 75.34(a)(1) or (a)(2), and for units with add-on Hg emission controls, the owner or operator shall keep the following records on-site in the quality assurance/quality control plan required by section 1 of appendix B to this part:
 - (1) A list of operating parameters for the add-on emission controls, including parameters in § 75.58(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.

§ 75.59(d)

- (d) *Excepted monitoring for low mass emissions units under § 75.19(c)(1)(iv).* For oil- and gas-fired units using the optional SO₂, NO_x and CO₂ emissions calculations for low mass emissions units under § 75.19, the owner or operator shall record the following information for tests performed to determine a fuel and unit-specific default as provided in § 75.19(c)(1)(iv):

| | |
|-------------------|--|
| § 75.59(d)(1) | <p>(1) For each run of each test performed using the procedures of section 2.1 of appendix E to this part, record the following data:</p> <ul style="list-style-type: none"> (i) Unit or common pipe identification code; (ii) Run start date and time; (iii) Run end date and time; (iv) NO_x emission rate (lb/mmBtu) from reference method; (v) Response time of the O₂ and NO_x reference method analyzers; (vi) Type of fuel(s) combusted during the run; (vii) Test number; (viii) Run number; (ix) Operating level during the run; (x) NO_x concentration recorded by the reference method during the run; (xi) Diluent concentration recorded by the reference method during the run; and (xii) Moisture measurement for the run (if applicable); <u>and</u> (xiii) <u>An indicator ("flag") if the run is used to calculate the highest 3-run average NO_x emission rate at any load level.</u> |
| § 75.59(d)(2) | <p>(2) For each single-load or multiple-load appendix E test, record the following:</p> <ul style="list-style-type: none"> (i) The three-run average NO_x emission rate for each load level; (ii) An indicator that the average NO_x emission rate is the highest NO_x average emission rate recorded at any load level of the test (if appropriate); (iii) The default NO_x emission rate (highest three-run average NO_x emission rate at any load level), multiplied by 1.15, if appropriate; (iv) An indicator that the add-on NO_x emission controls were operating or not operating during each run of the test; and (v) Parameter data indicating the use and efficacy of control equipment during the test; (vi) <u>Indicator of whether the testing was done at base load, peak load or both (if appropriate); and</u> (vii) <u>The default NO_x emission rate for peak load hours (if applicable).</u> |
| § 75.59(d)(3) | <p>(3) For each unit in a group of identical units qualifying for reduced testing under § 75.19(c)(1)(iv)(B), record the following data:</p> <ul style="list-style-type: none"> (i) The unique group identification code assigned to the group. This code must include the ORIS code of one of the units in the group; (ii) The ORIS code or facility identification code for the unit; (iii) The plant name of the facility at which the unit is located, consistent with the facility's monitoring plan; (iv) The identification code for the unit, consistent with the facility's monitoring plan; (v) A record of whether or not the unit underwent fuel and unit-specific testing for purposes of establishing a fuel and unit-specific NO_x emission rate for purposes of § 75.19; (vi) The completion date of the fuel and unit-specific test performed for purposes of establishing a fuel and unit-specific NO_x emission rate for purposes of § 75.19; (vii) The fuel and unit-specific NO_x default rate established for the group of identical units under § 75.19; (viii) The type of fuel combusted for the units during testing and represented by the resulting default NO_x emission rate; (ix) The control status for the units during testing and represented by the resulting default NO_x emission rate; (x) Documentation supporting the qualification of all units in the group for reduced testing based on the criteria established in § 75.19(c)(1)(iv)(B)(I); and (xi) Purpose of group tests. |
| <u>§ 75.59(e)</u> | <p><u>(e) Excepted monitoring for Hg low mass emission units under §75.81(b). For qualifying coal-fired units using the alternative low mass emission methodology under §75.81(b), the owner or operator shall record the data elements described in §75.59(a)(7)(vii), §75.59(a)(7)(viii), or §75.59(a)(7)(x), as applicable, for each run of each Hg emission test and re-test required under §75.81(c)(1) or §75.81(d)(4)(iii).</u></p> |
| <u>§ 75.59(f)</u> | <p><u>(f) DAHS Verification. For each DAHS (missing data and formula) verification that is required for initial certification, recertification, or for certain diagnostic testing of a monitoring system,</u></p> |

record the date and hour that the DAHS verification is successfully completed. (This requirement only applies to units that report monitoring plan data in accordance with §§ 75.53(g) and (h).)

Subpart G -- Reporting Requirements

§ 75.60

§ 75.60 General provisions.

§ 75.60(a)

(a) The designated representative for any affected unit subject to the requirements of this part shall comply with all reporting requirements in this section and with the signatory requirements of § 72.21 of this chapter for all submissions.

§ 75.60(b)

(b) *Submissions.* The designated representative shall submit all reports and petitions (except as provided in § 75.61) as follows:

(1) *Initial certifications.* The designated representative shall submit initial certification applications according to § 75.63.

(2) *Recertifications.* The designated representative shall submit recertification applications according to § 75.63.

(3) *Monitoring plans.* The designated representative shall submit monitoring plans according to § 75.62.

(4) *Electronic quarterly reports.* The designated representative shall submit electronic quarterly reports according to § 75.64.

(5) *Other petitions and communications.* The designated representative shall submit petitions, correspondence, application forms, designated representative signature, and petition-related test results in hardcopy to the Administrator. Additional petition requirements are specified in §§ 75.66 and 75.67.

(6) *Semiannual or annual RATA reports.* If requested in writing (or by electronic mail) by the applicable EPA Regional Office, appropriate State, and/or appropriate local air pollution control agency, the designated representative shall submit a hardcopy RATA report within 45 days after completing a required semiannual or annual RATA according to section 2.3.1 of appendix B to this part, or within 15 days of receiving the request, whichever is later. The designated representative shall report the hardcopy information required by § 75.59(a)(9) to the applicable EPA Regional Office, appropriate State, and/or appropriate local air pollution control agency that requested the RATA report.

(7) *Routine appendix E retest reports.* If requested in writing (or by electronic mail) by the applicable EPA Regional Office, appropriate State, and/or appropriate local air pollution control agency, the designated representative shall submit a hardcopy report within 45 days after completing a required periodic retest according to section 2.2 of appendix E to this part, or within 15 days of receiving the request, whichever is later. The designated representative shall report the hardcopy information required by § 75.59(b)(5) to the applicable EPA Regional Office, appropriate State, and/or appropriate local air pollution control agency that requested the hardcopy report.

(8) *Routine retest reports for Hg low mass emissions units.* If requested in writing (or by electronic mail) by the applicable EPA Regional Office, appropriate State, and/or appropriate local air pollution control agency, the designated representative shall submit a hardcopy report for a semiannual or annual retest required under §75.81(d)(4)(iii) for a Hg low mass emissions unit, within 45 days after completing the test or within 15 days of receiving the request, whichever is later. The designated representative shall report, at a minimum, the following hardcopy information to the applicable EPA Regional Office, appropriate State, and/or appropriate local air pollution control agency that requested the hardcopy report: a summary of the test results; the raw reference method data for each test run; the raw data and results of all pretest, post-test, and post-run quality-assurance checks of the reference method; the raw data and results of moisture measurements made during the test runs (if applicable); diagrams illustrating the test and sample point locations; a copy of the test protocol used; calibration certificates for the gas standards or standard solutions used in the testing; laboratory calibrations of the source sampling equipment; and the names of the key personnel involved in the test program, including test team members, plant contact persons, agency representatives, and test observers.

§ 75.60(c)

(c) *Confidentiality of data.* The following provisions shall govern the confidentiality of information submitted under this part.

(1) All emission data reported in quarterly reports under § 75.64 shall remain public information.

(2) For information submitted under this part other than emission data submitted in quarterly reports, the designated representative must assert a claim of confidentiality at the time of submission for any information he or she wishes to have treated as confidential business information (CBI) under subpart B of part 2 of this chapter. Failure to assert a claim of confidentiality at the time of submission may result in disclosure of the information by EPA without further notice to the designated representative.

(3) Any claim of confidentiality for information submitted in quarterly reports under § 75.64 must include substantiation of the claim. Failure to provide substantiation may result in disclosure of the information by EPA without further notice.

(4) As provided under subpart B of part 2 of this chapter, EPA may review information submitted to determine whether it is entitled to confidential treatment even when confidentiality claims are initially received. The EPA will contact the designated representative as part of such a review process.

§ 75.61

§ 75.61 Notifications.

§ 75.61(a)

(a) *Submission.* The designated representative for an affected unit (or owner or operator, as specified) shall submit notice to the Administrator, to the appropriate EPA Regional Office, and to the applicable State and local air pollution control agencies for the following purposes, as required by this part.

§ 75.61(a)(1)

(1) *Initial certification and recertification test notifications.* The owner or operator or designated representative for an affected unit shall submit written notification of initial certification tests, recertification tests, and revised test dates as specified in § 75.20 for continuous emission monitoring systems, for the excepted Hg monitoring methodology under §75.81(b), for alternative monitoring systems under subpart E of this part, or for excepted monitoring systems under appendix E to this part, except as provided in paragraphs (a)(1)(iii), (a)(1)(iv) and (a)(4) of this section. The owner or operator shall also provide written notification of testing performed under § 75.19(c)(1)(iv)(A) to establish fuel-and-unit-specific NO_x emission rates for low mass emissions units. Such notifications are not required, however, for initial certifications and recertifications of excepted monitoring systems under appendix D to this part.

§ 75.61(a)(1)(i)

(i) *Notification of initial certification testing and full recertification.* Initial certification test notifications and notifications of full recertification testing under § 75.20 (b)(2) shall be submitted not later than 21 days prior to the first scheduled day of certification or recertification testing. In emergency situations when full recertification testing is required following an uncontrollable failure of equipment that results in lost data, notice shall be sufficient if provided within 2 business days following the date when testing is scheduled. Testing may be performed on a date other than that already provided in a notice under this subparagraph as long as notice of the new date is provided either in writing or by telephone or other means at least 7 days prior to the original scheduled test date or the revised test date, whichever is earlier.

§ 75.61(a)(1)(ii)

(ii) *Notification of certification retesting, and partial recertification testing.* For retesting required following a loss of certification under § 75.20(a)(5) or for partial recertification testing required under § 75.20(b)(2), notice of the date of any required RATA testing or any required retesting under section 2.3 in appendix E to this part shall be submitted either in writing or by telephone at least 7 days prior to the first scheduled day of testing; except that in emergency situations when testing is required following an uncontrollable failure of equipment that results in lost data, notice shall be sufficient if provided within 2 business days following the date when testing is scheduled. Testing may be performed on a date other than that already provided in a notice under this subparagraph as long as notice of the new date is provided by telephone or other means at least 2 business days prior to the original scheduled test date or the revised test date, whichever is earlier.

§ 75.61(a)(1)(iii)

(iii) *Repeat of testing without notice.* Notwithstanding the above notice requirements, the owner or operator may elect to repeat a certification or recertification test immediately, without advance notification, whenever the owner or operator has determined during the certification or recertification testing that a test was failed or must be aborted, or that a second test is necessary in order to attain a reduced relative accuracy test frequency.

§ 75.61(a)(1)(iv)

(iv) *Waiver from notification requirements.* The Administrator, the appropriate EPA Regional Office, or the applicable State or local air pollution control agency may issue a waiver

from the notification requirement of paragraph (a)(1)(ii) of this section, for a unit or a group of units, for one or more recertification tests or other retests. The Administrator, the appropriate EPA Regional Office, or the applicable State or local air pollution control agency may also discontinue the waiver and reinstate the notification requirement of paragraph (a)(1)(ii) of this section for future recertification tests (or other retests) of a unit or a group of units. § 75.61(a)(1)(iv)

§ 75.61(a)(2)

(2) *New unit, newly affected unit, new stack, or new flue gas desulfurization system operation notification.* The designated representative for an affected unit shall submit written notification: For a new unit or a newly affected unit, of the planned date when a new unit or newly affected unit will commence commercial operation, or becomes affected, or, for new stack or flue gas desulfurization system, of the planned date when a new stack or flue gas desulfurization system will be completed and emissions will first exit to the atmosphere.

(i) Notification of the planned date shall be submitted not later than 45 days prior to the date the unit commences commercial operation or becomes affected, or not later than 45 days prior to the date when a new stack or flue gas desulfurization system exhausts emissions to the atmosphere.

(ii) If the date when the unit commences commercial operation or becomes affected, or the date when the new stack or flue gas desulfurization system exhausts emissions to the atmosphere, whichever is applicable, changes from the planned date, a notification of the actual date shall be submitted not later than 7 days following: The date the unit commences commercial operation or becomes affected, or the date when a new stack or flue gas desulfurization system exhausts emissions to the atmosphere.

§ 75.61(a)(3)

(3) *Unit shutdown and recommencement of commercial operation.* For an affected unit that will be shutdown on the relevant compliance date specified in § 75.4 or in a State or Federal pollutant mass emissions reduction program that adopts the monitoring and reporting requirements of this part, if the owner or operator is relying on the provisions in § 75.4(d) to postpone certification testing, the designated representative for the unit shall submit notification of unit shutdown and recommencement of commercial operation as follows:

(i) For planned unit shutdowns (e.g., extended maintenance outages), written notification of the planned shutdown date shall be provided at least 21 days prior to the applicable compliance date, and written notification of the planned date of recommencement of commercial operation shall be provided at least 21 days in advance of unit restart. If the actual shutdown date or the actual date of recommencement of commercial operation differs from the planned date, written notice of the actual date shall be submitted no later than 7 days following the actual date of shutdown or of recommencement of commercial operation, as applicable;

(ii) For unplanned unit shutdowns (e.g., forced outages), written notification of the actual shutdown date shall be provided no more than 7 days after the shutdown, and written notification of the planned date of recommencement of commercial operation shall be provided at least 21 days in advance of unit restart. If the actual date of recommencement of commercial operation differs from the expected date, written notice of the actual date shall be submitted no later than 7 days following the actual date of recommencement of commercial operation. ~~(3) *Unit shutdown and recommencement of commercial operation.* The designated representative for an affected unit that will be shutdown on the relevant compliance date in § 75.4(a) and that is relying on the provisions in § 75.4(d) to postpone certification testing, shall submit notification of unit shutdown and recommencement of commercial operation as follows:~~

~~(i) For planned unit shutdowns, written notification of the planned shutdown date and planned date of recommencement of commercial operation shall be submitted 45 calendar days prior to the deadline in § 75.4(a). For unit shutdowns that are not planned 45 days prior to the deadline in § 75.4(a), written notification of the planned shutdown date and planned date of recommencement of commercial operation shall be submitted no later than 7 days after the date the owner or operator is able to schedule the shutdown date and date of recommencement of commercial operation. If the actual shutdown date or the actual date of recommencement of commercial operation differs from the planned date, written notice of the actual date shall be submitted no later than 7 days following the actual date of shutdown or of recommencement of commercial operation, as applicable;~~

~~(ii) For unplanned unit shutdowns, written notification of actual shutdown date and the expected date of recommencement of commercial operation shall be submitted no later than 7 days after the shutdown. If the actual date of recommencement of commercial operation differs~~

~~from the expected date, written notice of the actual date shall be submitted no later than 7 days following the actual date of recommencement of commercial operation.~~

§ 75.61(a)(4)

(4) *Use of backup fuels for appendix E procedures.* The designated representative for an affected oil-fired or gas-fired peaking unit that is using an excepted monitoring system under appendix E of this part and that is relying on the provisions in § 75.4(f) to postpone testing of a fuel shall submit written notification of that fact no later than 45 days prior to the deadline in § 75.4. The designated representative shall also submit a notification that such a fuel has been combusted no later than 7 days after the first date of combustion of any fuel for which testing has not been performed under appendix E after the deadline in § 75.4. Such notice shall also include notice that testing under appendix E either was performed during the initial combustion or notice of the date that testing will be performed.

§ 75.61(a)(5)

(5) *Periodic relative accuracy test audits, appendix E retests, and low mass emissions unit retests.* The owner or operator or designated representative of an affected unit shall submit written notice of the date of periodic relative accuracy testing performed under section 2.3.1 of appendix B to this part, of periodic retesting performed under section 2.2 of appendix E to this part, and of periodic retesting of low mass emissions units performed under § 75.19(c)(1)(iv)(D), ~~and of periodic retesting of Hg low mass emissions units performed under § 75.81(d)(4)(iii).~~ no later than 21 days prior to the first scheduled day of testing. ~~Testing may be performed on a date other than that already provided in a notice under this subparagraph as long as notice of the new date is provided either in writing or by telephone or other means acceptable to the respective State agency or office of EPA, and the notice is provided as soon as practicable after the new testing date is known, but no later than twenty four (24) hours in advance of the new date of testing.~~

§ 75.61(a)(5)(i)

(i) Written notification under paragraph (a) (5) of this section may be provided either by mail or by facsimile. In addition, written notification may be provided by electronic mail, provided that the respective State agency or office of EPA agrees that this is an acceptable form of notification.

§ 75.61(a)(5)(ii)

(ii) Notwithstanding the notice requirements under paragraph (a)(5) of this section, the owner or operator may elect to repeat a periodic relative accuracy test, appendix E retest, or low mass emissions unit retest immediately, without additional notification whenever the owner or operator has determined that a test was failed, or that a second test is necessary in order to attain a reduced relative accuracy test frequency.

§ 75.61(a)(5)(iii)

(iii) *Waiver from notification requirements.* The Administrator, the appropriate EPA Regional Office, or the applicable State air pollution control agency may issue a waiver from the requirement of paragraph (a)(5) of this section to provide notice to the respective State agency or office of EPA for a unit or a group of units for one or more tests. The Administrator, the appropriate EPA Regional Office, or the applicable State air pollution control agency may also discontinue the waiver and reinstate the requirement of paragraph (a)(5) of this section to provide notice to the respective State agency or office of EPA for future tests for a unit or a group of units. In addition, if an observer from a State agency or EPA is present when a test is rescheduled, the observer may waive all notification requirements under paragraph (a)(5) of this section for the rescheduled test.

§ 75.61(a)(6)

(6) *Notice of combustion of emergency fuel under appendix D or E.* The designated representative of an oil-fired unit or gas-fired unit using appendix D or E of this part shall, for each calendar quarter in which emergency fuel is combusted, provide notice of the combustion of the emergency fuel in the cover letter (or electronic equivalent) which transmits the next quarterly report submitted under § 75.64. The notice shall specify the exact dates and hours during which the emergency fuel was combusted.

§ 75.61(a)(7)

(7) *Long-term cold storage and recommencement of commercial operation.* The designated representative for an affected unit that is placed into long-term cold storage that is relying on the provisions in § 75.4(d) or § 75.64(a), either to postpone certification testing or to discontinue the submittal of quarterly reports during the period of long-term cold storage, shall provide written notification of long-term cold storage status and recommencement of commercial operation as follows:

| | |
|-------------------|--|
| § 75.61(a)(7)(i) | <u>(i) Whenever an affected unit has been placed into long-term cold storage, written notification of the date and hour that the unit was shutdown and a statement from the designated representative stating that the shutdown is expected to last for at least two years from that date, in accordance with the definition for long-term cold storage of a unit as provided in § 72.2.</u> |
| § 75.61(a)(7)(ii) | <u>(ii) Whenever an affected unit that has been placed into long-term cold storage is expected to resume operation, written notification shall be submitted 45 calendar days prior to the planned date of recommencement of commercial operation. If the actual date of recommencement of commercial operation differs from the expected date, written notice of the actual date shall be submitted no later than 7 days following the actual date of recommencement of commercial operation.</u> |
| § 75.61(a)(8) | <u>(8) Certification deadline date for new or newly affected units. The designated representative of a new or newly affected unit shall provide notification of the date on which the relevant deadline for initial certification is reached, either as provided in § 75.4(b) or § 75.4(c), or as specified in a State or Federal SO₂, NO_x, or Hg mass emission reduction program that incorporates by reference, or otherwise adopts, the monitoring, recordkeeping, and reporting requirements of subpart F, G, H, or I of this part. The notification shall be submitted no later than 7 calendar days after the applicable certification deadline is reached.</u> |
| § 75.61(b) | (b) The owner or operator or designated representative shall submit notification of certification tests and recertification tests for continuous opacity monitoring systems as specified in § 75.20(c)(8) to the State or local air pollution control agency. |
| § 75.61(c) | (c) If the Administrator determines that notification substantially similar to that required in this section is required by any other State or local agency, the owner or operator or designated representative may send the Administrator a copy of that notification to satisfy the requirements of this section, provided the ORISPL unit identification number(s) is denoted. |
| § 75.62 | § 75.62 Monitoring plan submittals. |
| § 75.62(a) | <p>(a) <i>Submission.</i></p> <p>(1) <i>Electronic.</i> Using the format specified in paragraph (c) of this section, the designated representative for an affected unit shall submit a complete, electronic, up-to-date monitoring plan file (except for hardcopy portions identified in paragraph (a)(2) of this section) to the Administrator as follows: no later than 45-21 days prior to the initial certification tests; at the time of each certification or recertification application submission; in each electronic quarterly report; and (prior to or concurrent with) the submittal of the electronic quarterly report for a reporting quarter where <u>whenever</u> an update of the electronic monitoring plan information is required, either under § 75.53(b) or elsewhere in this part.</p> <p>(2) <i>Hardcopy.</i> The designated representative shall submit all of the hardcopy information required under § 75.53 to the appropriate EPA Regional Office and the appropriate State and/or local air pollution control agency prior to initial certification. Thereafter, the designated representative shall submit hardcopy information only if that portion of the monitoring plan is revised. The designated representative shall submit the required hardcopy information as follows: no later than 45-21 days prior to the initial certification test; with any certification or recertification application, if a hardcopy monitoring plan change is associated with the certification or recertification event; and within 30 days of any other event with which a hardcopy monitoring plan change is associated, pursuant to § 75.53(b). Electronic submittal of all monitoring plan information, including hardcopy portions, is permissible provided that a paper copy of the hardcopy portions can be furnished upon request.</p> |
| § 75.62(b) | (b) <i>Contents.</i> Monitoring plans shall contain the information specified in § 75.53 of this part. |
| § 75.62(c) | (c) <i>Format.</i> The designated representative shall submit each monitoring plan in a format specified by the Administrator. |
| § 75.63 | § 75.63 Initial certification or recertification application. |
| § 75.63(a) | (a) <i>Submission.</i> The designated representative for an affected unit or a combustion source |

shall submit applications and reports as follows:

§ 75.63(a)(1)

(1) *Initial certifications.*

(i) For CEM systems or excepted monitoring systems under appendix D or E to this part, within 45 days after completing all initial certification tests, submit:

(A) To the Administrator, the electronic information required by paragraph (b)(1) of this section ~~and a hardcopy certification application form (EPA form 7610-14)~~. Except for subpart E applications for alternative monitoring systems or unless specifically requested by the Administrator, do not submit a hardcopy of the test data and results to the Administrator.

(B) To the applicable EPA Regional Office and the appropriate State and/or local air pollution control agency, the hardcopy information required by paragraph (b)(2) of this section .

(ii) For units for which the owner or operator is applying for certification approval of the optional excepted methodology under § 75.19 for low mass emissions units, submit, no later than 45 days prior to commencing use of the methodology:

(A) To the Administrator, the electronic low mass emission qualification information required by § 75.53 (f)(5)(i) or § 75.53 (h)(4)(i) (as applicable) and paragraph (b)(1)(i) of this section, ~~and a hardcopy cover letter identifying the submittal as a low mass emissions unit certification application~~; and

(B) To the applicable EPA Regional Office and appropriate State and/or local air pollution control agency, the hardcopy information required by § 75.19(a)(2) and § 75.53 (f)(5)(ii) or § 75.53 (h)(4)(ii) (as applicable), the hardcopy results of any appendix E (of this part) tests or any CEMS data analysis used to derive a fuel-and-unit-specific default NO_x emission rate.

§ 75.63(a)(2)

(2) *Recertifications and diagnostic testing.*

(i) Within 45 days after completing all recertification tests under § 75.20(b), submit to the Administrator the electronic information required by paragraph (b)(1) of this section ~~and a hardcopy certification application form (EPA form 7610-14)~~. Except for subpart E applications for alternative monitoring systems or unless specifically requested by the Administrator, do not submit a hardcopy of the test data and results to the Administrator.

(ii) Within 45 days after completing all recertification tests under § 75.20(b), submit the hardcopy information required by paragraph (b)(2) of this section to the applicable EPA Regional Office and the appropriate State and/or local air pollution control agency. The applicable EPA Regional Office or appropriate State or local air pollution control agency may waive the requirement to provide hardcopy recertification test data and results. The applicable EPA Regional Office or the appropriate State or local air pollution control agency may also discontinue the waiver and reinstate the requirement of this paragraph to provide a hardcopy report of the recertification test data and results.

(iii) Notwithstanding the requirements of paragraphs (a)(2)(i) and (a)(2)(ii) of this section, for an event for which the Administrator determines that only diagnostic tests (see § 75.20(b)) are required rather than recertification testing, no hardcopy submittal is required; however, the results of all diagnostic test(s) shall be submitted ~~in prior to or concurrent with~~ the electronic quarterly report required under § 75.64. Notwithstanding the requirement of § 75.59(e), For for DAHS (missing data and formula) verifications, ~~neither a no hardcopy nor an electronic submittal of any kind~~ is required; the owner or operator shall keep these test results on-site in a format suitable for inspection.

§ 75.63(b)

(b) *Contents.* Each application for initial certification or recertification shall contain the following information, as applicable:

§ 75.63(b)(1)

(1) *Electronic.*

(i) A complete, up-to-date version of the electronic portion of the monitoring plan, according to § 75.53(e) and (f), in the format specified in § 75.62(c).

(ii) The results of the test(s) required by § 75.20, including the type of test conducted, testing date, information required by § 75.59, and the results of any failed tests that affect data validation.

§ 75.63(b)(2)

(2) *Hardcopy.*

(i) Any changed portions of the hardcopy monitoring plan information required under § 75.53(e) and (f). Electronic submittal of all monitoring plan information, including the hardcopy portions, is permissible, provided that a paper copy can be furnished upon request.

(ii) The results of the test(s) required by § 75.20, including the type of test conducted, testing date, information required by § 75.59(a)(9), and the results of any failed tests that affect data validation.

- (iii) ~~Certification or recertification application form (EPA form 7610-14).~~[Reserved]
- (iv) Designated representative signature certifying the accuracy of the submission.

§ 75.63(c)

(c) *Format.* The electronic portion of each certification or recertification application shall be submitted in a format to be specified by the Administrator. The hardcopy test results shall be submitted in a format suitable for review and shall include the information in § 75.59(a)(9).

§ 75.64

§ 75.64 Quarterly reports.

§ 75.64(a)

(a) *Electronic submission.* The designated representative for an affected unit shall electronically report the data and information in paragraphs (a), (b), and (c) of this section to the Administrator quarterly, beginning with the data from the earlier of the calendar quarter corresponding to the date of provisional certification or the calendar quarter corresponding to the relevant deadline for initial certification in § 75.4(a), (b), or (c). The initial quarterly report shall contain hourly data beginning with the hour of provisional certification or the hour corresponding to the relevant certification deadline, whichever is earlier. For an affected unit subject to § 75.4(d) that is shutdown on the relevant compliance date in § 75.4(a) or has been placed in long-term cold storage (as defined in § 72.2 of this chapter), quarterly reports are not required. In such cases, the owner or operator shall submit quarterly reports for the unit beginning with the data from the quarter in which the unit recommences commercial operation (where the initial quarterly report contains hourly data beginning with the first hour of recommenced commercial operation of the unit). For units placed into long-term cold storage during a reporting quarter, the exemption from submitting quarterly reports begins with the calendar quarter following the date that the unit is placed into long-term cold storage. For any provisionally-certified monitoring system, § 75.20(a)(3) shall apply for initial certifications, and § 75.20(b)(5) shall apply for recertifications. Each electronic report must be submitted to the Administrator within 30 days following the end of each calendar quarter. Prior to January 1, 2008, each electronic report shall include, for each affected unit (or group of units using a common stack), the information provided in paragraphs (a)(1), (a)(2), and (a)(8) through (a)(15) of this section. During the time period of January 1, 2008 to January 1, 2009, each electronic report shall include, either the information provided in paragraphs (a)(1), (a)(2), and (a)(8) through (a)(15) of this section or the information provided in paragraphs (a)(3) through (a)(15). On and after January 1, 2009, the owner or operator shall meet the requirements of paragraphs (a)(3) through (a)(15) of this section only. Each electronic report shall include the date of report generation. for the information provided in paragraphs (a)(2) through (a)(11) of this section, and shall also include for each affected unit (or group of units using a common stack):

§ 75.64(a)(1)

- (1) Facility information:
 - (i) Identification, including:
 - (A) Facility/ORISPL number;
 - (B) Calendar quarter and year for the data contained in the report; and
 - (C) Version of the electronic data reporting format used for the report.
 - (ii) Location, including:
 - (A) Plant name and facility ID;
 - (B) EPA AIRS facility system ID;
 - (C) State facility ID;
 - (D) Source category/type;
 - (E) Primary SIC code;
 - (F) State postal abbreviation;
 - (G) County code; and
 - (H) Latitude and longitude.

§ 75.64(a)(2)

- (2) The information and hourly data required in § 75.53 and §§ 75.57 through 75.59, excluding the following:
 - (i) Descriptions of adjustments, corrective action, and maintenance;
 - (ii) Information which is incompatible with electronic reporting (e.g., field data sheets, lab analyses, quality control plan);
 - (iii) Opacity data listed in § 75.57(f), and in § 75.59(a)(8);
 - (iv) For units with SO₂ or NO_x add-on emission controls that do not elect to use the approved site-specific parametric monitoring procedures for calculation of substitute data, the information in § 75.58(b)(3);
 - (v) [Reserved]

- (vi) Information required by § 75.57(h) concerning the causes of any missing data periods and the actions taken to cure such causes;
- (vii) Hardcopy monitoring plan information required by § 75.53 and hardcopy test data and results required by § 75.59;
- (viii) Records of flow monitor and moisture monitoring system polynomial equations, coefficients, or "K" factors required by § 75.59(a)(5)(vi) or § 75.59(a)(5)(vii);
- (ix) Daily fuel sampling information required by § 75.58(c)(3)(i) for units using assumed values under appendix D;
- (x) Information required by §§ 75.59(b)(1)(vi), (vii), (viii), (ix), and (xiii), and (b)(2)(iii) and (iv) concerning fuel flowmeter accuracy tests and transmitter/transducer accuracy tests;
- (xi) Stratification test results required as part of the RATA supplementary records under § 75.59(a)(7);

(xii) Data and results of RATAs that are aborted or invalidated due to problems with the reference method or operational problems with the unit and data and results of linearity checks that are aborted or invalidated due to problems unrelated to monitor performance; and

(xiii) Supplementary RATA information required under § 75.59(a)(7)(i) ~~through § 75.59(a)(7)(v), except that: the data under § 75.59(a)(7)(ii)(A) through (T) and the data under § 75.59(a)(7)(iii)(A) through (M) shall, as applicable, be reported for flow RATAs in which angular compensation (measurement of pitch and/or yaw angles) is used and for flow RATAs in which a site-specific wall effects adjustment factor is determined by direct measurement; and the data under § 75.59(a)(7)(ii)(T) shall be reported for all flow RATAs in which a default wall effects adjustment factor is applied.~~

(A) The applicable data elements under § 75.59(a)(7)(ii)(A) through (T) and under § 75.59(a)(7)(iii)(A) through (M) shall be reported for flow RATAs at circular or rectangular stacks (or ducts) in which angular compensation for yaw and/or pitch angles is used (i.e., Method 2F or 2G), with or without wall effects adjustments;

(B) The applicable data elements under § 75.59(a)(7)(ii)(A) through (T) and under § 75.59(a)(7)(iii)(A) through (M) shall be reported for any flow RATA run at a circular stack in which Method 2 is used and a wall effects adjustment factor is determined by direct measurement;

(C) The data under § 75.59(a)(7)(ii)(T) shall be reported for all flow RATAs at circular stacks in which Method 2 is used and a default wall effects adjustment factor is applied; and

(D) The data under § 75.59(a)(7)(ix)(A) through (F) shall be reported for all flow RATAs at rectangular stacks or ducts in which Method 2 is used and a wall effects adjustment factor is applied.

§ 75.64(a)(3)

(3) Facility Identification information, including:

(i) Facility/ORISPL number;

(ii) Calendar quarter and year for the data contained in the report; and

(iii) Version of the electronic data reporting format used for the report (3) Tons (rounded to the nearest tenth) of SO₂ emitted during the quarter and cumulative SO₂ emissions for the calendar year.

§ 75.64(a)(4)

(4) In accordance with § 75.62(a)(1), if any monitoring plan information required in § 75.53 requires an update, either under § 75.53(b) or elsewhere in this part, submission of the electronic monitoring plan update shall be completed prior to or concurrent with the submittal of the quarterly electronic data report for the appropriate quarter in which the update is required. (4) Average NO_x emission rate (lb/mmBtu, rounded to the nearest thousandth) during the quarter and cumulative NO_x emission rate for the calendar year.

§ 75.64(a)(5)

(5) Except for the daily calibration error test data, daily interference check, and off-line calibration demonstration information required in § 75.59(a)(1) and (2), which must always be submitted with the quarterly report, the certification, quality assurance, and quality control information required in § 75.59 shall either be submitted prior to or concurrent with the submittal of the relevant quarterly electronic data report.

§ 75.64(a)(6)

(6) The information and hourly data required in §§ 75.57 through 75.59, and daily calibration error test data, daily interference check, and off-line calibration demonstration information required in § 75.59(a)(1) and (2).

§ 75.64(a)(7)

(7) Notwithstanding the requirements of paragraphs (a)(4) through (a)(6) of this section, the following information is excluded from electronic reporting:

(i) Descriptions of adjustments, corrective action, and maintenance;
(ii) Information which is incompatible with electronic reporting (e.g., field data sheets, lab analyses, quality control plan);
(iii) Opacity data listed in § 75.57(f), and in § 75.59(a)(8);
(iv) For units with SO₂ or NO_x add-on emission controls that do not elect to use the approved site-specific parametric monitoring procedures for calculation of substitute data, the information in § 75.58(b)(3);
(v) Information required by § 75.57(h) concerning the causes of any missing data periods and the actions taken to cure such causes;
(vi) Hardcopy monitoring plan information required by § 75.53 and hardcopy test data and results required by § 75.59;
(vii) Records of flow monitor and moisture monitoring system polynomial equations, coefficients, or "K" factors required by § 75.59(a)(5)(vi) or § 75.59(a)(5)(vii);
(viii) Daily fuel sampling information required by § 75.58(c)(3)(i) for units using assumed values under appendix D;
(ix) Information required by §§ 75.59(b)(1)(vi), (vii), (viii), (ix), and (xiii), and (b)(2)(iii) and (iv) concerning fuel flowmeter accuracy tests and transmitter/transducer accuracy tests;
(x) Stratification test results required as part of the RATA supplementary records under § 75.59(a)(7);
(xi) Data and results of RATAs that are aborted or invalidated due to problems with the reference method or operational problems with the unit and data and results of linearity checks that are aborted or invalidated due to problems unrelated to monitor performance; and
(xii) Supplementary RATA information required under § 75.59(a)(7)(i) through § 75.59(a)(7)(v), except that:
(A) The applicable data elements under § 75.59(a)(7)(ii)(A) through (T) and under § 75.59(a)(7)(iii)(A) through (M) shall be reported for flow RATAs at circular or rectangular stacks (or ducts) in which angular compensation for yaw and/or pitch angles is used (i.e., Method 2F or 2G), with or without wall effects adjustments;
(B) The applicable data elements under § 75.59(a)(7)(ii)(A) through (T) and under § 75.59(a)(7)(iii)(A) through (M) shall be reported for any flow RATA run at a circular stack in which Method 2 is used and a wall effects adjustment factor is determined by direct measurement;
(C) The data under § 75.59(a)(7)(ii)(T) shall be reported for all flow RATAs at circular stacks in which Method 2 is used and a default wall effects adjustment factor is applied; and
(D) The data under § 75.59(a)(7)(vii)(A) through (F) shall be reported for all flow RATAs at rectangular stacks or ducts in which Method 2 is used and a wall effects adjustment factor is applied.

| | |
|-------------------------------|---|
| § 75.64(a)(38) | (38) Tons (rounded to the nearest tenth) of SO ₂ emitted during the quarter and cumulative SO ₂ emissions for the calendar year. |
| § 75.64(a)(49) | (49) Average NO _x emission rate (lb/mmBtu, rounded to the nearest thousandth) during the quarter and cumulative NO _x emission rate for the calendar year. |
| § 75.64(a)(510) | (510) Tons of CO ₂ emitted during quarter and cumulative CO ₂ emissions for calendar year. |
| § 75.64(a)(611) | (611) Total heat input (mmBtu) for quarter and cumulative heat input for calendar year. |
| § 75.64(a)(712) | (712) Unit or stack or common pipe header operating hours for quarter and cumulative unit or stack or common pipe header operating hours for calendar year. |
| § 75.64(a)(8) | (8) [Reserved] |
| § 75.64(a)(913) | (913) For low mass emissions units for which the owner or operator is using the optional low mass emissions methodology in § 75.19(c) to calculate NO _x mass emissions, the designated representative must also report tons (rounded to the nearest tenth) of NO _x emitted during the quarter and cumulative NO _x mass emissions for the calendar year. |
| § 75.64(a)(1014) | (1014) For low mass emissions units using the optional long term fuel flow methodology under § 75.19(c), for each quarter report the long term fuel flow for each fuel according to § 75.59 <u>§ 75.58(f)(2)</u> . |

- § 75.64(a)(~~44~~15) (~~44~~15) For units using the optional fuel flow to load procedure in section 2.1.7 of appendix D to this part, report both the fuel flow-to-load baseline data and the results of the fuel flow-to-load test each quarter.
- § 75.64(b) (b) The designated representative shall affirm that the component/system identification codes and formulas in the quarterly electronic reports, submitted to the Administrator pursuant to § 75.53, represent current operating conditions.
- § 75.64(c) (c) *Compliance certification.* The designated representative shall submit a certification in support of each quarterly emissions monitoring report based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The certification shall indicate whether the monitoring data submitted were recorded in accordance with the applicable requirements of this part including the quality control and quality assurance procedures and specifications of this part and its appendices, and any such requirements, procedures and specifications of an applicable excepted or approved alternative monitoring method. For a unit with add-on emission controls, the designated representative shall also include a certification, for all hours where data are substituted following the provisions of § 75.34(a)(1), that the add-on emission controls were operating within the range of parameters listed in the monitoring plan and that the substitute values recorded during the quarter do not systematically underestimate SO₂ or NO_x emissions, pursuant to § 75.34.
- § 75.64(d) (d) *Electronic format.* Each quarterly report shall be submitted in a format to be specified by the Administrator, including both electronic submission of data and (unless otherwise approved by the Administrator) electronic submission of compliance certifications.
- § 75.64(e) (e) [Reserved]
- § 75.64(f) (f) *Method of submission.* Beginning with the quarterly report for the first quarter of the year 2001, all quarterly reports shall be submitted to EPA by direct computer-to-computer electronic transfer via EPA-provided software, unless otherwise approved by the Administrator.
- § 75.64(g) (g) Any cover letter text accompanying a quarterly report shall either be submitted in hardcopy to the Agency or be provided in electronic format compatible with the other data required to be reported under this section.

§ 75.65 § 75.65 Opacity reports.

The owner or operator or designated representative shall report excess emissions of opacity recorded under § 75.57(f) to the applicable State or local air pollution control agency.

§ 75.66 § 75.66 Petitions to the Administrator.

- § 75.66(a) (a) *General.* The designated representative for an affected unit subject to the requirements of this part may submit a petition to the Administrator requesting that the Administrator exercise his or her discretion to approve an alternative to any requirement prescribed in this part or incorporated by reference in this part. Any such petition shall be submitted in accordance with the requirements of this section. The designated representative shall comply with the signatory requirements of § 72.21 of this chapter for each submission.
- § 75.66(b) (b) *Alternative flow monitoring method petition.* In cases where no location exists for installation of a flow monitor in either the stack or the ducts serving an affected unit that satisfies the minimum physical siting criteria in appendix A of this part or where installation of a flow monitor in either the stack or duct is demonstrated to the satisfaction of the Administrator to be technically infeasible, the designated representative for the affected unit may petition the Administrator for an alternative method for monitoring volumetric flow. The petition shall, at a minimum, contain the following information:
- (1) Identification of the affected unit(s);
 - (2) Description of why the minimum siting criteria cannot be met within the existing ductwork or stack(s). This description shall include diagrams of the existing ductwork or stack,

as well as documentation of any attempts to locate a flow monitor; and
(3) Description of proposed alternative method for monitoring flow.

§ 75.66(c)

(c) *Alternative to standards incorporated by reference.* The designated representative for an affected unit may apply to the Administrator for an alternative to any standard incorporated by reference and prescribed in this part. The designated representative shall include the following information in an application:

- (1) A description of why the prescribed standard is not being used;
- (2) A description and diagram(s) of any equipment and procedures used in the proposed alternative;
- (3) Information demonstrating that the proposed alternative produces data acceptable for use in the Acid Rain Program, including accuracy and precision statements, NIST traceability certificates or protocols, or other supporting data, as applicable to the proposed alternative.

§ 75.66(d)

(d) *Alternative monitoring system petitions.* The designated representative for an affected unit may submit a petition to the Administrator for approval and certification of an alternative monitoring system or component according to the procedure in subpart E of this part. Each petition shall contain the information and data specified in subpart E, including the information specified in § 75.48, in a format to be specified by the Administrator.

§ 75.66(e)

(e) *Parametric monitoring procedure petitions.* The designated representative for an affected unit may submit a petition to the Administrator, where each petition shall contain the information specified in § 75.58(b) for the use of a parametric monitoring method. The Administrator will either:

- (1) Publish a notice in the **Federal Register** indicating receipt of a parametric monitoring procedure petition; or
- (2) Notify interested parties of receipt of a parametric monitoring petition.

§ 75.66(f)

(f) ~~*Missing data petitions for units with add-on emission controls.* The designated representative for an affected unit may submit a petition to the Administrator for the use of the maximum controlled emission rate, which the Administrator will approve if the petition adequately demonstrates that all the requirements in § 75.34(a)(3) are satisfied. Each petition shall contain the information listed below for the time period (or data gap) during which the affected unit experienced the monitor outage that would otherwise result in the substitution of an uncontrolled maximum value under the standard missing data procedures contained in subpart D of this part:~~

- ~~(1) Data demonstrating that the affected unit's monitor data availability for the time period under petition was less than 90.0 percent;~~
- ~~(2) Data demonstrating that the add-on emission controls were operating properly during the time period under petition (i.e., operating parameters were within the ranges specified for proper operation of the add-on emission controls in the quality assurance/quality control program for the unit);~~
- ~~(3) A list of the average hourly values for the previous 720 quality-assured monitor operating hours, highlighting both the maximum recorded value and the value corresponding to the maximum controlled emission rate; and~~ — (4) An explanation and information on operation of the add-on emission controls demonstrating that the selected historical SO₂ concentration or NO_x emission rate does not underestimate the SO₂ concentration or NO_x emission rate during the missing data period. **[Reserved]**

§ 75.66(g)

(g) *Petitions for emissions or heat input apportionments.* The designated representative of an affected unit shall provide information to describe a method for emissions or heat input apportionment under §§ 75.13, 75.16, 75.17, or appendix D of this part. This petition may be submitted as part of the monitoring plan. Such a petition shall contain, at a minimum, the following information:

- (1) A description of the units, including their fuel type, their boiler type, and their categorization as Phase I units, substitution units, compensating units, Phase II units, new units, or non-affected units;
- (2) A formula describing how the emissions or heat input are to be apportioned to which units;
- (3) A description of the methods and parameters used to apportion the emissions or heat input; and
- (4) Any other information necessary to demonstrate that the apportionment method

accurately measures emissions or heat input and does not underestimate emissions or heat input from affected units.

§ 75.66(h)

(h) *Partial recertification petition.* The designated representative of an affected unit may provide information and petition the Administrator to specify which of the certification tests required by § 75.20 apply for partial recertification of the affected unit. Such a petition shall include the following information:

- (1) Identification of the monitoring system(s) being changed;
- (2) A description of the changes being made to the system;
- (3) An explanation of why the changes are being made; and
- (4) A description of the possible effect upon the monitoring system's ability to measure, record, and report emissions.

§ 75.66(i)

[Reserved] *Emergency fuel petition.* The designated representative for an affected unit may submit a petition to the Administrator to use the emergency fuel provisions in section 2.1.4 of appendix E to this part. The designated representative shall include the following information in the petition:

- (1) Identification of the affected plant and unit(s);
- (2) A procedure for determining the NO_x emission rate for the unit when the emergency fuel is combusted; and
- (3) A demonstration that the permit restricts use of the fuel to emergencies only.

§ 75.66(j)

(j) *Petition for alternative method of accounting for emissions prior to completion of certification tests.* The designated representative for an affected unit may submit a petition to the Administrator to use an alternative to the procedures in § 75.4(d)(3), (e)(3), (f)(3) or (g)(3) to account for emissions during the period between the compliance date for a unit and the completion of certification testing for that unit. The designated representative shall include:

- (1) Identification of the affected unit(s);
- (2) A detailed explanation of the alternative method to account for emissions of the following parameters, as applicable: SO₂ mass emissions (in lbs), NO_x emission rate (in lbs/mmBtu), CO₂ mass emissions (in lbs) and, if the unit is subject to the requirements of subpart H of this part, NO_x mass emissions (in lbs); and
- (3) A demonstration that the proposed alternative does not underestimate emissions.

§ 75.66(k)

(k) *Petition for an alternative to the stabilization criteria for the cycle time test in section 6.4 of appendix A to this part.* The designated representative for an affected unit may submit a petition to the Administrator to use an alternative stabilization criteria for the cycle time test in section 6.4 of appendix A to this part, if the installed monitoring system does not record data in 1-minute or 3-minute intervals. The designated representative shall provide a description of the alternative criteria.

§ 75.66(l)

(l) *Any other petitions to the Administrator under this part.* Except for petitions addressed in paragraphs (b) through (k) of this section, any petition submitted under this paragraph shall include sufficient information for the evaluation of the petition, including, at a minimum, the following information:

- (1) Identification of the affected plant and unit(s);
- (2) A detailed explanation of why the proposed alternative is being suggested in lieu of the requirement;
- (3) A description and diagram of any equipment and procedures used in the proposed alternative, if applicable;
- (4) A demonstration that the proposed alternative is consistent with the purposes of the requirement for which the alternative is proposed and is consistent with the purposes of this part and of section 412 of the Act and that any adverse effect of approving such alternative will be *de minimis*; and
- (5) Any other relevant information that the Administrator may require.

§ 75.67

§ 75.67 Retired units petitions.

§ 75.67(a)

(a) [Reserved]

§ 75.67(b)

(b) For combustion sources seeking to enter the Opt-in Program in accordance with part 74 of this chapter that will be permanently retired and governed upon entry into the Opt-in Program

by a thermal energy plan in accordance with § 74.47 of this chapter, an exemption from the requirements of this part, including the requirement to install and certify a continuous emissions monitoring system, may be obtained from the Administrator if the designated representative submits to the Administrator a petition for such an exemption prior to the deadline in § 75.4 by which the continuous emission or opacity monitoring systems must complete the required certification tests.

Subpart H -- NO_x Mass Emissions Provisions

§ 75.70

§75.70 NO_x mass emissions provisions.

§ 75.70(a)

(a) *Applicability.* The owner or operator of a unit shall comply with the requirements of this subpart to the extent that compliance is required by an applicable State or federal NO_x mass emission reduction program that incorporates by reference, or otherwise adopts the provisions of, this subpart.

§ 75.70(a)(1)

(1) For purposes of this subpart, the term “affected unit” shall mean any unit that is subject to a State or federal NO_x mass emission reduction program requiring compliance with this subpart, the term “non-affected unit” shall mean any unit that is not subject to such a program, the term “permitting authority” shall mean the permitting authority under an applicable State or federal NO_x mass emission reduction program that adopts the requirements of this subpart, and the term “designated representative” shall mean the responsible party under the applicable State or federal NO_x mass emission reduction program that adopts the requirements of this subpart.

§ 75.70(a)(2)

(2) In addition, the provisions of subparts A, C, D, E, F, and G and appendices A through G of this part applicable to NO_x concentration, flow rate, NO_x emission rate and heat input, as set forth and referenced in this subpart, shall apply to the owner or operator of a unit required to meet the requirements of this subpart by a State or federal NO_x mass emission reduction program. When applying these requirements, the term “affected unit” shall mean any unit that is subject to a State or federal NO_x mass emission reduction program requiring compliance with this subpart, the term “permitting authority” shall mean the permitting authority under an applicable State or federal NO_x mass emission reduction program that adopts the requirements of this subpart, and the term “designated representative” shall mean the responsible party under the applicable State or federal NO_x mass emission reduction program that adopts the requirements of this subpart. The requirements of this part for SO₂, CO₂ and opacity monitoring, recordkeeping and reporting do not apply to units that are subject to a State or federal NO_x mass emission reduction program only and are not affected units with an Acid Rain emission limitation.

§ 75.70(b)

(b) *Compliance dates.* The owner or operator of an affected unit shall meet the compliance deadlines established by an applicable State or federal NO_x mass emission reduction program that adopts the requirements of this subpart.

§ 75.70(c)

(c) Prohibitions.

§ 75.70(c)(1)

(1) No owner or operator of an affected unit or a non-affected unit under § 75.72(b)(2)(ii) shall use any alternative monitoring system, alternative reference method, or any other alternative for the required continuous emission monitoring system without having obtained prior written approval in accordance with paragraph (h) of this section.

§ 75.70(c)(2)

(2) No owner or operator of an affected unit or a non-affected unit under § 75.72(b)(2)(ii) shall operate the unit so as to discharge, or allow to be discharged emissions of NO_x to the atmosphere without accounting for all such emissions in accordance with the applicable provisions of this part, except as provided in §75.74.

§ 75.70(c)(3)

(3) No owner or operator of an affected unit or a non-affected unit under § 75.72(b)(2)(ii) shall disrupt the continuous emission monitoring system, any portion thereof, or any other approved emission monitoring method, and thereby avoid monitoring and recording NO_x mass emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing, or maintenance is performed in accordance with the

provisions of this part applicable to monitoring systems under §75.71, except as provided in §75.74.

§ 75.70(c)(4)

(4) No owner or operator of an affected unit or a non-affected unit under § 75.72(b)(2)(ii) shall retire or permanently discontinue use of the continuous emission monitoring system, any component thereof, or any other approved emission monitoring system under this part, except under any one of the following circumstances:

(i) During the period that the unit is covered by a retired unit exemption that is in effect under the State or federal NO_x mass emission reduction program that adopts the requirements of this subpart;

(ii) The owner or operator is monitoring NO_x mass emissions from the affected unit with another certified monitoring system approved, in accordance with the provisions of paragraph (d) of this section; or

(iii) The designated representative submits notification of the date of certification testing of a replacement monitoring system in accordance with § 75.61.

§ 75.70(d)

(d) *Initial certification and recertification procedures.*

§ 75.70(d)(1)

(1) The owner or operator of an affected unit that is subject to an Acid Rain emissions limitation shall comply with the initial certification and recertification procedures in § 75.20 of this part, except that the owner or operator shall meet any additional requirements set forth in an applicable State or federal NO_x mass emission reduction program that adopts the requirements of this subpart.

§ 75.70(d)(2)

(2) The owner or operator of an affected unit that is not subject to an Acid Rain emissions limitation shall comply with the initial certification and recertification procedures established by an applicable State or federal NO_x mass emission reduction program that adopts the requirements of this subpart. The owner or operator of an affected unit that is subject to an Acid Rain emissions limitation shall comply with the initial certification and recertification procedures established by an applicable State or federal NO_x mass emission reduction program that adopts the requirements of this subpart for any additional NO_x-diluent CEMS, flow monitors, diluent monitors or NO_x concentration monitoring system required under the NO_x mass emissions provisions of §75.71 or the common stack provisions in § 75.72.

§ 75.70(e)

(e) *Quality assurance and quality control requirements.* For units that use continuous emission monitoring systems to account for NO_x mass emissions, the owner or operator shall meet the applicable quality assurance and quality control requirements in § 75.21, appendix B to this part, and § 75.74(c) for the NO_x-diluent continuous emission monitoring systems, flow monitoring systems, NO_x concentration monitoring systems, moisture monitoring systems, and diluent monitors required under § 75.71. Units using the low mass emissions excepted methodology under § 75.19 shall meet the applicable quality assurance requirements of that section, except as otherwise provided in § 75.74(c). Units using excepted monitoring methods under appendices D and E to this part shall meet the applicable quality assurance requirements of those appendices.

§ 75.70(f)

(f) *Missing data procedures.* Except as provided in § 75.34, paragraph (g) of this section, and § 75.74(c)(7), the owner or operator shall provide substitute data from monitoring systems required under § 75.71 for each affected unit as follows:

§ 75.70(f)(1)

(1) For an owner or operator using a continuous emissions monitoring system, substitute for missing data in accordance with the applicable missing data procedures in §§ 75.31 through 75.37 whenever the unit combusts fuel and:

(i) A valid, quality-assured hour of NO_x emission rate data (in lb/mmBtu) has not been measured and recorded for a unit by a certified NO_x-diluent continuous emission monitoring system or by an approved monitoring system under subpart E of this part;

(ii) A valid, quality-assured hour of flow data (in scfh) has not been measured and recorded for a unit from a certified flow monitor or by an approved alternative monitoring system under subpart E of this part;

(iii) A valid, quality-assured hour of heat input rate data (in mmBtu/hr) has not been measured and recorded for a unit from a certified flow monitor and a certified diluent (CO₂ or O₂) monitor or by an approved alternative monitoring system under subpart E of this part, where heat input is required either for calculating NO_x mass or allocating allowances under the applicable

State or federal NO_x mass emission reduction program that adopts the requirements of this subpart;

(iv) A valid, quality-assured hour of NO_x concentration data (in ppm) has not been measured and recorded by a certified NO_x concentration monitoring system, or by an approved alternative monitoring method under subpart E of this part, where the owner or operator chooses to use a NO_x concentration monitoring system with a flow monitor to calculate NO_x mass emissions. The initial missing data procedures for determining monitor data availability and the standard missing data procedures for a NO_x concentration monitoring system shall be the same as the procedures specified for a NO_x-diluent continuous emission monitoring system under §§ 75.31, 75.32, and 75.33; or

(v) A valid, quality-assured hour of moisture data (in percent H₂O) has not been measured or recorded for an affected unit, either by a certified moisture monitoring system or an approved alternative monitoring method under subpart E of this part. This requirement does not apply when a default percent moisture value, as provided in § 75.11(b) or § 75.12(b), is used to account for the hourly moisture content of the stack gas.

§ 75.70(f)(2)

(2) For an owner or operator using an excepted monitoring system under appendix D or E of this part, substitute for missing data in accordance with the missing data procedures in section 2.4 of appendix D to this part or in section 2.5 of appendix E to this part whenever the unit combusts fuel and:

(i) A valid, quality-assured hour of fuel flow rate data has not been measured and recorded by a certified fuel flowmeter that is part of an excepted monitoring system under appendix D or E of this part; or

(ii) A fuel sample value for gross calorific value, or if necessary, density or specific gravity, from a sample taken and analyzed in accordance with appendix D of this part is not available; or

(iii) A valid, quality-assured hour of NO_x emission rate data has not been obtained according to the procedures and specifications of appendix E to this part.

§ 75.70(g)

(g) *Reporting data prior to initial certification.* If the owner or operator of an affected unit has not successfully completed all certification tests required by the State or federal NO_x mass emission reduction program that adopts the requirements of this subpart by the applicable date required by that program, he or she shall determine, record and report hourly data prior to initial certification using one of the following procedures, consistent with the monitoring equipment to be certified:

(1) For units that the owner or operator intends to monitor for NO_x mass emissions using NO_x emission rate and heat input rate, the maximum potential NO_x emission rate and the maximum potential hourly heat input of the unit, as defined in § 72.2 of this chapter.

(2) For units that the owner or operator intends to monitor for NO_x mass emissions using a NO_x concentration monitoring system and a flow monitoring system, the maximum potential concentration of NO_x and the maximum potential flow rate, as defined in section 2.1.4.1 of appendix A to this part;

(3) For any unit, the reference methods under § 75.22 of this part.

(4) For any unit using the low mass emissions excepted monitoring methodology under § 75.19, the procedures in paragraphs (g)(1) or (2) of this section.

(5) Any unit using the procedures in paragraph (g)(2) of this section that is required to report heat input for purposes of allocating allowances shall also report the maximum potential hourly heat input of the unit, as defined in § 72.2 of this chapter.

(6) For any unit using continuous emissions monitors, the conditional data validation procedures in § 75.20(b)(3)(ii) through (b)(3)(ix).

§ 75.70(h)

(h) *Petitions.*

§ 75.70(h)(1)

(1) The designated representative of an affected unit that is subject to an Acid Rain emissions limitation may submit a petition to the Administrator requesting an alternative to any requirement of this subpart. Such a petition shall meet the requirements of § 75.66 and any additional requirements established by an applicable State or federal NO_x mass emission reduction program that adopts the requirements of this subpart. Use of an alternative to any requirement of this subpart is in accordance with this subpart and with such State or federal NO_x mass emission reduction program only to the extent that the petition is approved by the Administrator, in consultation with the permitting authority.

§ 75.70(h)(2)

(2) Notwithstanding paragraph (h)(1) of this section, petitions requesting an alternative to a

requirement concerning any additional CEMS required solely to meet the common stack provisions of § 75.72 shall be submitted to the permitting authority and the Administrator and shall be governed by paragraph (h)(3)(ii) of this section. Such a petition shall meet the requirements of § 75.66 and any additional requirements established by an applicable State or federal NO_x mass emission reduction program that adopts the requirements of this subpart.

§ 75.70(h)(3)

(3)(i) The designated representative of an affected unit that is not subject to an Acid Rain emissions limitation may submit a petition to the permitting authority and the Administrator requesting an alternative to any requirement of this subpart. Such a petition shall meet the requirements of § 75.66 and any additional requirements established by an applicable State or federal NO_x mass emission reduction program that adopts the requirements of this subpart.

(ii) Use of an alternative to any requirement of this subpart is in accordance with this subpart only to the extent that it is approved by the Administrator and by the permitting authority if required by an applicable State or federal NO_x mass emission reduction program that adopts the requirements of this subpart.

§ 75.71

§ 75.71 Specific provisions for monitoring NO_x ~~emission rate~~ and heat input for the purpose of calculating NO_x mass emissions.

§ 75.71(a)

(a) *Coal-fired units.* The owner or operator of a coal-fired affected unit shall either:

(1) Meet the general operating requirements in § 75.10 for a NO_x-diluent continuous emission monitoring system (consisting of a NO_x pollutant concentration monitor, an O₂ or CO₂ diluent gas monitor, and a data acquisition and handling system) to measure NO_x emission rate and for a flow monitoring system and an O₂ or CO₂ diluent gas monitoring ing system to measure heat input rate, except as provided in accordance with subpart E of this part; or

(2) Meet the general operating requirements in § 75.10 for a NO_x concentration monitoring system (consisting of a NO_x pollutant concentration monitor and a data acquisition and handling system) to measure NO_x concentration and for a flow monitoring system. In addition, if heat input is required to be reported under the applicable State or federal NO_x mass emission reduction program that adopts the requirements of this subpart, the owner or operator also must meet the general operating requirements for a flow monitoring system and an O₂ or CO₂ ~~diluent~~ gas monitoring ing system to measure heat input rate. These requirements must be met, except as provided in accordance with subpart E of this part.

§ 75.71(b)

(b) *Moisture correction.*

(1) If a correction for the stack gas moisture content is needed to properly calculate the NO_x emission rate in lb/mmBtu (e.g., if the NO_x pollutant concentration monitor in a NO_x-diluent monitoring system measures on a different moisture basis from the diluent monitor) or to calculate the heat input rate, the owner or operator of an affected unit shall account for the moisture content of the flue gas on a continuous basis in accordance with § 75.12(b).

(2) If a correction for the stack gas moisture content is needed to properly calculate NO_x mass emissions in tons, in the case where a NO_x concentration monitoring system which measures on a dry basis is used with a flow rate monitor to determine NO_x mass emissions, the owner or operator of an affected unit shall account for the moisture content of the flue gas on a continuous basis in accordance with § 75.11(b) except that the term "SO₂" shall be replaced by the term "NO_x."

(3) If a correction for the stack gas moisture content is needed to properly calculate NO_x mass emissions, in the case where a diluent monitor that measures on a dry basis is used with a flow rate monitor to determine heat input rate, which is then multiplied by the NO_x emission rate, the owner or operator shall install, operate, maintain, and quality assure a continuous moisture monitoring system, as described in § 75.11(b).

§ 75.71(c)

(c) *Gas-fired nonpeaking units or oil-fired nonpeaking units.* The owner or operator of an affected unit that, based on information submitted by the designated representative in the monitoring plan, qualifies as a gas-fired or oil-fired unit but not as a peaking unit, as defined in § 72.2 of this chapter, shall either:

(1) Meet the requirements of paragraph (a) of this section and, if applicable, paragraph (b) of this section; or

(2) Meet the general operating requirements in § 75.10 for a NO_x-diluent continuous emission monitoring system, except as provided in accordance with subpart E of this part, and use the procedures specified in appendix D to this part for determining hourly heat input rate. However, for a common pipe configuration, the heat input rate apportionment provisions in

section 2.1.2 of appendix D to this part shall not be used to meet the NO_x mass reporting provisions of this subpart, unless all of the units served by the common pipe are affected units and have similar efficiencies; or

(3) Meet the requirements of the low mass emissions excepted methodology under paragraph (e)(2) of this section and under § 75.19, if applicable.

§ 75.71(d)

(d) *Gas-fired or oil-fired peaking units.* The owner or operator of an affected unit that qualifies as a peaking unit and as either gas-fired or oil-fired, as defined in § 72.2 of this chapter, based on information submitted by the designated representative in the monitoring plan, shall either:

(1) Meet the requirements of paragraph (c) of this section; or

(2) Use the procedures in appendix D to this part for determining hourly heat input and the procedure specified in appendix E to this part for estimating hourly NO_x emission rate. However, for a common pipe configuration, the heat input apportionment provisions in section 2.1.2 of appendix D to this part shall not be used to meet the NO_x mass reporting provisions of this subpart unless all of the units served by the common pipe are affected units and have similar efficiencies. In addition, if after certification of an excepted monitoring system under appendix E to this part, the operation of a unit that reports emissions on an annual basis under § 75.74(a) of this part exceeds a capacity factor of 20.0 percent in any calendar year or exceeds an annual capacity factor of 10.0 percent averaged over three years, or the operation of a unit that reports emissions on an ozone season basis under § 75.74(b) of this part exceeds a capacity factor of 20.0 percent in any ozone season or exceeds an ozone season capacity factor of 10.0 percent averaged over three years, the owner or operator shall meet the requirements of paragraph (c)(1) or (c)(2) of this section by no later than December 31 of the following calendar year. If the required CEMS are not installed and certified by that date, the owner or operator shall report hourly NO_x mass emissions as the product of the maximum potential NO_x emission rate (MER) and the maximum hourly heat input of the unit (as defined in § 72.2 of this chapter), starting with the first unit operating hour after the deadline and continuing until the CEMS are provisionally certified.

§ 75.71(e)

(e) *Low mass emissions units.* Notwithstanding the requirements of paragraphs (c) and (d) of this section, ~~the owner or operator of an affected unit that qualifies as a low mass emissions unit under § 75.19(a) shall comply with one of the following:~~

~~(1) Meet the applicable requirements specified in paragraphs (c) or (d) of this section; or~~

~~(2) Use the low mass emissions excepted methodology in § 75.19(e) for estimating hourly emission rate, hourly heat input, and hourly NO_x mass emissions; for an affected unit using the low mass emissions (LME) unit under § 75.19 to estimate hourly NO_x emission rate, heat input and NO_x mass emissions, the owner or operator shall calculate the ozone season NO_x mass emissions by summing all of the estimated hourly NO_x mass emissions in the ozone season, as determined under § 75.19 (c)(4)(ii)(A), and dividing this sum by 2000 lb/ton.~~

§ 75.71(f)

(f) *Other units.* The owner or operator of an affected unit that combusts wood, refuse, or other materials shall comply with the monitoring provisions specified in paragraph (a) of this section and, where applicable, paragraph (b) of this section.

§ 75.72

§ 75.72 Determination of NO_x mass emissions for common stack and multiple stack configurations.

~~Except as provided in paragraphs (e) and (f) of this section, t~~The owner or operator of an affected unit shall either: calculate hourly NO_x mass emissions (in lbs) by multiplying the hourly NO_x emission rate (in lbs/mmBtu) by the hourly heat input rate (in mmBtu/hr) and the unit or stack operating time (as defined in § 72.2), or as provided in paragraph (e) of this section, calculate hourly NO_x mass emissions from the hourly NO_x concentration (in ppm) and the hourly stack flow rate (in scfh). Only one methodology for determining NO_x mass emissions shall be identified in the monitoring plan for each monitoring location at any given time. The owner or operator shall also calculate quarterly and cumulative year-to-date NO_x mass emissions and cumulative NO_x mass emissions for the ozone season (in tons) by summing the hourly NO_x mass emissions according to the procedures in section 8 of appendix F to this part.

§ 75.72(a)

(a) *Unit utilizing common stack with other affected unit(s).* When an affected unit utilizes a common stack with one or more affected units, but no nonaffected units, the owner or operator shall either:

§ 75.72(a)(1)

(1) Install, certify, operate, and maintain a NO_x-diluent continuous emissions monitoring system and a flow monitoring system in the common stack, record the combined NO_x mass emissions for the units exhausting to the common stack, and, for purposes of determining the hourly unit heat input rates, either:

- (i) Apportion the common stack heat input rate to the individual units according to the procedures in § 75.16(e)(3); or
- (ii) Install, certify, operate, and maintain a flow monitoring system and diluent monitor in the duct to the common stack from each unit; or
- (iii) If any of the units using the common stack are eligible to use the procedures in appendix D to this part,
 - (A) Use the procedures in appendix D to this part to determine heat input rate for that unit; and
 - (B) Install, certify, operate, and maintain a flow monitoring system and a diluent monitor in the duct to the common stack for each remaining unit; or

§ 75.72(a)(2)

(2) Install, certify, operate, and maintain a NO_x-diluent continuous emissions monitoring system in the duct to the common stack from each unit and, for purposes of heat input determination, either:

- (i) Install, certify, operate, and maintain a flow monitoring system in the duct to the common stack from each unit; or
- (ii) For any unit using the common stack and eligible to use the procedures in appendix D to this part,
 - (A) Use the procedures in appendix D to determine heat input rate for that unit; and
 - (B) Install, certify, operate, and maintain a flow monitoring system in the duct to the common stack for each remaining unit.

§ 75.72(b)

(b) *Unit utilizing common stack with nonaffected unit(s).* When one or more affected units utilizes a common stack with one or more nonaffected units, the owner or operator shall either:

§ 75.72(b)(1)

(1) Install, certify, operate, and maintain a NO_x-diluent continuous emission monitoring system in the duct to the common stack from each affected unit and, for purposes of heat input determination,

- (i) Install, certify, operate, and maintain a flow monitoring system in the duct to the common stack from each affected unit; or
- (ii) For any affected unit using the common stack and eligible to use the procedures in appendix D to this part,
 - (A) Use the procedures in appendix D to determine heat input for that unit; however, for a common pipe configuration, the heat input apportionment provisions in section 2.1.2 of appendix D to this part shall not be used to meet the NO_x mass reporting provisions of this subpart unless all of the units served by the common pipe are affected units and have similar efficiencies; and
 - (B) Install, certify, operate, and maintain a flow monitoring system in the duct to the common stack for each remaining affected unit that exhausts to the common stack; or

§ 75.72(b)(2)

(2) Install, certify, operate, and maintain a NO_x-diluent continuous emission monitoring system in the common stack; and

- (i) Designate the nonaffected units as affected units in accordance with the applicable State or federal NO_x mass emissions reduction program and meet the requirements of paragraph (a)(1) of this section; or
- (ii) Install, certify, operate, and maintain a flow monitoring system in the common stack and a NO_x-diluent continuous emission monitoring system in the duct to the common stack from each nonaffected unit. The designated representative shall submit a petition to the permitting authority and the Administrator to allow a method of calculating and reporting the NO_x mass emissions from the affected units as the difference between NO_x mass emissions measured in the common stack and NO_x mass emissions measured in the ducts of the nonaffected units, not to be reported as an hourly value less than zero. The permitting authority and the Administrator may approve such a method whenever the designated representative demonstrates, to the satisfaction of the permitting authority and the Administrator, that the method ensures that the NO_x mass emissions from the affected units are not underestimated. In addition, the owner or operator shall also either:
 - (A) Install, certify, operate, and maintain a flow monitoring system in the duct from each nonaffected unit or,
 - (B) For any nonaffected unit exhausting to the common stack and otherwise eligible to use the procedures in appendix D to this part, determine heat input rate using the procedures in

appendix D for that unit. However, for a common pipe serving both affected and non-affected units, the heat input rate apportionment provisions in section 2.1.2 of appendix D to this part shall not be used to meet the NO_x mass reporting provisions of this subpart. For any remaining nonaffected unit that exhausts to the common stack, install, certify, operate, and maintain a flow monitoring system in the duct to the common stack; or

(iii) Install a flow monitoring system in the common stack and record the combined emissions from all units as the combined NO_x mass emissions for the affected units for recordkeeping and compliance purposes, in accordance with paragraph (a) of this section; or

(iv) Submit a petition to the permitting authority and the Administrator to allow use of a method for apportioning NO_x mass emissions measured in the common stack to each of the units using the common stack and for reporting the NO_x mass emissions. The permitting authority and the Administrator may approve such a method whenever the designated representative demonstrates, to the satisfaction of the permitting authority and the Administrator, that the method ensures that the NO_x mass emissions from the affected units are not underestimated.

§ 75.72(c)

(c) *Unit with a main stack and a bypass stack.* Whenever any portion of the flue gases from an affected unit can be routed through a bypass stack to avoid the installed NO_x-diluent continuous emissions monitoring system or NO_x concentration monitoring system, the owner and operator shall either:

§ 75.72(c)(1)

(1) Install, certify, operate, and maintain separate NO_x-diluent continuous emissions monitoring systems and flow monitoring systems on the main stack and the bypass stack and calculate NO_x mass emissions for the unit as the sum of the NO_x mass emissions measured at the two stacks;

§ 75.72(c)(2)

(2) Monitor NO_x mass emissions at the main stack using a NO_x-diluent CEMS and a flow monitoring system and measure NO_x mass emissions at the bypass stack using the reference methods in § 75.22(b) for NO_x concentration, flow rate, and diluent gas concentration, or NO_x concentration and flow rate, and calculate NO_x mass emissions for the unit as the sum of the emissions recorded by the installed monitoring systems on the main stack and the emissions measured by the reference method monitoring systems; or

§ 75.72(c)(3)

(3) Install, certify, operate, and maintain a NO_x-diluent CEMS and a flow monitoring system only on the main stack. If this option is chosen, it is not necessary to designate the exhaust configuration as a multiple stack configuration in the monitoring plan required under § 75.53, since only the main stack is monitored. For each unit operating hour in which the bypass stack is used, report NO_x mass emissions as follows. If the unit heat input is determined using a flow monitor and a diluent monitor, report NO_x mass emissions using the maximum potential NO_x emission rate, the maximum potential flow rate, and either the maximum potential CO₂ concentration or the minimum potential O₂ concentration (as applicable). The maximum potential NO_x emission rate may be specific to the type of fuel combusted in the unit during the bypass (see § 75.33(c)(8)). If the unit heat input is determined using a fuel flowmeter, in accordance with appendix D to this part, report NO_x mass emissions as the product of the maximum potential NO_x emission rate and the actual measured hourly heat input rate.

§ 75.72(d)

(d) *Unit with multiple stack or duct configuration.* When the flue gases from an affected unit discharge to the atmosphere through more than one stack, or when the flue gases from an affected unit utilize two or more ducts feeding into a single stack and the owner or operator chooses to monitor in the ducts rather than in the stack, the owner or operator shall either:

§ 75.72(d)(1)

(1) Install, certify, operate, and maintain a NO_x-diluent continuous emission monitoring system and a flow monitoring system in each of the multiple stacks and determine NO_x mass emissions from the affected unit as the sum of the NO_x mass emissions recorded for each stack. If another unit also exhausts flue gases into one of the monitored stacks, the owner or operator shall comply with the applicable requirements of paragraphs (a) and (b) of this section, in order to properly determine the NO_x mass emissions from the units using that stack;

§ 75.72(d)(2)

(2) Install, certify, operate, and maintain a NO_x-diluent continuous emissions monitoring system and a flow monitoring system in each of the ducts that feed into the stack, and determine NO_x mass emissions from the affected unit using the sum of the NO_x mass emissions measured at each duct, except that where another unit also exhausts flue gases to one or more of the stacks, the owner or operator shall also comply with the applicable requirements of paragraphs (a) and (b) of

this section to determine and record NO_x mass emissions from the units using that stack; or

§ 75.72(d)(3)

(3) If the unit is eligible to use the procedures in appendix D to this part and if the conditions and restrictions of § 75.17(c)(2) are fully met, install, certify, operate, and maintain a NO_x-diluent continuous emissions monitoring system in one of the ducts feeding into the stack or in one of the multiple stacks, (as applicable) in accordance with § 75.17(c)(2), and use the procedures in appendix D to this part to determine heat input rate for the unit.

§ 75.72(e)

(e) *Units using a NO_x concentration monitoring system and a flow monitoring system to determine NO_x mass.* The owner or operator may use a NO_x concentration monitoring system and a flow monitoring system to determine NO_x mass emissions for the cases described in paragraphs (a) through (c) of this section and in paragraph (d)(1) or paragraph (d)(2) of this section (in place of a NO_x-diluent continuous emissions monitoring system and a flow monitoring system). However, this option may not be used for the case described in paragraph (d)(3) of this section. When using this approach, calculate NO_x mass according to sections 8.2 and 8.3 in appendix F to this part. In addition, if an applicable State or federal NO_x mass reduction program requires determination of a unit's heat input, the owner or operator must either:

(1) Install, certify, operate, and maintain a CO₂ or O₂ diluent monitor in the same location as each flow monitoring system. In addition, the owner or operator must provide heat input rate values for each unit utilizing a common stack. The owner or operator may either:

(i) Apportion heat input rate from the common stack to each unit according to § 75.16(e)(3), where all units utilizing the common stack are affected units, or

(ii) Measure heat input from each affected unit, using a flow monitor and a CO₂ or O₂ diluent monitor in the duct from each affected unit; or

(2) For units that are eligible to use appendix D to this part, use the procedures in appendix D to this part to determine heat input rate for the unit. However, the use of a fuel flowmeter in a common pipe header and the provisions of sections 2.1.2.1 and 2.1.2.2 of appendix D of this part are not applicable to any unit that is using the provisions of this subpart to monitor, record, and report NO_x mass emissions under a State or federal NO_x mass emission reduction program and that shares a common pipe with a nonaffected unit.

§ 75.72(f)

~~(f) *Units using the low mass emitter excepted methodology under § 75.19.* For units that are using the low mass emitter excepted methodology under § 75.19, calculate ozone season NO_x mass emissions by summing all of the hourly NO_x mass emissions in the ozone season, as determined under paragraph § 75.19(e)(4)(ii)(A) of this section, divided by 2000 lb/ton. [Reserved]~~

§ 75.72(g)

(g) *Procedures for apportioning heat input to the unit level.* If the owner or operator of a unit using the common stack monitoring provisions in paragraphs (a) or (b) of this section does not monitor and record heat input at the unit level and the owner or operator is required to do so under an applicable State or federal NO_x mass emission reduction program, apportion heat input from the common stack to each unit according to § 75.16(e)(3).

§ 75.73

§ 75.73 Recordkeeping and reporting.

§ 75.73(a)

(a) *General recordkeeping provisions.* The owner or operator of any affected unit shall maintain for each affected unit and each non-affected unit under § 75.72(b)(2)(ii) 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. Except for the certification data required in § 75.57(a)(4) and the initial submission of the monitoring plan required in § 75.57(a)(5), the data shall be collected beginning with the earlier of the date of provisional certification or the compliance deadline in § 75.70(b). The certification data required in § 75.57(a)(4) shall be collected beginning with the date of the first certification test performed. The file shall contain the following information:

§ 75.73(a)(1)

(1) The information required in §§ 75.57(a)(2), (a)(4), (a)(5), (a)(6), (b), (c)(2), (d), (g), and (h).

§ 75.73(a)(2)

(2) The information required in §§ 75.58(b)(2) or (b)(3) (for units with add-on NO_x emission controls), as applicable, (d) (as applicable for units using Appendix E to this part), and (f) (as applicable for units using the low mass emissions unit provisions of § 75.19).

- § 75.73(a)(3) (3) For each hour when the unit is operating, NO_x mass emissions, calculated in accordance with section 8.1 of appendix F to this part.
- § 75.73(a)(4) (4) During the second and third calendar quarters, cumulative ozone season heat input and cumulative ozone season operating hours.
- § 75.73(a)(5) (5) Heat input and NO_x methodologies for the hour.
- § 75.73(a)(6) (6) *Specific heat input record provisions for gas-fired or oil-fired units using the procedures in appendix D to this part.* In lieu of the information required in § 75.57(c)(2), the owner or operator shall record the information in § 75.58(c) for each affected gas-fired or oil-fired unit and each non-affected gas- or oil-fired unit under § 75.72(b)(2)(ii) for which the owner or operator is using the procedures in appendix D to this part for estimating heat input.
- § 75.73(a)(7) (7) *Specific NO_x record provisions for gas-fired or oil-fired units using the optional low mass emissions excepted methodology in § 75.19.* In lieu of recording the information in §§ 75.57(b), (c)(2), (d), and (g), the owner or operator shall record, for each hour when the unit is operating for any portion of the hour, the following information for each affected low mass emissions unit for which the owner or operator is using the low mass emissions excepted methodology in § 75.19(c):
- (i) Date and hour;
 - (ii) If one type of fuel is combusted in the hour, fuel type (pipeline natural gas, natural gas, residual oil, or diesel fuel) or, if more than one type of fuel is combusted in the hour, the fuel type which results in the highest emission factors for NO_x; (iii) Average hourly NO_x emission rate (in lb/mmBtu, rounded to the nearest thousandth); and
 - (iv) Hourly NO_x mass emissions (in lbs, rounded to the nearest tenth).
- § 75.73(a)(8) (8) Formulas from monitoring plan for total NO_x mass.
- § 75.73(b) (b) *Certification, quality assurance and quality control record provisions.* The owner or operator of any affected unit shall record the applicable information in § 75.59 for each affected unit or group of units monitored at a common stack and each non-affected unit under § 75.72(b)(2)(ii).
- § 75.73(c) (c) *Monitoring plan recordkeeping provisions.*
- § 75.73(c)(1) (1) *General provisions.* The owner or operator of an affected unit shall prepare and maintain a monitoring plan for each affected unit or group of units monitored at a common stack and each non-affected unit under § 75.72(b)(2)(ii). Except as provided in paragraph (d) or (f) of this section, a monitoring plan shall contain sufficient information on the continuous emission monitoring systems, excepted methodology under § 75.19, or excepted monitoring systems under appendix D or E to this part and the use of data derived from these systems to demonstrate that all the unit's NO_x emissions are monitored and reported.
- § 75.73(c)(2) (2) Whenever the owner or operator makes a replacement, modification, or change in the certified continuous emission monitoring system, excepted methodology under § 75.19, excepted monitoring system under appendix D or E to this part, or alternative monitoring system under subpart E of this part, including a change in the automated data acquisition and handling system or in the flue gas handling system, that affects information reported in the monitoring plan (e.g., a change to a serial number for a component of a monitoring system), then the owner or operator shall update the monitoring plan.
- § 75.73(c)(3) (3) *Contents of the monitoring plan for units not subject to an Acid Rain emissions limitation.* Prior to January 1, 2009, Each each monitoring plan shall contain the information in § 75.53(e)(1) or § 75.53(g)(1) in electronic format and the information in § 75.53(e)(2) or § 75.53(g)(2) in hardcopy format. On and after January 1, 2009, each monitoring plan shall contain the information in § 75(g)(1) in electronic format and § 75.53(g)(2) in hardcopy format, only. In addition, to the extent applicable, prior to January 1, 2009, each monitoring plan shall contain the information in § 75.53-paragraphs (f)(1)(i), (f)(2)(i), and (f)(4) or § 75.53- (h)(1)(ii) and (h)(2)(i) in electronic format and the information in § 75.53-paragraphs (f)(1)(ii) and (f)(2)(ii) or § 75.53(h)(1)(i)and (h)(2)(ii) in hardcopy format. On and after January 1, 2009, each monitoring plan shall contain the information in § 75.53-paragraphs (h)(1)(i), and (h)(2)(i) in electronic

~~format and the information in § 75.53, paragraphs (h)(1)(ii) and (h)(2)(ii) in hardcopy format, only. For units using the low mass emissions excepted methodology under § 75.19, prior to January 1, 2009, the monitoring plan shall include the additional information in § 75.53, paragraphs (f)(5)(i) and (f)(5)(ii) or § 75.53(h)(4)(i) and (h)(4)(ii). On and after January 1, 2009, for units using the low mass emissions excepted methodology under § 75.19 the monitoring plan shall include the additional information in § 75.53, paragraphs (h)(4)(i) and (h)(4)(ii), only. Prior to January 1, 2008, the monitoring plan shall also shall identify, in electronic format, the reporting schedule for the affected unit (ozone season or quarterly), and the beginning and end dates for the reporting schedule. The monitoring plan also shall include a seasonal controls indicator, and ozone season fuel switching flag, and whether year-round reporting for the unit is required by a State or local agency.~~

§ 75.73(d)

(d) *General reporting provisions.*

§ 75.73(d)(1)

(1) The designated representative for an affected unit shall comply with all reporting requirements in this section and with any additional requirements set forth in an applicable State or federal NO_x mass emission reduction program that adopts the requirements of this subpart.

§ 75.73(d)(2)

(2) The designated representative for an affected unit shall submit the following for each affected unit or group of units monitored at a common stack and each non-affected unit under § 75.72(b)(2)(ii):

- (i) Initial certification and recertification applications in accordance with § 75.70(d);
- (ii) Monitoring plans in accordance with paragraph (e) of this section; and
- (iii) Quarterly reports in accordance with paragraph (f) of this section.

§ 75.73(d)(3)

(3) *Other petitions and communications.* The designated representative for an affected unit shall submit petitions, correspondence, application forms, and petition-related test results in accordance with the provisions in § 75.70(h).

§ 75.73(d)(4)

(4) *Quality assurance RATA reports.* If requested by the permitting authority, the designated representative of an affected unit shall submit the quality assurance RATA report for each affected unit or group of units monitored at a common stack and each non-affected unit under § 75.72(b)(2)(ii) by the later of 45 days after completing a quality assurance RATA according to section 2.3 of appendix B to this part or 15 days of receiving the request. The designated representative shall report the hardcopy information required by § 75.59(a)(9) to the permitting authority.

§ 75.73(d)(5)

(5) *Notifications.* The designated representative for an affected unit shall submit written notice to the permitting authority according to the provisions in § 75.61 for each affected unit or group of units monitored at a common stack and each non-affected unit under § 75.72(b)(2)(ii).

§ 75.73(d)(6)

(6) *Routine appendix E retest reports.* If requested by the applicable EPA Regional Office, appropriate State, and/or appropriate local air pollution control agency, the designated representative shall submit a hardcopy report within 45 days after completing a required periodic retest according to section 2.2 of appendix E to this part, or within 15 days of receiving the request, whichever is later. The designated representative shall report the hardcopy information required by § 75.59(b)(5) to the applicable EPA Regional Office, appropriate State, and/or appropriate local air pollution control agency that requested the hardcopy report.

§ 75.73(e)

(e) *Monitoring plan reporting.*

§ 75.73(e)(1)

(1) *Electronic submission.* The designated representative for an affected unit shall submit to the Administrator a complete, electronic, up-to-date monitoring plan file for each affected unit or group of units monitored at a common stack and each non-affected unit under § 75.72(b)(2)(ii), no later than ~~45-21~~ days prior to the initial certification test; at the time of a certification or recertification application submission; and whenever an update of the electronic monitoring plan is required, either under § 75.53 or elsewhere in this part.

§ 75.73(e)(2)

(2) *Hardcopy submission.* The designated representative of an affected unit shall submit all of the hardcopy information required under § 75.53, for each affected unit or group of units monitored at a common stack and each nonaffected unit under § 75.72(b)(2)(ii), to the permitting authority prior to initial certification. Thereafter, the designated representative shall submit

hardcopy information only if that portion of the monitoring plan is revised. The designated representative shall submit the required hardcopy information as follows: no later than ~~45-21~~ days prior to the initial certification test; with any certification or recertification application, if a hardcopy monitoring plan change is associated with the recertification event; and within 30 days of any other event with which a hardcopy monitoring plan change is associated, pursuant to § 75.53(b). Electronic submittal of all monitoring plan information, including hardcopy portions, is permissible provided that a paper copy of the hardcopy portions can be furnished upon request.

§ 75.73(f)

(f) *Quarterly reports.*

§ 75.73(f)(1)

(1) *Electronic submission.* The designated representative for an affected unit shall electronically report the data and information in this paragraph (f)(1) and in paragraphs (f)(2) and (3) of this section to the Administrator quarterly, unless the unit has been placed in long-term cold storage (as defined in § 72.2 of this chapter). For units placed into long-term cold storage during a reporting quarter, the exemption from submitting quarterly reports begins with the calendar quarter following the date that the unit is placed into long-term cold storage. In such cases, the owner or operator shall submit quarterly reports for the unit beginning with the data from the quarter in which the unit recommences operation (where the initial quarterly report contains hourly data beginning with the first hour of recommenced operation of the unit). Each electronic report must be submitted to the Administrator within 30 days following the end of each calendar quarter. Except as otherwise provided in §§ 75.64(a)(4) and (a)(5), eEach electronic report shall include ~~the date of report generation,~~ for the information provided in paragraphs (f)(1)(ii) through (1)(vi) of this section, and shall also include the date of report generation. Prior to January 1, 2009, each report shall include the facility information provided in paragraphs (f)(1)(i)(A) and (B). On and after January 1, 2009, only the facility identification information provided in paragraph (f)(1)(i)(A) is required.

§ 75.73(f)(1)(i)

- (i) Facility information:
 - (A) Identification, including:
 - (1) Facility/ORISPL number;
 - (2) Calendar quarter and year data contained in the report; and
 - (3) Electronic data reporting format version used for the report.
 - (B) Location of facility, including:
 - (1) Plant name and facility identification code;
 - (2) EPA AIRS facility system identification code;
 - (3) State facility identification code;
 - (4) Source category/type;
 - (5) Primary SIC code;
 - (6) State postal abbreviation;
 - (7) FIPS county code; and
 - (8) Latitude and longitude.

§ 75.73(f)(1)(ii)

- (ii) The information and hourly data required in paragraphs (a) and (b) of this section, except for:
- (A) Descriptions of adjustments, corrective action, and maintenance;
 - (B) Information which is incompatible with electronic reporting (e.g., field data sheets, lab analyses, quality control plan);
 - (C) For units with NO_x add-on emission controls that do not elect to use the approved site-specific parametric monitoring procedures for calculation of substitute data, the information in § 75.58(b)(3);
 - (D) Information required by § 75.57(h) concerning the causes of any missing data periods and the actions taken to cure such causes;
 - (E) Hardcopy monitoring plan information required by § 75.53 and hardcopy test data and results required by § 75.59;
 - (F) Records of flow polynomial equations and numerical values required by § 75.59(a)(5)(vi);
 - (G) Daily fuel sampling information required by § 75.58(c)(3)(i) for units using assumed values under appendix D;
 - (H) Information required by § 75.59(b)(2) concerning transmitter or transducer accuracy tests;
 - (I) Stratification test results required as part of the RATA supplementary records under § 75.59(a)(7);

(J) Data and results of RATAs that are aborted or invalidated due to problems with the reference method or operational problems with the unit and data and results of linearity checks that are aborted or invalidated due to operational problems with the unit; and

(K) Supplementary RATA information required under § 75.59(a)(7)(i) through § 75.59(a)(7)(v), except that: ~~the data under § 75.59(a)(7)(ii)(A) through (T) and the data under § 75.59(a)(7)(iii)(A) through (M) shall, as applicable, be reported for flow RATAs in which angular compensation (measurement of pitch and/or yaw angles) is used and for flow RATAs in which a site specific wall effects adjustment factor is determined by direct measurement; and the data under § 75.59(a)(7)(ii)(T) shall be reported for all flow RATAs in which a default wall effects adjustment factor is applied.~~

(1) The applicable data elements under § 75.59(a)(7)(ii)(A) through (T) and under § 75.59(a)(7)(iii)(A) through (M) shall be reported for flow RATAs at circular or rectangular stacks (or ducts) in which angular compensation for yaw and/or pitch angles is used (i.e., Method 2F or 2G), with or without wall effects adjustments;

(2) The applicable data elements under § 75.59(a)(7)(ii)(A) through (T) and under § 75.59(a)(7)(iii)(A) through (M) shall be reported for any flow RATA run at a circular stack in which Method 2 is used and a wall effects adjustment factor is determined by direct measurement;

(3) The data under § 75.59(a)(7)(ii)(T) shall be reported for all flow RATAs at circular stacks in which Method 2 is used and a default wall effects adjustment factor is applied; and

(4) The data under § 75.59(a)(7)(ix)(A) through (F) shall be reported for all flow RATAs at rectangular stacks or ducts in which Method 2 is used and a wall effects adjustment factor is applied.

- § 75.73(f)(1)(iii) (iii) Average NO_x emission rate (lb/mmBtu, rounded to the nearest thousandth) during the quarter and cumulative NO_x emission rate for the calendar year.
- § 75.73(f)(1)(iv) (iv) Tons of NO_x emitted during quarter, cumulative tons of NO_x emitted during the year, and, during the second and third calendar quarters, cumulative tons of NO_x emitted during the ozone season.
- § 75.73(f)(1)(v) (v) During the second and third calendar quarters, cumulative heat input for the ozone season.
- § 75.73(f)(1)(vi) (vi) Unit or stack or common pipe header operating hours for quarter, cumulative unit, stack or common pipe header operating hours for calendar year, and, during the second and third calendar quarters, cumulative operating hours during the ozone season.
- § 75.73(f)(1)(vii) (vii) Reporting period heat input.
- § 75.73(f)(1)(viii) (viii) New reporting frequency and begin date of the new reporting frequency (if applicable).
- § 75.73(f)(2) (2) The designated representative shall certify that the component and system identification codes and formulas in the quarterly electronic reports submitted to the Administrator pursuant to paragraph (e) of this section represent current operating conditions.
- § 75.73(f)(3) (3) *Compliance certification.* The designated representative shall submit and sign a compliance certification in support of each quarterly emissions monitoring report based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The certification shall state that:
- (i) The monitoring data submitted were recorded in accordance with the applicable requirements of this part, including the quality assurance procedures and specifications; and
- (ii) With regard to a unit with add-on emission controls and for all hours where data are substituted in accordance with § 75.34(a)(1), the add-on emission controls were operating within the range of parameters listed in the monitoring plan and the substitute values do not systematically underestimate NO_x emissions.
- § 75.73(f)(4) (4) The designated representative shall comply with all of the quarterly reporting requirements in §§ 75.64(d), (f), and (g).

§ 75.74

§ 75.74 Annual and ozone season monitoring and reporting requirements.

§ 75.74(a)

(a) *Annual monitoring requirement.* (1) The owner or operator of an affected unit subject both to an Acid Rain emission limitation and to a State or federal NO_x mass reduction program that adopts the provisions of this part must meet the requirements of this part during the entire calendar year.

(2) The owner or operator of an affected unit subject to a State or federal NO_x mass reduction program that adopts the provisions of this part and that requires monitoring and reporting of hourly emissions on an annual basis must meet the requirements of this part during the entire calendar year.

§ 75.74(b)

(b) *Ozone season monitoring requirements.* The owner or operator of an affected unit that is not required to meet the requirements of this subpart on an annual basis under paragraph (a) may either:

(1) Meet the requirements of this subpart on an annual basis; or

(2) Meet the requirements of this subpart during the ozone season, except as specified in paragraph (c) of this section.

§ 75.74(c)

(c) If the owner or operator of an affected unit chooses to meet the requirements of this subpart on less than an annual basis in accordance with paragraph (b)(2) of this section, then:

§ 75.74(c)(1)

(1) The owner or operator of a unit that uses continuous emissions monitoring systems or a fuel flowmeter to meet any of the requirements of this subpart shall quality assure the hourly ozone season emission data required by this subpart. To achieve this, the owner or operator shall operate, maintain and calibrate each required CEMS and shall perform diagnostic testing and quality assurance testing of each required CEMS or fuel flowmeter according to the applicable provisions of paragraphs (c)(2) through (c)(5) of this section. Except where otherwise noted, the provisions of paragraphs (c)(2) and (c)(3) of this section apply instead of the quality assurance provisions in sections 2.1 through 2.3 of appendix B to this part, and shall be used in lieu of those appendix B provisions.

§ 75.74(c)(2)

(2) *Quality assurance requirements prior to the ozone season.* The provisions of this paragraph apply to each ozone season. ~~In the time period prior to the start of the current ozone season (i.e., in the period extending from October 1 of the previous calendar year through April 30 of the current calendar year),~~ the owner or operator shall, at a minimum, perform the following diagnostic testing and quality assurance assessments, and shall maintain the following records, to ensure that the hourly emission data recorded at the beginning of the current ozone season are suitable for reporting as quality-assured data:

§ 75.74(c)(2)(i)

(i) For each required gas monitor (i.e., for each NO_x pollutant concentration monitor and each diluent gas (CO₂ or O₂) monitor, including CO₂ and O₂ monitors used exclusively for heat input determination and O₂ monitors used for moisture determination), a linearity check shall be performed and passed in the second calendar quarter no later than April 30.

(A) Conduct each linearity check in accordance with the general procedures in section 6.2 of appendix A to this part, except that the data validation procedures in sections 6.2(a) through (f) of appendix A do not apply.

(B) Each linearity check shall be done "hands-off," as described in section 2.2.3(c) of appendix B to this part.

(C) In the time period extending from the date and hour in which the linearity check is passed through April 30 ~~of the current calendar year~~, the owner or operator shall operate and maintain the CEMS and shall perform daily calibration error tests of the CEMS in accordance with section 2.1 of appendix B to this part. When a calibration error test is failed, as described in section 2.1.4 of appendix B to this part, corrective actions shall be taken. The additional calibration error test provisions of section 2.1.3 of appendix B to this part shall be followed. ~~Records of the required daily calibration error tests shall be kept in a format suitable for inspection on a year-round basis.~~

(D) If the linearity check is not completed by April 30, data validation shall be determined in accordance with paragraph (c)(3)(ii)(E) of this section. (D) Exceptions.

(1) If the monitor passed a linearity check on or after January 1 of the previous year and the unit or stack on which the monitor is located operated for fewer than 336 unit or stack operating hours (as defined in § 72.2 of this chapter) in the previous ozone season, the owner or operator may have a grace period of up to 168 unit or stack operating hours to perform a linearity check, subject to the restrictions in this paragraph and in paragraph (c)(3)(xii) of this section, and the owner or operator may continue to submit quality assured data from that monitor as long as all

~~other required quality assurance tests are passed. If the unit or stack operates for more than the allowable grace period of 168 unit or stack operating hours in the current ozone season without a linearity check of the monitor having been performed, the owner or operator of the unit shall either report data from a certified backup monitoring system or reference method or shall report substitute data using the missing data procedures under paragraph (c)(7) of this section, starting with the first unit or stack operating hour after the grace period expires and continuing until the successful completion of a linearity check. Note that the grace period shall not extend beyond the end of the third calendar quarter.~~

~~(2) If a monitor does not qualify for an exception under paragraph (c)(2)(i)(D)(1) and if a required linearity check has not been completed prior to the start of the current ozone season, follow the applicable procedures in paragraph (c)(3)(vi) of this section.~~

§ 75.74(c)(2)(ii)

(ii) For each required CEMS (i.e., for each NO_x concentration monitoring system, each NO_x-diluent monitoring system, each flow rate monitoring system, each moisture monitoring system and each diluent gas CEMS used exclusively for heat input determination), a relative accuracy test audit (RATA) shall be performed and passed in the first or second calendar quarter, but no later than April 30. Notwithstanding this requirement, a pre-ozone season RATA need not be performed between October 1 and April 30, if a RATA was passed during the previous ozone season and if the conditions in paragraph (c)(3)(vii) of this section are met, thereby ensuring that the data from the CEMS are quality-assured at the beginning of the current ozone season.

§ 75.74(c)(2)(ii)(A)

(A) Conduct each RATA in accordance with the applicable procedures in sections 6.5 through 6.5.10 of appendix A to this part, except that the data validation procedures in sections 6.5(f)(1) through (f)(6) do not apply, and, for flow rate monitoring systems, the required RATA load level(s) (or operating level(s)) shall be as specified in this paragraph.

§ 75.74(c)(2)(ii)(B)

(B) Each RATA shall be done "hands-off," as described in section 2.3.2 (c) of appendix B to this part. The provisions in section 2.3.1.4 of appendix B to this part, pertaining to the number of allowable RATA attempts, shall apply.

§ 75.74(c)(2)(ii)(C)

(C) For flow rate monitoring systems installed on peaking units or bypass stacks and for flow monitors exempted from multiple-level RATA testing under section 6.5.2 (e) of appendix A to this part, a single-load (or single-level) RATA is required. For all other flow rate monitoring systems, a 2-load (or 2-level) RATA is required at the two most frequently-used load or operating levels (as defined under section 6.5.2.1 of appendix A to this part), with the following exceptions. Except for flow monitors exempted from 3-level RATA testing under section 6.5.2 (e) of appendix A to this part, a 3-load flow RATA is required at least once every five years and is also required if the flow monitor polynomial coefficients or K factor(s) are changed prior to conducting the flow RATA required under this paragraph.

§ 75.74(c)(2)(ii)(D)

(D) A bias test of each required NO_x concentration monitoring system, each NO_x-diluent monitoring system and each flow rate monitoring system shall be performed in accordance with section 7.6 of appendix A to this part. If the bias test is failed, a bias adjustment factor (BAF) shall be calculated for the monitoring system, as described in section 7.6.5 of appendix A to this part and shall be applied to the subsequent data recorded by the CEMS.

§ 75.74(c)(2)(ii)(E)

(E) In the time period extending from the hour of completion of the required RATA through April 30 ~~of the current calendar year~~, the owner or operator shall operate and maintain the CEMS by performing, at a minimum, the following activities:

(1) The owner or operator shall perform daily calibration error tests and (if applicable) daily flow monitor interference checks, according to section 2.1 of appendix B to this part. When a daily calibration error test or interference check is failed, as described in section 2.1.4 of appendix B to this part, corrective actions shall be taken. The additional calibration error test provisions in section 2.1.3 of appendix B to this part shall be followed. Records of the required daily calibration error tests and interference checks shall be kept in a format suitable for inspection on a year-round basis.

(2) If the owner or operator makes a replacement, modification, or change in a certified monitoring system that significantly affects the ability of the system to accurately measure or record NO_x mass emissions or heat input or to meet the requirements of § 75.21 or appendix B to this part, the owner or operator shall recertify the monitoring system according to § 75.20(b).

§ 75.74(c)(2)(ii)(F)

(F) Data Validation.

For each RATA that is performed by April 30, data validation shall be done according to sections 2.3.2(a) - (j) of appendix B to this part. However, if a required RATA is not completed by April 30, data from the monitoring system shall be invalid, beginning with the first unit operating hour on or after May 1. The owner or operator shall continue to invalidate all data from the CEMS until either:

(1) The required RATA of the CEMS has been performed and passed; or

(2) A probationary calibration error test of the CEMS is passed in accordance with § 75.20(b)(3)(ii). Once the probationary calibration error test has been passed, the owner or operator shall perform the required RATA in accordance with the conditional data validation provisions and within the 720 unit or stack operating hour time frame specified in § 75.20(b)(3) (subject to the restrictions in paragraph (c)(3)(xii) of this section), and the term "quality assurance" shall apply instead of the term "recertification." However, in lieu of the provisions in § 75.20(b)(3)(ix), the owner or operator shall follow the applicable provisions in paragraphs (c)(3)(xi) and (c)(3)(xii) of this section.

(F) If the results of a RATA performed according to the provisions of this paragraph indicate that the CEMS qualifies for an annual RATA frequency (see Figure 2 in appendix B to this part), the RATA may be used to quality assure data for the entire current ozone season.

§ 75.74(c)(2)(ii)(G)

(G) If the results of a RATA performed according to the provisions of this paragraph indicate that the CEMS qualifies for a semiannual RATA frequency rather than an annual frequency, provided that the RATA was completed on or after January 1 of the current calendar year, the RATA may be used to quality assure data for the entire current ozone season. However, if the RATA was performed in the fourth calendar quarter of the previous year, the RATA may only be used to quality assure data for a part of the current ozone season, from May 1 through June 30. An additional RATA is then required by June 30 of the current calendar year to quality assure the remainder of the data (from June 30 through September 30) for the current ozone season. If such an additional RATA is required but is not completed by June 30 of the current calendar year, data from the CEMS shall be considered invalid as of the first unit or stack operating hour subsequent to June 30 of the current calendar year and shall remain invalid until the required RATA is performed and passed.

§ 75.74(c)(2)(ii)(H)

(H) Exceptions:

(1) If the monitoring system passed a RATA on or after January 1 of the previous year and the unit or stack on which the monitor is located operated for fewer than 336 unit or stack operating hours (as defined in § 72.2 of this chapter) in the previous ozone season, the owner or operator may have a grace period of up to 720 unit or stack operating hours to perform a RATA, subject to the restrictions in this paragraph and in paragraph (c)(3)(xii) of this section, and the owner or operator may continue to report quality assured data from that monitor as long as all other required quality assurance tests are passed. If the unit or stack operates for more than the allowable grace period of 720 unit or stack operating hours in the current ozone season, without a RATA of the monitoring system having been performed, the owner or operator of the unit or stack shall either report data from a certified backup monitoring system or reference method or shall report substitute data using the missing data procedures under paragraph (c)(7) of this section, starting with the first unit operating hour after the grace period expires and continuing until the successful completion of the RATA. Note that the grace period shall not extend beyond the end of the third calendar quarter.

(2) If a monitor does not qualify for a grace period under paragraph (c)(2)(ii)(H)(1) of this section and if a required RATA has not been completed prior to the start of the current ozone season, follow the applicable procedures in paragraph (c)(3)(vi) of this section.

§ 75.74(c)(3)

(3) Quality assurance requirements within the ozone season. The provisions of this paragraph apply to each ozone season. The owner or operator shall, at a minimum, perform the following quality assurance testing during the ozone season, i.e. in the time period extending from May 1 through September 30 of each calendar year:

§ 75.74(c)(3)(i)

(i) Daily calibration error tests and (if applicable) interference checks of each CEMS required by this subpart shall be performed in accordance with sections 2.1.1 and 2.1.2 of appendix B to this part. The applicable provisions in sections 2.1.3, 2.1.4 and 2.1.5 of appendix B to this part, pertaining, respectively, to additional calibration error tests and calibration adjustments, data validation, and quality assurance of data with respect to daily assessments, shall also apply.

§ 75.74(c)(3)(ii)

(ii) For each gas monitor required by this subpart, linearity checks shall be performed in the second and third calendar quarters, as follows:

(A) For the second calendar quarter, the pre-ozone season linearity check required under paragraph (c)(2)(i) of this section shall be performed by April 30.

(B) For the third calendar quarter, a linearity check shall be performed and passed no later than July 30.

(C) Conduct each linearity check in accordance with the general procedures in section 6.2 of appendix A to this part, except that the data validation procedures in sections 6.2(a) through (f) of appendix A do not apply.

(D) Each linearity check shall be done "hands-off," as described in section 2.2.3(c) of appendix B to this part.

(E) Data Validation.

For second and third quarter linearity checks performed by the applicable deadline (i.e., April 30 or July 30), data validation shall be done in accordance with sections 2.2.3(a), (b), (c), (e), and (h) of Appendix B to this part. However, if a required linearity check for the second calendar quarter is not completed by April 30, or if a required linearity check for the third calendar quarter is not completed by July 30, data from the monitoring system (or range) shall be invalid, beginning with the first unit operating hour on or after May 1 or July 31, respectively. The owner or operator shall continue to invalidate all data from the CEMS until either:

(1) The required linearity check of the CEMS has been performed and passed; or

(2) A probationary calibration error test of the CEMS is passed in accordance with § 75.20(b)(3)(ii). Once the probationary calibration error test has been passed, the owner or operator shall perform the required linearity check in accordance with the conditional data validation provisions and within the 168 unit or stack operating hour time frame specified in § 75.20(b)(3) (subject to the restrictions in paragraph (c)(3)(xii) of this section), and the term "quality assurance" shall apply instead of the term "recertification." However, in lieu of the provisions in § 75.20(b)(3)(ix), the owner or operator shall follow the applicable provisions in paragraphs (c)(3)(xi) and (c)(3)(xii) of this section.

(F) A pre-season linearity check performed and passed in April satisfies the linearity check requirement for the second quarter.

(G) The third quarter linearity check requirement in paragraph (c)(3)(ii)(B) of this section is waived if:

(1) Due to infrequent unit operation, the 168 operating hour conditional data validation period associated with a pre-season linearity check extends into the third quarter; and

(2) A linearity check is performed and passed within that conditional data validation period, in accordance with section 2.2.1 of appendix B to this part (see also paragraph (c)(3)(vii) of this section). For the second calendar quarter of the year, only unit or stack operating hours in the months of May and June shall be included when determining whether the second calendar quarter is a "QA operating quarter" (as defined in § 72.2 of this chapter). Data validation for these linearity checks shall be done in accordance with sections 2.2.3(a) through (e) of appendix B to this part. The grace period provision in section 2.2.4 of appendix B to this part does not apply to these linearity checks. If the required linearity check has not been completed by the end of the calendar quarter, unless the conditional data validation provisions of § 75.20(b)(3) are applied, data from the CEMS are considered to be invalid, beginning with the first unit or stack operating hour after the end of the quarter and shall remain invalid until a linearity check of the CEMS is performed and passed.

§ 75.74(c)(3)(iii)

(iii) For each flow monitoring system required by this subpart, except for flow monitors installed on non-load-based units that do not produce electrical or thermal output, flow-to-load ratio tests are required in the second and third calendar quarters, in accordance with section 2.2.5 of appendix B to this part. If the flow-to-load ratio test for the second calendar quarter is failed, the owner or operator shall follow the procedures in section 2.2.5(c)(8) of appendix B to this part. If the flow-to-load ratio test for the third calendar quarter is failed, data from the flow monitor shall be considered invalid at the beginning of the next ozone season unless, prior to May 1 of the next calendar year, the owner or operator has either successfully implemented Option 1 in section 2.2.5.1 of appendix B to this part or Option 2 in section 2.2.5.2 of appendix B to this part, or unless a flow RATA has been performed and passed in accordance with paragraph (c)(2)(ii) of this section.

§ 75.74(c)(3)(iv)

(iv) For each differential pressure-type flow monitor used to meet the requirements of this subpart, quarterly leak checks are required in the second and third calendar quarters, in accordance with section 2.2.2 of appendix B to this part. For the second calendar quarter of the year, only the unit or stack operating hours in the months of May and June shall be used to determine whether the second calendar quarter is a QA operating quarter (as defined in § 72.2 of this chapter). Data validation for quarterly flow monitor leak checks shall be done in accordance with section 2.2.3(g) of appendix B to this part. If the leak check for the third calendar quarter is failed and a subsequent leak check is not passed by the end of the ozone season, then data from the flow monitor shall be considered invalid at the beginning of the next ozone season unless a leak check is passed prior to May 1 of the next calendar year.

§ 75.74(c)(3)(v)

(v) A fuel flow-to-load ratio test in section 2.1.7 of appendix D to this part shall be performed in the second and third calendar quarters if, for a unit using a fuel flowmeter to determine heat input under this subpart, the owner or operator has elected to use the fuel flow-to-load ratio test to extend the deadline for the next fuel flowmeter accuracy test. Automatic deadline extensions may be claimed for the two calendar quarters outside the ozone season (the first and fourth calendar quarters), since a fuel flow-to-load ratio test is not required in those quarters. If a fuel flow-to-load ratio test is failed, follow the applicable procedures and data validation provisions in section 2.1.7.4 of appendix D to this part. If the fuel flow-to-load ratio test for the third calendar quarter is failed, data from the fuel flowmeter shall be considered invalid at the beginning of the next ozone season unless the requirements of section 2.1.7.4 of appendix D to this part have been fully met prior to May 1 of the next calendar year.

§ 75.74(c)(3)(vi)

~~(vi) If, at the start of the current ozone season (i.e., as of May 1 of the current calendar year), the linearity check or RATA required under paragraph (c)(2)(i) or (c)(2)(ii) of this section has not been performed for a particular monitor or monitoring system, and if, during the previous ozone season, the unit or stack on which the monitoring system is installed operated for 336 hours or more the owner or operator shall invalidate all data from the CEMS until either:~~

~~(A) The required linearity check or RATA of the CEMS has been performed and passed; or~~

~~(B) A probationary calibration error test of the CEMS is passed in accordance with § 75.20(b)(3)(ii). Note that a calibration error test passed on April 30 may be used as the probationary calibration error test, to ensure that emission data recorded by the CEMS at the beginning of the ozone season will have a conditionally valid status. Once the probationary calibration error test has been passed, the owner or operator shall perform the required linearity check or RATA in accordance with the conditional data validation provisions and within the associated timelines in § 75.20(b)(3) (subject to the restrictions in paragraph (c)(3)(xii) of this section), with the term "diagnostic" applying instead of the term "recertification." However, in lieu of the provisions in § 75.20(b)(3)(ix), the owner or operator shall follow the applicable provisions in paragraphs (c)(3)(xi) and (c)(3)(xii) of this section.~~[Reserved]

§ 75.74(c)(3)(vii)

~~(vii) A RATA which is performed and passed during the second or third quarter of the current calendar year may be used to quality assure data in the next ozone season, provided that:~~

~~(A) The results of the RATA indicate that the CEMS qualifies for an annual RATA frequency (see Figure 2 in appendix B to this part); and~~

~~(B) The CEMS is continuously operated and maintained, and daily calibration error tests and (if applicable) interference checks of the CEMS are performed in the time period extending from the end of the current ozone season (October 1 of the current calendar year) through April 30 of the next calendar year; and~~

~~(C) For a gas monitoring system, the linearity check requirement of paragraph (c)(2)(i) of this section is met prior to May 1 of the next calendar year.~~

~~(D) If conditions in paragraphs (c)(3)(vii) (A), (B) and, if applicable, (c)(3)(vii)(C) of this section are met, then a RATA completed and passed in the second or third calendar quarter of the current year may be used to quality assure data for the next ozone season, as follows:~~

~~(1) If the RATA is completed and passed in the second calendar quarter of the current year, the RATA may be used to quality assure data from the CEMS through June 30 of the next calendar year.~~

~~(2) If the RATA is completed and passed in the third calendar quarter of the current year, the RATA may be used to quality assure data from the CEMS through September 30 of the next calendar year.~~[Reserved]

§ 75.74(c)(3)(viii)

~~(viii) If a linearity check performed to meet the requirement of paragraph (c)(2)(i) of this section is completed and passed in the second calendar quarter of the current year, provided that~~

~~the date and hour of completion of the test is within the first 168 unit or stack operating hours of the current ozone season, the linearity check may be used to satisfy both the requirement of paragraph (e)(2)(i) of this section and to meet the second quarter linearity check requirement of paragraph (e)(3)(ii) of this section.~~[Reserved]

§ 75.74(c)(3)(ix)

(ix) If, for any required CEMS, diagnostic linearity checks or RATAs other than those required by this section are performed during the ozone season, use the applicable data validation procedures in section 2.2.3 (for linearity checks) or 2.3.2 (for RATAs) of appendix B to this part.

§ 75.74(c)(3)(x)

(x) If any required CEMS is recertified within the ozone season, use the data validation provisions in § 75.20(b)(3) and, if applicable, paragraphs (c)(3)(xi) and (c)(3)(xii) of this section.

§ 75.74(c)(3)(xi)

(xi) If, at the end of the second quarter of any calendar year, a required quality assurance, diagnostic, or recertification test of a monitoring system has not been completed, and if data contained in the quarterly report are conditionally valid pending the results of test(s) to be completed in a subsequent quarter, the owner or operator shall indicate this by means of a suitable conditionally valid data flag in the electronic quarterly report for the second calendar quarter. The owner or operator shall resubmit the report for the second quarter if the required quality assurance, diagnostic, or recertification test is subsequently failed. In the resubmitted report, the owner or operator shall use the appropriate missing data routine in § 75.31, ~~§ 75.33, or through~~ § 75.37 to replace with substitute data each hour of conditionally valid data that was invalidated by the failed quality assurance, diagnostic, or recertification test. Alternatively, if any required quality assurance, diagnostic, or recertification test is not completed by the end of the second calendar quarter but is completed no later than 30 days after the end of that quarter (i.e., prior to the deadline for submitting the quarterly report under § 75.73), the test data and results may be submitted with the second quarter report even though the test date(s) are from the third calendar quarter. In such instances, if the quality assurance, diagnostic, or recertification test(s) are passed in accordance with the conditional data validation provisions of § 75.20(b)(3), conditionally valid data may be reported as quality-assured, in lieu of reporting a conditional data flag. If the tests are failed and if conditionally valid data are replaced, as appropriate, with substitute data, then neither the reporting of a conditional data flag nor resubmission is required.

§ 75.74(c)(3)(xii)

(xii) If, at the end of the third quarter of any calendar year, a required quality assurance, diagnostic or recertification test of a monitoring system has not been completed, and if data contained in the quarterly report are conditionally valid pending the results of test(s) to be completed, the owner or operator shall do one of the following:

§ 75.74(c)(3)(xii)(A)

(A) If the results of the required tests are not available within 30 days of the end of the third calendar quarter and cannot be submitted with the quarterly report for the third calendar quarter, then the test results are considered to be missing and the owner or operator shall use the appropriate missing data routine in § 75.31, ~~§ 75.33, or through~~ § 75.37 to replace with substitute data each hour of conditionally valid data in the third quarter report. In addition, if the data in the second quarterly report were flagged as conditionally valid at the end of the quarter, pending the results of the same missing tests, the owner or operator shall resubmit the report for the second quarter and shall use the appropriate missing data routine in § 75.31, ~~§ 75.33, or through~~ § 75.37 to replace with substitute data each hour of conditionally valid data associated with the missing quality assurance, diagnostic, or recertification tests; or

§ 75.74(c)(3)(xii)(B)

(B) If the required quality assurance, diagnostic, or recertification tests are completed no later than 30 days after the end of the third calendar quarter, the test data and results may be submitted with the third quarter report even though the test date(s) are from the fourth calendar quarter. In this instance, if the required tests are passed in accordance with the conditional data validation provisions of § 75.20(b)(3), all conditionally valid data associated with the tests shall be reported as quality assured. If the tests are failed, the owner or operator shall use the appropriate missing data routine in § 75.31, ~~§ 75.33, or through~~ § 75.37 to replace with substitute data each hour of conditionally valid data associated with the failed test(s). In addition, if the data in the second quarterly report were flagged as conditionally valid at the end of the quarter, pending the results of the same failed test(s), the owner or operator shall resubmit the report for the second quarter and shall use the appropriate missing data routine in § 75.31, ~~§ 75.33, or through~~ § 75.37 to replace with substitute data each hour of conditionally valid data associated with the failed test(s).

§ 75.74(c)(4)

(4) The owner or operator of a unit using the procedures in appendix D of this part to determine heat input rate is required to maintain fuel flowmeters only during the ozone season, except that for purposes of determining the deadline for the next periodic quality assurance test on the fuel flowmeter, the owner or operator shall include all fuel flowmeter QA operating quarters (as defined in § 72.2) for the entire calendar year, not just fuel flowmeter QA operating quarters in the ozone season. For each calendar year, the owner or operator shall record, for each fuel flowmeter, the number of fuel flowmeter QA operating quarters. The owner or operator shall include all calendar quarters in the year when determining the deadline for visual inspection of the primary fuel flowmeter element, as specified in section 2.1.6(c) of appendix D to this part.

§ 75.74(c)(5)

(5) The owner or operator of a unit using the procedures in appendix D of this part to determine heat input rate is only required to sample fuel for the purposes of determining density and GCV during the ozone season, except that:

(i) The owner or operator of a unit that performs sampling from the fuel storage tank upon delivery must sample the tank between the date and hour of the most recent delivery before the first date and hour that the unit operates in the ozone season and the first date and hour that the unit operates in the ozone season.

(ii) The owner or operator of a unit that performs sampling upon delivery from the delivery vehicle must ensure that all shipments received during the calendar year are sampled.

(iii) The owner or operator of a unit that performs sampling on each day the unit combusts fuel or that performs fuel sampling continuously must sample the fuel starting on the first day the unit operates during the ozone season. The owner or operator then shall use that sampled value for all hours of combustion during the first day of unit operation, continuing until the date and hour of the next sample.

§ 75.74(c)(6)

(6) The owner or operator shall, in accordance with § 75.73, record and report the hourly data required by this subpart and shall record and report the results of all required quality assurance tests, as follows:

(i) All hourly emission data for the period of time from May 1 through September 30 of each calendar year shall be recorded and reported. For missing data purposes, only the data recorded in the time period from May 1 through September 30 shall be considered quality-assured;

(ii) The results of all daily calibration error tests and flow monitor interference checks performed in the time period from May 1 through September 30 shall be recorded and reported;

(iii) For the time periods described in paragraphs (c)(2)(i)(C) and (c)(2)(ii)(E) of this section, hourly emission data and the results of all daily calibration error tests and flow monitor interference checks shall be recorded. The results of all daily calibration error tests and flow monitor interference checks performed in the time period from April 1 through April 30 shall be reported. The owner or operator ~~may also report the hourly emission data and unit operating data recorded in the time period from April 1 through April 30. However, only the emission data recorded in the time period from May 1 through September 30 shall be used for NO_x mass compliance determination;~~ shall also report unit operating data recorded in the time period from April 1 through April 30 beginning with the day of the first required daily calibration error test or flow monitor interference check performed whenever the XML reporting format is used. The owner or operator may also report the hourly emission data in the time period from April 1 through April 30. However, only the emission data recorded in the time period from May 1 through September 30 shall be used for NO_x mass compliance determination;

(iv) The results of all required quality assurance tests (RATAs, linearity checks, flow-to-load ratio tests and leak checks) performed during the ozone season shall be reported in the appropriate ozone season quarterly report; and

(v) The results of RATAs (and any other quality assurance test(s) required under paragraph (c)(2) or (c)(3) of this section) which affect data validation for the current ozone season, but which were performed outside the ozone season (i.e., between ~~October 1 of the previous calendar year~~ January 1 and April 30 of the current calendar year), shall be reported in the quarterly report for the second quarter of the current calendar year (or in the report for the third calendar quarter of the current calendar year, if the unit or stack does not operate in the second quarter).

§ 75.74(c)(7)

(7) The owner or operator shall use only quality-assured data from within ozone seasons in the substitute data procedures under subpart D of this part and section 2.4.2 of appendix D to this part.

§ 75.74(c)(7)(i)

(i) The lookback periods (e.g., 2160 quality-assured monitor operating hours for a NO_x-

diluent continuous emission monitoring system, a NO_x concentration monitoring system, or a flow monitoring system) used to calculate missing data must include only quality-assured data from periods within ozone seasons.

§ 75.74(c)(7)(ii)

(ii) The applicable missing data procedures of §§ 75.31 through 75.37 shall be used, with one exception. When a fuel which has a significantly higher NO_x emission rate than any of the fuel(s) combusted in prior ozone seasons is combusted in the unit, and no quality-assured NO_x data have been recorded in the current, or any previous, ozone season while combusting the new fuel, the owner or operator shall substitute the maximum potential NO_x emission rate, as defined in § 72.2 of this chapter, from a NO_x-diluent continuous emission monitoring system, or the maximum potential concentration of NO_x, as defined in section 2.1.2.1 of appendix A to this part, from a NO_x concentration monitoring system. The maximum potential value used shall be specific to the new fuel. The owner or operator shall substitute the maximum potential value for each hour of missing NO_x data until the first hour that quality-assured NO_x data are obtained while combusting the new fuel, and then shall resume use of the missing data routines in §§ 75.31 through 75.37 ; and

§ 75.74(c)(7)(iii)

(iii) In order to apply the missing data routines described in §§ 75.31 through 75.37 on an ozone season-only basis, the procedures in those sections shall be modified as follows:

(A) The use of the initial missing data procedures in § 75.31 shall commence with the first unit operating hour in the first ozone season for which emissions data are required to be reported under § 75.64.

(B) In § 75.31(a), the phrases "During the first 720 quality-assured monitor operating hours within the ozone season" and "during the first 2,160 quality-assured monitor operating hours within the ozone season" apply respectively instead of the phrases "During the first 720 quality-assured monitor operating hours" and "during the first 2,160 quality-assured monitor operating hours".

(C) In § 75.32(a), the phrases "the first 720 quality-assured monitor operating hours within the ozone season" and "the first 2,160 quality-assured monitor operating hours within the ozone season" apply, respectively, instead of the phrases "the first 720 quality-assured monitor operating hours" and "the first 2,160 quality-assured monitor operating hours".

(D) In § 75.32(a)(1), the phrase "Following initial certification, prior to completion of 3,672 unit (or stack) operating hours within the ozone season" applies instead of the phrase "Prior to completion of 8,760 unit (or stack) operating hours following initial certification".

(E) In Equation 8, the phrase "Total unit operating hours within the ozone season" applies instead of the phrase "Total unit operating hours".

(F) In § 75.32(a)(2), the phrase "3,672 unit (or stack) operating hours within the ozone season" applies instead of the phrase "8,760 unit (or stack) operating hours".

(G) In the numerator of Equation 9, the phrase "Total unit operating hours within the ozone season" applies instead of the phrase "Total unit operating hours", and the phrase "3,672 unit operating hours within the ozone season" applies instead of the phrase "8,760 unit operating hours". In the denominator of Equation 9, the number "3,672" applies instead of "8,760."

(H) Use the following instead of the first three sentences in § 75.32(a)(3): "When calculating percent monitor data availability using Equation 8 or 9, the owner or operator shall include all unit or stack operating hours within the ozone season, and all monitor operating hours within the ozone season for which quality-assured data were recorded by a certified primary monitor; a certified redundant or non-redundant backup monitor or a reference method for that unit; or by an approved alternative monitoring system under subpart E of this part. No hours from more than three years (26,280 clock hours) earlier shall be used in Equation 9. For a unit that has accumulated fewer than 3,672 ozone season operating hours in the previous three years, use the following: in the numerator of Equation 9 use 'Total unit operating hours within the ozone season for which quality-assured data were recorded in the previous three years'; and in the denominator of Equation 9 use 'Total unit operating hours within the ozone season, in the previous three years'."

(I) In § 75.33(a), the phrases "the first 720 quality-assured monitor operating hours within the ozone season" and "the first 2,160 quality-assured monitor operating hours within the ozone season" apply, respectively, instead of the phrases "the first 720 quality-assured monitor operating hours" and "the first 2,160 quality-assured monitor operating hours".

(J) Instead of the last sentence of § 75.33(a), use "For the purposes of missing data substitution, the owner or operator of a unit shall use only quality-assured monitor operating hours of data that were recorded within the ozone season and no more than three years (26,280 clock hours) prior to the date and time of the missing data period."

(K) In §§ 75.33(b), 75.33(c), 75.35, 75.36, and 75.37, the phrases "720 quality-assured monitor operating hours within the ozone season" and "2,160 quality-assured monitor operating hours within the ozone season" apply, respectively, instead of the phrases "720 quality-assured monitor operating hours" and "2,160 quality-assured monitor operating hours."

(L) In § 75.34(a)(3), the phrase "720 quality-assured monitor operating hours within the ozone season" applies instead of "720 quality-assured monitor operating hours".

§ 75.74(c)(8)

(8) The owner or operator of a unit with NO_x add-on emission controls or a unit capable of combusting more than one fuel shall keep records during ozone season in a form suitable for inspection to demonstrate that the typical NO_x emission rate or NO_x concentration during the prior ozone season(s) included in the missing data lookback period is representative of the ozone season in which missing data are substituted and that use of the missing data procedures will not systematically underestimate NO_x mass emissions. These records shall include:

(i) For units that can combust more than one fuel, the fuel or fuels combusted each hour; and

(ii) For units with add-on emission controls, using the missing data options in § 75.34(a)(1) through § 75.34(a)(3), the range of operating parameters for add-on emission controls, as described in §75.34(a) and information for verifying proper operation of the add-on emission controls during missing data periods, as described in §75.34(d).

§ 75.74(c)(9)

(9) The designated representative shall certify with each quarterly report that NO_x emission rate values or NO_x concentration values substituted for missing data under subpart D of this part are calculated using only values from an ozone season, that substitute values measured during the prior ozone season(s) included in the missing data lookback period are representative of the ozone season in which missing data are substituted, and that NO_x emissions are not systematically underestimated.

§ 75.74(c)(10)

(10) Units may qualify to use the low mass emissions excepted monitoring methodology in § 75.19 on an ozone season basis. In order to be allowed to use this methodology, a unit may not emit more than 50 tons of NO_x per ozone season, as provided in § 75.19 (a)(1)(i)(A)(3).

If any low mass emissions unit fails to provide a demonstration that its ozone season NO_x mass emissions are less than or equal to 50 tons, then the unit is disqualified from using the methodology. The owner or operator must install and certify any equipment needed to ensure that the unit is monitored using an acceptable methodology by December 31 of the following year.

§ 75.74(c)(11)

(11) Units may qualify to use the optional NO_x mass emissions estimation protocol for gas-fired ~~peaking units~~ and oil-fired peaking units in appendix E to this part on an ozone season basis. In order to be allowed to use this methodology, the unit must meet the definition of "peaking unit" in § 72.2 of this ~~chapter, except that the words "year," "calendar year," and "calendar years" in that definition shall be replaced by the words "ozone season," "ozone season," and "ozone seasons," respectively. In addition, in the definition of the term "capacity factor" in § 72.2 of this chapter, the word "annual" shall be replaced by the words "ozone season" and the number "8,760" shall be replaced by the number "3,672".~~ ~~part, except that the word "calendar year" shall be replaced by the word "ozone season" and the word annual in the definition of the term "capacity factor" in § 72.2 of this part, shall be replaced by the word "ozone season".~~

§ 75.75

§ 75.75 Additional ozone season calculation procedures for special circumstances.

§ 75.75(a)

(a) The owner or operator of a unit that is required to calculate ozone season heat input for purposes of providing data needed for determining allocations, shall do so by summing the unit's hourly heat input determined according to the procedures in this part for all hours in which the unit operated during the ozone season.

§ 75.75(b)

(b) The owner or operator of a unit that is required to determine ozone season NO_x emission rate (in lbs/mmBtu) shall do so by dividing ozone season NO_x mass emissions (in lbs) determined in accordance with this subpart, by heat input determined in accordance with paragraph (a) of this section.

Subpart I -- Hg Mass Emission Provisions

§ 75.80

§ 75.80 General provisions.

- § 75.80(a) (a) *Applicability.* The owner or operator of a unit shall comply with the requirements of this subpart to the extent that compliance is required by an applicable State or Federal Hg mass emission reduction program that incorporates by reference, or otherwise adopts the provisions of, this subpart.
- (1) For purposes of this subpart, the term “affected unit” shall mean any coal-fired unit (as defined in § 72.2 of this chapter) that is subject to a State or Federal Hg mass emission reduction program requiring compliance with this subpart. The term “non-affected unit” shall mean any unit that is not subject to such a program, the term “permitting authority” shall mean the permitting authority under an applicable State or Federal Hg mass emission reduction program that adopts the requirements of this subpart, and the term “designated representative” shall mean the responsible party under the applicable State or Federal Hg mass emission reduction program that adopts the requirements of this subpart.
- (2) In addition, the provisions of subparts A, C, D, E, F, and G and appendices A through G of this part applicable to Hg concentration, flow rate, moisture, diluent gas concentration, and heat input, as set forth and referenced in this subpart, shall apply to the owner or operator of a unit required to meet the requirements of this subpart by a State or Federal Hg mass emission reduction program. The requirements of this part for SO₂, NO_x, CO₂ and opacity monitoring, recordkeeping and reporting do not apply to units that are subject only to a State or Federal Hg mass emission reduction program that adopts the requirements of this subpart, but are not affected units under the Acid Rain Program or under a State or Federal NO_x mass emission reduction program that adopts the requirements of subpart H of this part.
- § 75.80(b) (b) *Compliance dates.* The owner or operator of an affected unit shall meet the compliance deadlines established by an applicable State or Federal Hg mass emission reduction program that adopts the requirements of this subpart.
- § 75.80(c) (c) *Prohibitions.*
- § 75.80(c)(1) (1) No owner or operator of an affected unit or a nonaffected unit under § 75.82(b)(2)(ii) shall use any alternative monitoring system, alternative reference method, or any other alternative for the required continuous emission monitoring system without having obtained prior written approval in accordance with paragraph (h) of this section.
- § 75.80(c)(2) (2) No owner or operator of an affected unit or a non-affected unit under § 75.82(b)(2)(ii) shall operate the unit so as to discharge, or allow to be discharged emissions of Hg to the atmosphere without accounting for all such emissions in accordance with the applicable provisions of this part.
- § 75.80(c)(3) (3) No owner or operator of an affected unit or a non-affected unit under § 75.82(b)(2)(ii) shall disrupt the continuous emission monitoring system, any portion thereof, or any other approved emission monitoring method, and thereby avoid monitoring and recording Hg mass emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing, or maintenance is performed in accordance with the provisions of this part applicable to monitoring systems under § 75.81.
- § 75.80(c)(4) (4) No owner or operator of an affected unit or a non-affected unit under § 75.82(b)(2)(ii) shall retire or permanently discontinue use of the continuous emission monitoring system, any component thereof, or any other approved emission monitoring system under this part, except under any one of the following circumstances:
- (i) During the period that the unit is covered by a retired unit exemption that is in effect under the State or Federal Hg mass emission reduction program that adopts the requirements of this subpart; or
- (ii) The owner or operator is monitoring Hg mass emissions from the affected unit with another certified monitoring system approved, in accordance with the provisions of paragraph (d) of this section; or
- (iii) The designated representative submits notification of the date of certification testing of a replacement monitoring system in accordance with § 75.61.
- § 75.80(d) (d) *Initial certification and recertification procedures.*
- (1) The owner or operator of an affected unit that is subject to the Acid Rain Program or to a State or Federal NO_x mass emission reduction program that adopts the requirements of subpart H of this part shall comply with the applicable initial certification and recertification procedures in §

75.20 and § 75.70(d), except that the owner or operator shall meet any additional requirements for Hg concentration monitoring systems, sorbent trap monitoring systems (as defined in § 72.2 of this chapter), flow monitors, CO₂ monitors, O₂ monitors, or moisture monitors, as set forth under § 75.81, under the common stack provisions in § 75.82, or under an applicable State or Federal Hg mass emission reduction program that adopts the requirements of this subpart.

(2) The owner or operator of an affected unit that is not subject to the Acid Rain Program or to a State or Federal NO_x mass emission reduction program that adopts the requirements of subpart H of this part shall comply with the initial certification and recertification procedures established by an applicable State or Federal Hg mass emission reduction program that adopts the requirements of this subpart.

§ 75.80(e)

(e) Quality assurance and quality control requirements. For units that use continuous emission monitoring systems to account for Hg mass emissions, the owner or operator shall meet the applicable quality assurance and quality control requirements in § 75.21 and appendix B to this part for the flow monitoring systems, Hg concentration monitoring systems, moisture monitoring systems, and diluent monitors required under § 75.81. Units using sorbent trap monitoring systems shall meet the applicable quality assurance requirements in § 75.15, appendix K to this part, and sections 1.5 and 2.3 of appendix B to this part.

§ 75.80(f)

(f) Missing data procedures. Except as provided in § 75.38(b) and paragraph (g) of this section, the owner or operator shall provide substitute data from monitoring systems required under § 75.81 for each affected unit as follows:

§ 75.80(f)(1)

(1) For an owner or operator using an Hg concentration monitoring system, substitute for missing data in accordance with the applicable missing data procedures in §§ 75.31 through 75.38 whenever the unit combusts fuel and:

(i) A valid, quality-assured hour of Hg concentration data (in µg/scm) has not been measured and recorded, either by a certified Hg concentration monitoring system, by an appropriate EPA reference method under § 75.22, or by an approved alternative monitoring method under subpart E of this part; or

(ii) A valid, quality-assured hour of flow rate data (in scfh) has not been measured and recorded for a unit either by a certified flow monitor, by an appropriate EPA reference method under § 75.22, or by an approved alternative monitoring system under subpart E of this part; or

(iii) A valid, quality-assured hour of moisture data (in percent H₂O) has not been measured or recorded for an affected unit, either by a certified moisture monitoring system, by an appropriate EPA reference method under § 75.22, or an approved alternative monitoring method under subpart E of this part. This requirement does not apply when a default percent moisture value, as provided in § 75.11(b) or § 75.12(b), is used to account for the hourly moisture content of the stack gas, or when correction of the Hg concentration for moisture is not necessary; or

(iv) A valid, quality-assured hour of heat input rate data (in MMBtu/hr) has not been measured and recorded for a unit, either by certified flow rate and diluent (CO₂ or O₂) monitors, by appropriate EPA reference methods under § 75.22, or by approved alternative monitoring systems under subpart E of this part, where heat input is required for allocating allowances under the applicable State or Federal Hg mass emission reduction program that adopts the requirements of this subpart.

§ 75.80(f)(2)

(2) For an owner or operator using a sorbent trap monitoring system to quantify Hg mass emissions, substitute for missing data in accordance with the missing data procedures in § 75.39.

§ 75.80(g)

(g) Reporting data prior to initial certification. If, by the applicable compliance date under the State or Federal Hg mass emission reduction program that adopts the requirements of this subpart, the owner or operator of an affected unit has not successfully completed all required certification tests for any monitoring system(s), he or she shall determine, record and report hourly data prior to initial certification using one of the following procedures, for the monitoring system(s) that are uncertified:

(1) For Hg concentration and flow monitoring systems, report the maximum potential concentration of Hg as defined in section 2.1.7 of appendix A to this part and the maximum potential flow rate, as defined in section 2.1.4.1 of appendix A to this part; or

(2) For any unit, report data from the reference methods under § 75.22; or

(3) For any unit that is required to report heat input for purposes of allocating allowances, report (as applicable) the maximum potential flow rate, as defined in section 2.1.4.1 of appendix A to this part, the maximum potential CO₂ concentration, as defined in section 2.1.3.1 of

appendix A to this part, the minimum potential O₂ concentration, as defined in section 2.1.3.2 of appendix A to this part, and the minimum potential percent moisture, as defined in section 2.1.5 of appendix A to this part.

§ 75.80(h)

(h) *Petitions.*

(1) The designated representative of an affected unit that is also subject to the Acid Rain Program may submit a petition to the Administrator requesting an alternative to any requirement of this subpart. Such a petition shall meet the requirements of § 75.66 and any additional requirements established by the applicable State or Federal Hg mass emission reduction program that adopts the requirements of this subpart. Use of an alternative to any requirement of this subpart is in accordance with this subpart and with such State or Federal Hg mass emission reduction program only to the extent that the petition is approved in writing by the Administrator, in consultation with the permitting authority.

(2) Notwithstanding paragraph (h)(1) of this section, petitions requesting an alternative to a requirement concerning any additional CEMS required solely to meet the common stack provisions of § 75.82 shall be submitted to the permitting authority and the Administrator and shall be governed by paragraph (h)(3) of this section. Such a petition shall meet the requirements of § 75.66 and any additional requirements established by an applicable State or Federal Hg mass emission reduction program that adopts the requirements of this subpart.

(3) The designated representative of an affected unit that is not subject to the Acid Rain Program may submit a petition to the permitting authority and the Administrator requesting an alternative to any requirement of this subpart. Such a petition shall meet the requirements of § 75.66 and any additional requirements established by the applicable State or Federal Hg mass emission reduction program that adopts the requirements of this subpart. Use of an alternative to any requirement of this subpart is in accordance with this subpart only to the extent that it is approved in writing by the Administrator, in consultation with the permitting authority.

§ 75.81

§ 75.81 Monitoring of Hg mass emissions and heat input at the unit level.

The owner or operator of the affected coal-fired unit shall either:

§ 75.81(a)

(a) Meet the general operating requirements in § 75.10 for the following continuous emission monitors (except as provided in accordance with subpart E of this part):

(1) A Hg concentration monitoring system (as defined in § 72.2 of this chapter) or a sorbent trap monitoring system (as defined in § 72.2 of this chapter) to measure Hg concentration; and

(2) A flow monitoring system; and

(3) A continuous moisture monitoring system (if correction of Hg concentration for moisture is required), as described in § 75.11(b) or § 75.12(b). Alternatively, the owner or operator may use the appropriate fuel-specific default moisture value provided in § 75.11 or § 75.12, or a site-specific moisture value approved by petition under § 75.66; and

(4) If heat input is required to be reported under the applicable State or Federal Hg mass emission reduction program that adopts the requirements of this subpart, the owner or operator ~~also~~ must meet the general operating requirements for a flow monitoring system and an O₂ or CO₂ monitoring system to measure heat input rate; ~~or~~.

§ 75.81(b)

(b) For an affected unit that emits 464 ounces (29 lb) of Hg per year or less, use the following excepted monitoring methodology. To implement this methodology for a qualifying unit, the owner or operator shall meet the general operating requirements in § 75.10 for the continuous emission monitors described in paragraphs (a)(2) and (a)(4) of this section, and perform Hg emission testing for initial certification and ongoing quality-assurance, as described in paragraphs (c) through (e) of this section.

§ 75.81(c)

(c) To determine whether an affected unit is eligible to use the monitoring provisions in paragraph (b) of this section:

(1) The owner or operator must perform Hg emission testing one year or less before ~~prior to~~ the compliance date in § 75.80(b), to determine the Hg concentration (i.e., total vapor phase Hg) in the effluent. The testing shall be performed using one of the Hg reference methods listed in § 75.22(a)(7), and shall consist of a minimum of 3 runs at the normal unit operating load, while combusting coal. The coal combusted during the testing must be from the same source of supply as the coal combusted at the start of the Hg mass emission reduction program. The minimum time per run shall be 1 hour if an instrumental reference method is used. If Method 29 or the Ontario Hydro Method is used, paired sampling trains are required for each test run and the ~~test runs~~ must

be long enough to ensure that sufficient Hg is collected to analyze. ~~If the unit is equipped with flue gas desulfurization or add-on Hg emission controls, the controls must be operating normally during the testing, and, for the purpose of establishing proper operation of the controls, the owner or operator shall record parametric data or SO₂ concentration data in accordance with § 75.58(b)(3)(i).~~ When Method 29 or the Ontario Hydro method is used, the test results shall be based on the vapor phase Hg collected in the back-half of the sampling trains (i.e., the non-filterable impinger catches). For each Method 29 or Ontario Hydro method test run, the paired trains must meet the percent relative deviation (RD) requirement in §75.22(a)(7). If the RD specification is met, the results of the two trains shall be averaged arithmetically. If the unit is equipped with flue gas desulfurization or add-on Hg emission controls, the controls must be operating normally during the testing, and, for the purpose of establishing proper operation of the controls, the owner or operator shall record parametric data or SO₂ concentration data in accordance with §75.58(b)(3)(i).

(2) Based on the results of the emission testing, Equation 1 of this section shall be used to provide a conservative estimate of the annual Hg mass emissions from the unit:
Where:

$$E = 8760 K C_{\text{Hg}} Q_{\text{max}}$$

(Eq. 1)

Where:

E = Estimated annual Hg mass emissions from the affected unit, (ounces/year)

K = Units conversion constant, 9.978×10^{-10} oz-scm/µg-scf

8760 = Number of hours in a year

CHg = The highest Hg concentration (µg/scm) from any of the test runs or 0.50 µg/scm, whichever is greater

Qmax = Maximum potential flow rate, determined according to section 2.1.4.1 of appendix A to this part, (scfh)

Equation 1 of this section assumes that the unit operates year-round at its maximum potential flow rate. Also, note that if the highest Hg concentration measured in any test run is less than 0.50 µg/scm, a default value of 0.50 µg/scm must be used in the calculations.

(3) If the estimated annual Hg mass emissions from paragraph (c)(2) of this section are 464 ounces per year or less, then the unit is eligible to use the monitoring provisions in paragraph (b) of this section, and continuous monitoring of the Hg concentration is not required (except as otherwise provided in paragraphs (e) and (f) of this section).

§ 75.81(d)

(d) If the owner or operator of an eligible unit under paragraph (c)(3) of this section elects not to continuously monitor Hg concentration, then the following requirements must be met:

§ 75.81(d)(1)

(1) The results of the Hg emission testing performed under paragraph (c) of this section shall be submitted as a certification application to the Administrator and to the permitting authority, no later than 45 days after the testing is completed. The calculations demonstrating that the unit emits 464 ounces (or less) per year of Hg shall also be provided, and the default Hg concentration that will be used for reporting under § 75.84 shall be specified in both the electronic and hard copy portions of the monitoring plan for the unit. The methodology is considered to be provisionally certified as of the date and hour of completion of the Hg emission testing.

~~$$E = 8760 K C_{\text{Hg}} Q_{\text{max}} \text{ (Eq. 1)}$$~~

§ 75.81(d)(2)

(2) Following initial certification, the same default Hg concentration value that was used to estimate the unit's annual Hg mass emissions under paragraph (c) of this section shall be reported for each unit operating hour, except as otherwise provided in paragraph (d)(4)(iv) or (d)(6) of this section. The default Hg concentration value shall be updated as appropriate, according to paragraph (d)(5) of this section.

§ 75.81(d)(3)

(3) The hourly Hg mass emissions shall be calculated according to section 9.1.3 in appendix F to this part.

§ 75.81(d)(4)

(4) The Hg emission testing described in paragraph (c) of this section shall be repeated periodically, for the purposes of quality-assurance, as follows:

(i) If the results of the certification testing under paragraph (c) of this section show that the unit emits 144 ounces (9 lb) of Hg per year or less, the first retest is required by the end of the fourth QA operating quarter (as defined in § 72.2 of this chapter) following the calendar quarter of the certification testing; or

(ii) If the results of the certification testing under paragraph (c) of this section show that the unit emits more than 144 ounces of Hg per year, but less than or equal to 464 ounces per year, the first retest is required by the end of the second QA operating quarter (as defined in § 72.2 of this chapter) following the calendar quarter of the certification testing; and

(iii) Thereafter, retesting shall be required either semiannually or annually (i.e., by the end of the second or fourth QA operating quarter following the quarter of the previous test), depending on the results of the previous test. To determine whether the next retest is due within two or four QA operating quarters, substitute the highest Hg concentration from the current test or 0.50 µg/scm (whichever is greater) into the equation in paragraph (c)(2) of this section. If the estimated annual Hg mass emissions exceeds 144 ounces, the next test is due within two QA operating quarters. If the estimated annual Hg mass emissions is 144 ounces or less, the next test is due within four QA operating quarters.

(iv) An additional retest is required when there is a change in the fuel supply. The retest shall be performed within 720 unit operating hours of the change.

§ 75.81(d)(5)

(5) The default Hg concentration used for reporting under § 75.84 shall be updated after each required retest. This includes retests that are required prior to the compliance date in §75.80(b). The updated value shall either be the highest Hg concentration measured in any of the test runs or 0.50 µg/scm, whichever is greater. The updated default value shall be applied beginning with the first unit operating in which Hg emissions data are required to be reported after completion of the retest, except as provided in paragraph (d)(4)(iv) of this section, where the need to retest is triggered by a change in the fuel supply. In that case, apply the updated default Hg concentration beginning with the first unit operating hour in which Hg emissions are required to be reported after the date and hour of the fuel switch.

~~hour after completion of the retest.~~

§ 75.81(d)(6)

(6) If the unit is equipped with a flue gas desulfurization system or add-on Hg controls, the owner or operator shall record the information required under § 75.58(b)(3) for each unit operating hour, to document proper operation of the emission controls. For any operating hour in which this documentation is unavailable, the maximum potential Hg concentration, as defined in section 2.1.7 of appendix A to this part, shall be reported.

§ 75.81(e)

(e) For units with common stack and multiple stack exhaust configurations, the use of the monitoring methodology described in paragraphs (b) through (d) of this section is restricted as follows:

(1) The methodology may not be used for reporting Hg mass emissions at a common stack unless all of the units using the common stack are affected units and each individual unit is tested to demonstrate that its potential to emit does not exceed 464 ounces of Hg per year, ~~or less,~~ in accordance with paragraphs (c) and (d) of this section. If the units sharing the common stack qualify as a group of identical units in accordance with §75.19(c)(1)(iv)(B), the owner or operator may test a subset of the units in lieu of testing each unit individually. If this option is selected, the number of units required to be tested shall be determined from Table LM-4 in §75.19. If these conditions are met the test results demonstrate that the units sharing the common stack qualify as low mass emitters, the default Hg concentration used for reporting Hg mass emissions at the common stack shall either be the highest value obtained in any test run for any of the tested units serving the common stack or 0.50 µg/scm, whichever is greater. Notwithstanding these requirements, the emission testing required under paragraphs (c) and/or (d)(3) of this section may be performed at the common stack in the following circumstances:

(i) The initial certification testing required under paragraph (c) of this section may be performed at the common stack if all of the units using the stack are affected units and if, prior to entering the common stack, the effluent gas streams from the individual units are combined together upstream of an emission control device that reduces the Hg concentration. If this testing option is chosen:

(A) The testing must be done at a combined load corresponding to the designated normal load level (low, mid, or high) for the units sharing the common stack, in accordance with section 6.5.2.1 of appendix A to this part;

(B) All of the units that share the stack must be operating in a normal, stable manner and

at typical load levels during the emission testing;

(C) When calculating E, the estimated maximum potential annual Hg mass emissions from the stack, the maximum potential flow rate through the common stack (as defined in the monitoring plan) and the highest concentration from any test run (or 0.50 µg/scm, if greater) shall be substituted into Equation 1;

(D) The calculated value of E shall be divided by the number of units sharing the stack. If the result, when rounded to the nearest ounce, does not exceed 464 ounces, the units qualify to use the low mass emission methodology; and

(E) If the units qualify to use the methodology, the default Hg concentration used for reporting at the common stack shall be the highest value obtained in any test run or 0.50 µg/scm, whichever is greater; or

(ii) For all common stack configurations, the retests required under paragraph (d)(3) of this section may be done at the common stack. If this testing option is chosen, the testing shall be done at a combined load corresponding to the designated normal load level (low, mid, or high) for the units sharing the common stack, in accordance with section 6.5.2.1 of appendix A to this part. The due date for the next retest shall be determined as follows:

(A) To calculate E, the maximum potential flow rate for the common stack (as defined in the monitoring plan) and the highest Hg concentration from any test run (or 0.50 µg/scm, if greater) shall be substituted into Equation 1;

(B) If the value of E obtained from Equation 1, rounded to the nearest ounce, is greater than 144 times the number of units sharing the common stack, but less than or equal to 464 times the number of units sharing the stack, the next retest is due in two QA operating quarters;

(C) If the value of E obtained from Equation 1, rounded to the nearest ounce, is less than or equal to 144 times the number of units sharing the common stack, the next retest is due in four QA operating quarters.

(2) For units with multiple stack or duct configurations, Hg emission testing must be performed separately on each stack or duct, and the sum of the estimated annual Hg mass emissions from the stacks or ducts must not exceed 464 ounces of Hg per year. For reporting purposes, the default Hg concentration used for each stack or duct shall either be the highest value obtained in any test run for that stack or 0.50 µg/scm, whichever is greater.

(3) For units with a main stack and bypass stack configuration, Hg emission testing shall be performed only on the main stack. For reporting purposes, the default Hg concentration used for the main stack shall either be the highest value obtained in any test run for that stack or 0.50 µg/scm, whichever is greater. Whenever the main stack is bypassed, the maximum potential Hg concentration, as defined in section 2.1.7 of appendix A to this part, shall be reported.

§ 75.81(f)

(f) At the end of each calendar year, if the cumulative annual Hg mass emissions from an affected unit have exceeded 464 ounces, then the owner shall install, certify, operate, and maintain a Hg concentration monitoring system or a sorbent trap monitoring system no later than 180 days after the end of the calendar year in which the annual Hg mass emissions exceeded 464 ounces. For common stack and multiple stack configurations, installation and certification of a Hg concentration or sorbent trap monitoring system on each stack (except for bypass stacks) is likewise required within 180 days after the end of the calendar year, if:

(1) The annual Hg mass emissions at the common stack have exceeded 464 ounces times the number of affected units using the common stack; or

(2) The sum of the annual Hg mass emissions from all of the multiple stacks or ducts has exceeded 464 ounces; or

(3) The sum of the annual Hg mass emissions from the main and bypass stacks has exceeded 464 ounces.

§ 75.81(g)

(g) For an affected unit that is using a Hg concentration CEMS or a sorbent trap system under § 75.81(a) to continuously monitor the Hg mass emissions, the owner or operator may switch to the methodology in § 75.81(b), provided that the applicable conditions in paragraphs (c) through (f) of this section are met.

§ 75.82

§ 75.82 Monitoring of Hg mass emissions and heat input at common and multiple stacks.

§ 75.82(a)

(a) *Unit utilizing common stack with other affected unit(s).* When an affected unit utilizes a common stack with one or more affected units, but no nonaffected units, the owner or operator shall either:

- § 75.82(a)(1) (1) Install, certify, operate, and maintain the monitoring systems described in § 75.81(a) at the common stack, record the combined Hg mass emissions for the units exhausting to the common stack. Alternatively, if, in accordance with § 75.81(e), each of the units using the common stack is demonstrated to emit less than 464 ounces of Hg per year, the owner or operator may install, certify, operate and maintain the monitoring systems and perform the Hg emission testing described under § 75.81(b). If reporting of the unit heat input rate is required, determine the hourly unit heat input rates either by:
- (i) Apportioning the common stack heat input rate to the individual units according to the procedures in § 75.16(e)(3); or
 - (ii) Installing, certifying, operating, and maintaining a flow monitoring system and diluent monitor in the duct to the common stack from each unit; or
- § 75.82(a)(2) (2) Install, certify, operate, and maintain the monitoring systems and (if applicable) perform the Hg emission testing described in § 75.81(a) or § 75.81(b) in the duct to the common stack from each unit.
- § 75.82(b) (b) Unit utilizing common stack with nonaffected unit(s). When one or more affected units utilizes a common stack with one or more nonaffected units, the owner or operator shall either:
- § 75.82(b)(1) (1) Install, certify, operate, and maintain the monitoring systems and (if applicable) perform the Hg emission testing described in § 75.81(a) or § 75.81(b) in the duct to the common stack from each affected unit; or
- § 75.82(b)(2) (2) Install, certify, operate, and maintain the monitoring systems described in § 75.81(a) in the common stack; and
- (i) Install, certify, operate, and maintain the monitoring systems and (if applicable) perform the Hg emission testing described in § 75.81(a) or § 75.81(b) in the duct to the common stack from each non-affected unit. The designated representative shall submit a petition to the permitting authority and the Administrator to allow a method of calculating and reporting the Hg mass emissions from the affected units as the difference between Hg mass emissions measured in the common stack and Hg mass emissions measured in the ducts of the non-affected units, not to be reported as an hourly value less than zero. The permitting authority and the Administrator may approve such a method whenever the designated representative demonstrates, to the satisfaction of the permitting authority and the Administrator, that the method ensures that the Hg mass emissions from the affected units are not underestimated; or
 - (ii) Count the combined emissions measured at the common stack as the Hg mass emissions for the affected units, for recordkeeping and compliance purposes, in accordance with paragraph (a) of this section; or
 - (iii) Submit a petition to the permitting authority and the Administrator to allow use of a method for apportioning Hg mass emissions measured in the common stack to each of the units using the common stack and for reporting the Hg mass emissions. The permitting authority and the Administrator may approve such a method whenever the designated representative demonstrates, to the satisfaction of the permitting authority and the Administrator, that the method ensures that the Hg mass emissions from the affected units are not underestimated.
- (3) If the monitoring option in paragraph (b)(2) of this section is selected, and if heat input is required to be reported under the applicable State or Federal Hg mass emission reduction program that adopts the requirements of this subpart, the owner or operator shall either:
- (i) Apportion the common stack heat input rate to the individual units according to the procedures in §75.16(e)(3); or
 - (ii) Install a flow monitoring system and a diluent gas (O₂ or CO₂) monitoring system in the duct leading from each affected unit to the common stack, and measure the heat input rate in each duct, according to section 5.2 of appendix F to this part.
- § 75.82(c) (c) Unit with a main stack and a bypass stack. Whenever any portion of the flue gases from an affected unit can be routed through a bypass stack to avoid the Hg monitoring system(s) installed on the main stack, the owner and operator shall either:
- (1) Install, certify, operate, and maintain the monitoring systems described in § 75.81(a) on both the main stack and the bypass stack and calculate Hg mass emissions for the unit as the sum of the Hg mass emissions measured at the two stacks;
 - (2) Install, certify, operate, and maintain the monitoring systems described in § 75.81(a) at

the main stack and measure Hg mass emissions at the bypass stack using the appropriate reference methods in § 75.22(b). Calculate Hg mass emissions for the unit as the sum of the emissions recorded by the installed monitoring systems on the main stack and the emissions measured by the reference method monitoring systems; or

(3) Install, certify, operate, and maintain the monitoring systems and (if applicable) perform the Hg emission testing described in § 75.81(a) or § 75.81(b) only on the main stack. If this option is chosen, it is not necessary to designate the exhaust configuration as a multiple stack configuration in the monitoring plan required under § 75.53, since only the main stack is monitored. For each unit operating hour in which the bypass stack is used, report, as applicable, the maximum potential Hg concentration (as defined in section 2.1.7 of appendix A to this part), and the appropriate substitute data values for flow rate, CO₂ concentration, O₂ concentration, and moisture (as applicable), in accordance with the missing data procedures of §§ 75.31 through 75.37.

(4) If the monitoring option in paragraph (c)(1) or (c)(2) of this section is selected, and if heat input is required to be reported under the applicable State or Federal Hg mass emission reduction program that adopts the requirements of this subpart, the owner or operator shall:

(i) Use the installed flow and diluent monitors to determine the hourly heat input rate at each stack (mmBtu/hr), according to section 5.2 of appendix F to this part; and

(ii) Calculate the hourly heat input at each stack (in mmBtu) by multiplying the measured stack heat input rate by the corresponding stack operating time; and

(iii) Determine the hourly unit heat input by summing the hourly stack heat input values.

§ 75.82(d)

(d) Unit with multiple stack or duct configuration. When the flue gases from an affected unit discharge to the atmosphere through more than one stack, or when the flue gases from an affected unit utilize two or more ducts feeding into a single stack and the owner or operator chooses to monitor in the ducts rather than in the stack, the owner or operator shall either:

(1) Install, certify, operate, and maintain the monitoring systems and (if applicable) perform the Hg emission testing described in § 75.81(a) or § 75.81(b) in each of the multiple stacks and determine Hg mass emissions from the affected unit as the sum of the Hg mass emissions recorded for each stack. If another unit also exhausts flue gases into one of the monitored stacks, the owner or operator shall comply with the applicable requirements of paragraphs (a) and (b) of this section, in order to properly determine the Hg mass emissions from the units using that stack; or

(2) Install, certify, operate, and maintain the monitoring systems and (if applicable) perform the Hg emission testing described in § 75.81(a) or § 75.81(b) in each of the ducts that feed into the stack, and determine Hg mass emissions from the affected unit using the sum of the Hg mass emissions measured at each duct, except that where another unit also exhausts flue gases to one or more of the stacks, the owner or operator shall also comply with the applicable requirements of paragraphs (a) and (b) of this section to determine and record Hg mass emissions from the units using that stack.

(3) If the monitoring option in paragraph (d)(1) or (d)(2) of this section is selected, and if heat input is required to be reported under the applicable State or Federal Hg mass emission reduction program that adopts the requirements of this subpart, the owner or operator shall:

(i) Use the installed flow and diluent monitors to determine the hourly heat input rate at each stack or duct (mmBtu/hr), according to section 5.2 of appendix F to this part; and

(ii) Calculate the hourly heat input at each stack or duct (in mmBtu) by multiplying the measured stack (or duct) heat input rate by the corresponding stack (or duct) operating time; and

(iii) Determine the hourly unit heat input by summing the hourly stack (or duct) heat input values.

§ 75.83

§ 75.83 Calculation of Hg mass emissions and heat input rate.

The owner or operator shall calculate Hg mass emissions and heat input rate in accordance with the procedures in sections 9.1 through 9.3 of appendix F to this part.

§ 75.84

§ 75.84 Recordkeeping and reporting.

§ 75.84(a)

(a) *General recordkeeping provisions.* The owner or operator of any affected unit shall maintain for each affected unit and each non-affected unit under § 75.82(b)(2)(ii) 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 3 years from the date of each record. Except for the certification data required in § 75.57(a)(4) and the initial submission of the monitoring plan required in §

75.57(a)(5), the data shall be collected beginning with the earlier of the date of provisional certification or the compliance deadline in § 75.80(b). The certification data required in § 75.57(a)(4) shall be collected beginning with the date of the first certification test performed. The file shall contain the following information:

(1) The information required in §§ 75.57(a)(2), (a)(4), (a)(5), (a)(6), (b), (c)(2), (g) (if applicable), (h), and (i) or (j) (as applicable). For the information in § 75.57(a)(2), replace the phrase “the deadline in § 75.4(a), (b) or (c)” with the phrase “the applicable certification deadline under the State or Federal Hg mass emission reduction program”;

(2) The information required in § 75.58(b)(3), for units with flue gas desulfurization systems or add-on Hg emission controls;

(3) For affected units using Hg CEMS or sorbent trap monitoring systems, for each hour when the unit is operating, record the Hg mass emissions, calculated in accordance with section 9 of appendix F to this part.

(4) Heat input and Hg methodologies for the hour; and

(5) Formulas from monitoring plan for total Hg mass emissions and heat input rate (if applicable);

§ 75.84(b) (b) Certification, quality assurance and quality control record provisions. The owner or operator of any affected unit shall record the applicable information in § 75.59 for each affected unit or group of units monitored at a common stack and each non-affected unit under § 75.82(b)(2)(ii).

§ 75.84(c) (c) *Monitoring plan recordkeeping provisions.*

(1) *General provisions.* The owner or operator of an affected unit shall prepare and maintain a monitoring plan for each affected unit or group of units monitored at a common stack and each non-affected unit under § 75.82(b)(2)(ii). The monitoring plan shall contain sufficient information on the continuous monitoring systems and the use of data derived from these systems to demonstrate that all the unit’s Hg emissions are monitored and reported.

(2) *Updates.* Whenever the owner or operator makes a replacement, modification, or change in a certified continuous monitoring system or alternative monitoring system under subpart E of this part, including a change in the automated data acquisition and handling system or in the flue gas handling system, that affects information reported in the monitoring plan (e.g., a change to a serial number for a component of a monitoring system), then the owner or operator shall update the monitoring plan.

(3) *Contents of the monitoring plan.* Each monitoring plan shall contain the information in § 75.53(eg)(1) in electronic format and the information in § 75.53(eg)(2) in hardcopy format.

§ 75.84(d) (d) *General reporting provisions.*

§ 75.84(d)(1) (1) The designated representative for an affected unit shall comply with all reporting requirements in this section and with any additional requirements set forth in an applicable State or Federal Hg mass emission reduction program that adopts the requirements of this subpart.

§ 75.84(d)(2) (2) The designated representative for an affected unit shall submit the following for each affected unit or group of units monitored at a common stack and each non-affected unit under § 75.82(b)(2)(ii):

(i) Initial certification and recertification applications in accordance with § 75.80(d);

(ii) Monitoring plans in accordance with paragraph (e) of this section; and

(iii) Quarterly reports in accordance with paragraph (f) of this section.

§ 75.84(d)(3) (3) *Other petitions and communications.* The designated representative for an affected unit shall submit petitions, correspondence, application forms, and petition-related test results in accordance with the provisions in § 75.80(h).

§ 75.84(d)(4) (4) *Quality assurance RATA reports.* If requested by the permitting authority, the designated representative of an affected unit shall submit the quality assurance RATA report for each affected unit or group of units monitored at a common stack and each non-affected unit under § 75.82(b)(2)(ii) by the later of 45 days after completing a quality assurance RATA according to section 2.3 of appendix B to this part or 15 days of receiving the request. The designated representative shall report the hardcopy information required by § 75.59(a)(9) to the permitting authority.

§ 75.84(d)(5)

(5) *Notifications.* The designated representative for an affected unit shall submit written notice to the permitting authority according to the provisions in § 75.61 for each affected unit or group of units monitored at a common stack and each non-affected unit under § 75.82(b)(2)(ii).

§ 75.84(e)

(e) *Monitoring plan reporting.*

(1) Electronic submission. The designated representative for an affected unit shall submit to the Administrator a complete, electronic, up-to-date monitoring plan file for each affected unit or group of units monitored at a common stack and each non-affected unit under § 75.82(b)(2)(ii), as follows: No later than ~~45~~ 21 days prior to the commencement of initial certification testing; at the time of a certification or recertification application submission; and whenever an update of the electronic monitoring plan is required, either under § 75.53 or elsewhere in this part.

(2) Hardcopy submission. The designated representative of an affected unit shall submit all of the hardcopy information required under § 75.53, for each affected unit or group of units monitored at a common stack and each non-affected unit under § 75.82(b)(2)(ii), to the permitting authority prior to initial certification. Thereafter, the designated representative shall submit hardcopy information only if that portion of the monitoring plan is revised. The designated representative shall submit the required hardcopy information as follows: no later than ~~45~~ 21 days prior to the commencement of initial certification testing; with any certification or recertification application, if a hardcopy monitoring plan change is associated with the recertification event; and within 30 days of any other event with which a hardcopy monitoring plan change is associated, pursuant to § 75.53(b). Electronic submittal of all monitoring plan information, including hardcopy portions, is permissible provided that a paper copy of the hardcopy portions can be furnished upon request.

§ 75.84(f)

(f) *Quarterly reports.*

§ 75.84(f)(1)

(1) *Electronic submission.* Electronic quarterly reports shall be submitted, beginning with the calendar quarter containing the compliance date in § 75.80(b), unless otherwise specified in the final rule implementing a State or Federal Hg mass emissions reduction program that adopts the requirements of this subpart. The designated representative for an affected unit shall report the data and information in this paragraph (f)(1) and the applicable compliance certification information in paragraph (f)(2) of this section to the Administrator quarterly, except as otherwise provided in § 75.64(a) for units in long-term cold storage. Each electronic report must be submitted to the Administrator within 30 days following the end of each calendar quarter. Except as otherwise provided in §§ 75.64(a)(4) and (a)(5). ~~Each~~ electronic report shall include the date of report generation and the following information for each affected unit or group of units monitored at a common stack:

§ 75.84(f)(1)(i)

(i) The facility information in § 75.64(a)(~~3~~) 3; and

§ 75.84(f)(1)(ii)

(ii) The information and hourly data required in paragraphs (a) and (b) of this section, except for:

(A) Descriptions of adjustments, corrective action, and maintenance;

(B) Information which is incompatible with electronic reporting (e.g., field data sheets, lab analyses, quality control plan);

(C) For units with flue gas desulfurization systems or with add-on Hg emission controls, the parametric information in § 75.58(b)(3);

(D) Information required by § 75.57(h) concerning the causes of any missing data periods and the actions taken to cure such causes;

(E) Hardcopy monitoring plan information required by § 75.53 and hardcopy test data and results required by § 75.59;

(F) Records of flow polynomial equations and numerical values required by § 75.59(a)(5)(vi);

(G) Stratification test results required as part of the RATA supplementary records under § 75.59(a)(7);

(H) Data and results of RATAs that are aborted or invalidated due to problems with the reference method or operational problems with the unit and data and results of linearity checks that are aborted or invalidated due to operational problems with the unit;

~~(I) Supplementary RATA information required under § 75.59(a)(7)(i) through § 75.59(a)(14), as applicable, except that: The data under § 75.59(a)(7)(ii)(A) through (T) and the data under § 75.59(a)(7)(iii)(A) through (M) shall, as applicable, be reported for flow RATAs in which angular compensation (measurement of pitch and/or yaw angles) is used and for flow~~

~~RATAs in which a site-specific wall effects adjustment factor is determined by direct measurement; and the data under § 75.59(a)(7)(ii)(T) shall be reported for all flow RATAs in which a default wall effects adjustment factor is applied;~~

(I) Supplementary RATA information required under § 75.59(a)(7), except that:

(1) The applicable data elements under § 75.59(a)(7)(ii)(A) through (T) and under § 75.59(a)(7)(iii)(A) through (M) shall be reported for flow RATAs at circular or rectangular stacks (or ducts) in which angular compensation for yaw and/or pitch angles is used (i.e., Method 2F or 2G), with or without wall effects adjustments;

(2) The applicable data elements under § 75.59(a)(7)(ii)(A) through (T) and under § 75.59(a)(7)(iii)(A) through (M) shall be reported for any flow RATA run at a circular stack in which Method 2 is used and a wall effects adjustment factor is determined by direct measurement;

(3) The data under § 75.59(a)(7)(ii)(T) shall be reported for all flow RATAs at circular stacks in which Method 2 is used and a default wall effects adjustment factor is applied; and

(4) The data under § 75.59(a)(7)(ix)(A) through (F) shall be reported for all flow RATAs at rectangular stacks or ducts in which Method 2 is used and a wall effects adjustment factor is applied.

(J) For units using sorbent trap monitoring systems, the hourly dry gas meter readings taken between the initial and final meter readings for the data collection period; and

§ 75.84(f)(1)(iii)

(iii) Ounces of Hg emitted during quarter and cumulative ounces of Hg emitted in the year-to-date (rounded to the nearest thousandth); and

§ 75.84(f)(1)(iv)

(iv) Unit or stack operating hours for quarter, cumulative unit or stack operating hours for year-to-date; and

§ 75.84(f)(1)(v)

(v) Reporting period heat input (if applicable) and cumulative, year-to-date heat input.

§ 75.84(f)(2)

(2) *Compliance certification.*

§ 75.84(f)(2)(i)

(i) The designated representative shall certify that the monitoring plan information in each quarterly electronic report (i.e., component and system identification codes, formulas, etc.) represent current operating conditions for the affected unit(s)

§ 75.84(f)(2)(ii)

(ii) The designated representative shall submit and sign a compliance certification in support of each quarterly emissions monitoring report based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The certification shall state that:

(A) The monitoring data submitted were recorded in accordance with the applicable requirements of this part, including the quality assurance procedures and specifications; and

(B) With regard to a unit with an FGD system or with add-on Hg emission controls, that for all hours where data are substituted in accordance with § 75.38(b), the add-on emission controls were operating within the range of parameters listed in the quality-assurance plan for the unit (or that quality-assured SO₂ CEMS data were available to document proper operation of the emission controls), and that the substitute values do not systematically underestimate Hg emissions.

§ 75.84(f)(3)

(3) *Additional reporting requirements.* The designated representative shall also comply with all of the quarterly reporting requirements in §§ 75.64(d), (f), and (g).