

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 75**

[FRL-5203-2]

**Acid Rain Program: Continuous Emission Monitoring Rule Technical Revisions****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Interim final rule and request for comments.

**SUMMARY:** Title IV of the Clean Air Act (the Act), as amended by the Clean Air Act Amendments of 1990, authorizes the Environmental Protection Agency (EPA or Agency) to establish the Acid Rain Program. The program sets emissions limitations to reduce acidic deposition and its serious, adverse effects on natural resources, ecosystems, materials, visibility, and public health. On January 11, 1993, the Agency promulgated final rules under title IV. Several parties filed petitions for review of the rules. On April 17, 1995, the EPA and the parties signed a settlement agreement addressing continuous emission monitoring (CEM) issues.

In this interim final rule, EPA is amending certain provisions of the CEM regulations to allow industry to be in compliance in situations that were not contemplated in the original rulemaking. The interim final rule allows industry additional flexibility to implement new provisions immediately that address these unforeseen situations, reduces the possibility of underestimating emissions, and also allows the public to comment upon these new provisions.

**DATES: Effective Dates.** This interim final rule shall become effective on July 17, 1995. The provisions of §§ 75.11(a), 75.21(a), and 75.32(a)(3); sections 6.3.1, 6.3.2 and 6.4 of appendix A of part 75; and section 2.1 of appendix B of part 75 are suspended temporarily from July 17, 1995 through December 31, 1996. Sections 75.11 (e) and (g), 75.21(f), 75.30 (d) and (e), 75.32(a)(4), 75.55(e), and 75.56(a)(6); Figure 5 and sections 6.3.3, 6.3.4 and 6.4.1 of appendix A of part 75; section 2.1.7 of appendix B of part 75; and section 7 of appendix F of part 75 are temporarily added and are effective from July 17, 1995 through December 31, 1996.

**Comment Date.** Comments on this interim final rule must be received on or before June 16, 1995.

**ADDRESSES:** Any written comments on these interim final rule revisions must be identified with the Docket No. A-94-

16, must be identified as comments on the interim final rule, and must be submitted in duplicate to: EPA Air Docket (6102), Environmental Protection Agency, 401 M Street SW, Washington, DC 20460. The docket is available for public inspection and copying between 8:30 a.m. and 3:30 p.m., Monday through Friday, at the address given above. A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** Margaret Sheppard, Acid Rain Division (6204J), U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460, telephone number (202) 233-9180.

**SUPPLEMENTARY INFORMATION:** All public comments received on the interim final rule will be addressed in a subsequent final rulemaking notice. The EPA will not institute a second comment period on this document. Any parties interested in commenting on this interim final rule should do so at this time.

For additional information about further revisions to the Acid Rain monitoring provisions, see the direct final rule published elsewhere in this **Federal Register**.

The EPA intends to publish a final rulemaking document as a follow-up to this interim final rule prior to January 1, 1997 that will incorporate provisions based upon public comments. At that time, the sections that are added temporarily by this interim final rule would be permanently added by the follow-up final rule. Provisions that are suspended temporarily in this interim final rule would be removed in the follow-up final rule. If EPA were not to publish a follow-up final rule prior to January 1, 1997, the sections temporarily added by the interim final rule would expire and the sections suspended temporarily by the interim final rule would be effective January 1, 1997.

**I. Background**

Title IV of the Clean Air Act (CAA or the Act), as amended November 15, 1990, requires the Environmental Protection Agency (EPA or Agency) to establish an Acid Rain Program to reduce the adverse effects of acidic deposition. On January 11, 1993, the Agency promulgated final rules implementing the program, including the General Provisions of the Permits Regulation and the CEM rule (58 FR 3590-3766). Technical corrections were published on June 23, 1993 (58 FR 34126) and July 30, 1993 (58 FR 40746-40752). This notice of interim final rulemaking, like the notice of direct

final rulemaking published elsewhere in this issue of the **Federal Register**, contains additional technical corrections and other amendments to address various implementation issues that have come to light since the final rule was published on January 11, 1993. The effective date of these interim final amendments will be July 17, 1995.

The EPA has been engaged in settlement discussions with several parties who challenged certain provisions of the Acid Rain CEM rules promulgated on January 11, 1993. [See *Environmental Defense Fund v. Browner*, No. 93-1203 and consolidated cases, "Complex" (D.C. Cir., filed March 12, 1993.)] Although the parties have been able to reach agreement on a number of issues, which are addressed in the direct final rule, some additional issues remain outstanding. These outstanding issues, unlike the noncontroversial and routine technical corrections addressed by the direct final rule, may not be considered noncontroversial and therefore are being addressed separately in this interim final rule. The issues addressed by this interim final rule are: (1) A requirement that units with SO<sub>2</sub> CEMS burning gaseous fuels only must use heat input and a default SO<sub>2</sub> emission rate or appendix D methods to determine SO<sub>2</sub> emissions instead of an SO<sub>2</sub> CEMS and a flow monitor [§ 75.11(e)], (2) the procedure for assigning proportional flow rates for emissions through multiple stacks or bypass stacks for purposes of substituting missing data [§ 75.30(e)], (3) the procedure for determining proper operation of units with add-on controls for purposes of substituting missing data (§ 75.34), (4) clarification of provisions in the January 11, 1993 rule that the unit must be operating while performing certain quality assurance procedures (appendix A, sections 6.3.1 and 6.3.2; appendix B, section 2.1 Introductory Text), and (5) the procedures for performing cycle time tests (appendix A, section 6.4).

In order to allow for necessary changes to the data acquisition and handling systems (DAHS) required by the revisions to §§ 75.11(e) and 75.30(e), owners or operators may choose to delay compliance with the revised provisions regarding use of heat input and a default SO<sub>2</sub> emission rate or appendix D methods for units with SO<sub>2</sub> CEMS when burning only gaseous fuels [§ 75.11(e)] or with the procedure for assigning proportional flow rates for emissions through multiple stacks or bypass stacks for purposes of missing data substitution [§ 75.30(e)] until January 1, 1997. The EPA believes that this will give utilities time to comment

on these issues and EPA time to respond to these issues in a final rulemaking before the provisions become required. Furthermore, EPA believes an optional delayed compliance date for these revised provisions is warranted because utilities may need time to incorporate these changes into their DAHS, emissions will be monitored under the current regulations until the changeover, and emissions affected by these provisions will be small.

## II. EPA Action

Under CAA Section 412(c), not later than January 1, 1995, owners and operators of Acid Rain affected units must install and operate CEMS, quality assure the data, and keep records and reports in accordance with the Acid Rain regulations. Because EPA believes the revisions published in this rule will improve and enhance the implementation of the Acid Rain monitoring program, EPA believes it is necessary that the revisions become effective as soon as possible. Many of the monitoring provisions in part 75 are interrelated and would be difficult to separate from other, related provisions and therefore these technical revisions to the monitoring provisions must be considered as a whole. For these reasons, EPA is publishing the noncontroversial revisions through a direct final rulemaking and is also publishing provisions that may be controversial and on which it may receive comment through this interim final rulemaking. Both the direct final rule and the interim final rule will become effective on the same date. Even though comments may be submitted on these interim final provisions, EPA believes that it is necessary to include the interim final revisions in the revised CEM regulation in order to assure an overall consistent and implementable Acid Rain monitoring program. Therefore, EPA is issuing these amendments to the CEM regulation effective at the same time as the direct final amendments and will take comment on both sets of revisions. Comments on the interim final provisions must be submitted to Air Docket A-94-16, which is also the docket for the direct final rulemaking published elsewhere in this issue of the **Federal Register**, and must be identified as comments on the interim final rule to distinguish them from comments on the direct final provisions. Because the provisions of the direct final rule and interim final rule are interrelated, the docket contains supporting material and relevant information for both rulemakings.

As described in the notice of direct final rulemaking, if EPA receives significant adverse comments on the direct final rule, EPA will withdraw those portions of the direct final rule upon which comments are submitted, address the comments, and subsequently issue a final rule that addresses the withdrawn portions of the direct final rule. Except for certain specified subsections which will cease to be in effect as of January 1, 1997, the interim final rule will remain in effect until EPA publishes a subsequent final rule, following consideration of comments received in response to the notice of proposed rulemaking corresponding to this interim final rule. At the time of that future rulemaking, sections that are temporarily added in today's interim final rule would be permanently added and would replace provisions in the current rule that are temporarily suspended.

The EPA has been addressing many technical issues during early implementation of the Acid Rain monitoring program through issuance of policy statements interpreting the monitoring provisions of the January 11, 1993 rule, as well as by issuance of technical guidance. Many of the clarifying policy statements and technical guidance, which are to a large extent reflected in the direct final rule and interim final rule, are now being used by utilities for implementation guidance. Therefore, EPA believes it would be contrary to the public interest to delay the effectiveness of these monitoring provisions and believes these technical revisions should be effective immediately. Because EPA believes it is necessary to issue the technical corrections to the CEMS regulation as soon as possible and because the revised portions of the monitoring provisions are integrally interrelated, EPA believes it necessary for the full complement of revisions to take effect at the same time. The EPA is therefore invoking the good cause exception under the Administrative Procedure Act (APA) in not providing an opportunity for comment before this interim final rule takes effect.<sup>1</sup> [See 5 U.S.C. 553(b)(B); see also 42 U.S.C. 7607(d)(1).] Under CAA Section 307(d)(1), subsection 307(d) does not apply in the case of a rule for which the agency invokes the good cause exception of 5 U.S.C. 553(b)(B). Therefore, CAA Section 307(d) does not

<sup>1</sup> As previously noted however, EPA is providing the public with an opportunity to comment on EPA's direct final rule and will withdraw any portions of the direct final rule upon which significant adverse comments are submitted.

apply to this interim final rule. The EPA believes that notice-and-comment rulemaking prior to the effective date of the interim final rule would be impracticable and contrary to the public interest because of the complex and interrelated nature of the monitoring provisions that make it necessary to revise all of the CEM provisions in a consistent and integrated way in order to avoid inconsistency in monitoring requirements and because of the need to make the technical corrections and amendments available for use by utilities as soon as possible.

## III. Rationale

### A. SO<sub>2</sub> Monitoring During Combustion of Gas for Units With SO<sub>2</sub> CEMS

Some coal-fired units and oil-fired units also combust pipeline natural gas. Natural gas has a very low sulfur content and will produce extremely low SO<sub>2</sub> concentrations when combusted alone. In order to monitor these low concentrations accurately, a utility would need to use an SO<sub>2</sub> monitor with a range of a few parts per million (ppm). At this range, there are no Protocol 1 gases available for calibrations. Furthermore, it is unlikely that the CEMS would be able to pass the relative accuracy test at such low levels because it is difficult to measure extremely small concentrations precisely with either the reference method or a CEMS. The EPA had concerns about the accuracy of the SO<sub>2</sub> concentration data when measuring natural gas alone, because of the extremely low concentrations and because of the difficulty in performing appropriate quality assurance testing. The EPA decided that it was inappropriate for units to use an SO<sub>2</sub> CEMS to measure emissions from natural gas only. However, a coal-fired, oil-fired, or gas-fired unit could still use an SO<sub>2</sub> CEMS for measuring SO<sub>2</sub> when combusting fuels other than natural gas (or other gaseous fuel with a sulfur content no greater than natural gas) or when combusting a combination of fuels.

In order to address this situation, some industry representatives requested to use the provisions of appendix D of part 75 for determination of SO<sub>2</sub> emissions from natural gas instead of use of an SO<sub>2</sub> CEMS. (See Docket Item II-D-29, Letter from B. Machaver to S. Jewett, November 30, 1993; Docket Item II-D-30, Log of telephone conversation on Questions Concerning 40 CFR Part 75 Regulations for Oil/Gas Fired Title IV Affected Units (Questions provided in November 30, 1993 Memorandum to Susan Jewett), December 7, 1993.) After consideration, EPA agreed that this

would be an acceptable alternative to using the SO<sub>2</sub> CEMS during combustion of low sulfur gaseous fuel, so long as the utility certifies an excepted monitoring system under appendix D of part 75 for the measuring of gas. This requires accuracy testing of a gas flowmeter and testing of the DAHS. Furthermore, the utility must perform the procedures under appendix D, with the same fuel sampling, analysis, and fuel flowmeter quality assurance/quality control (QA/QC) requirements.

Another variant suggested by a utility was to use the default SO<sub>2</sub> emission rate factor of 0.0006 pound per million British thermal units (lb/mmBtu) for pipeline natural gas that EPA previously discussed in a policy statement regarding the "NADB emission rate" in appendix D and the heat input calculated by a flow monitor and a diluent monitor. (See Docket Item II-D-54, Acid Rain CEM (Part 75) Policy Manual; Docket Item II-D-59, Letter from R. LaBorde, Central Louisiana Electric Company to J. Winkler, EPA Region VI Re: Requestion for Clarification, Rodemacher Power Station Unit-1, Rapides Parish, LA, August 3, 1994). After further consideration, EPA agreed that this also is acceptable. (See Docket Item II-D-67, Response to R. LaBorde, CLECO, from J. Hepola, EPA, August 25, 1994.) The owner or operator must certify the system using the flow monitoring system, the diluent monitor, and the DAHS as a system for monitoring SO<sub>2</sub> emissions. These monitors must be tested following the QA/QC requirements of appendix B of part 75. Both of these methods allow utilities to use provisions that are allowed for estimating the low SO<sub>2</sub> emissions due to combustion of gaseous fuels with a low sulfur content under appendix D of part 75. The EPA believes that these methods will allow SO<sub>2</sub> accounting with sufficient accuracy for the low emission rate from combustion of natural gas. These methods are not sufficiently accurate for combustion of oil or coal because of their higher sulfur content. Similarly, during periods of co-firing of oil, coal or other high sulfur fuels, the owner or operator must use the certified SO<sub>2</sub> CEMS.

#### *B. Missing Data Substitution Provisions*

##### **1. Missing Data Procedures for Units With Add-On Emission Controls**

Many utilities were uncertain of the requirements for substituting and reporting missing data for units with add-on emission controls. For instance, the regulation was not clear as to whether or not parametric data needed

to be reported and recorded for these units. Industry also commented that the possible options for substituting missing data were unclear for these units. (See Docket Item II-D-3, Discussion Issues for TU Electric and EPA; Docket Item II-D-4, Draft Meeting Notes for EPA-Texas Utilities Teleconference, December 7, 1992). In response to these concerns, EPA prepared a policy statement to clarify missing data substitution procedures for units with add-on emission controls. (See Docket Item II-D-54, Acid Rain CEM (Part 75) Policy Manual). The EPA has amended part 75 in part to incorporate these interpretations.

The amendments to part 75 allow four ways of substituting for missing data. The default option is to substitute the maximum potential concentration of SO<sub>2</sub> or the maximum potential NO<sub>x</sub> emission rate when no information on the emission controls is available. A unit with SO<sub>2</sub> add-on emission controls with an inlet monitor may instead use the maximum SO<sub>2</sub> concentration at the scrubber inlet during the previous 720 quality-assured monitor operating hours. This option may always be used by a source.

Another option is to develop a site-specific correlation to determine the removal efficiency of the control equipment. The designated representative for a unit will petition the Administrator for use of this correlation instead of following standard missing data substitution procedures. The requirements for using this correlation as a missing data substitution method are located in appendix C of part 75. The correlation involves monitoring emission control parameters and electronically reporting this data for each missing data period to EPA each quarter. This correlation method may only be used if the availability or the CEMS at the outlet of the emission controls is 90.0 percent or greater.

A third option is to use the standard missing data procedures and to keep information on the emission controls at the site. The parameters listed in appendix C are a guideline of the types of information that are to be used to verify the add-on emission controls are operating properly. The EPA considers "proper operation" of the control equipment to require that the removal efficiency is equal to or greater than that when monitor data is available, such as during the hours before and after the missing data period. It is not enough to show that the control device simply is operating. The information that a utility should keep relates to site-specific equipment. Part 75 does not require that

every single one of those parameters must be kept, nor does it prohibit the use of other information to verify proper operation of the emission controls. Also, these records do not have to be kept electronically. However, the designated representative must report in the monitoring plan for the unit the range of each parameter that indicates proper operation of the add-on emission controls. The EPA or a State air pollution control agency could request to look at the parametric records or to have them reported at any time to verify that the add-on emission controls are maintaining emission reductions and are operating properly, by comparing the data with the range of each parameter reported in the monitoring plan. In addition, a designated representative for a source must certify that the emission controls are properly operating and that the missing data procedures are not systematically underestimating emissions during the quarter where the utility uses the standard missing data procedures. This additional certification is to be reported as part of the designated representative's certification with each quarterly report.

The fourth and final option for supplying missing data is to use the standard missing data procedures as in the third option, and then to petition the Administrator for use of a value more representative of actual emissions than the maximum SO<sub>2</sub> concentration in the previous 720 hours or the maximum NO<sub>x</sub> emission rate at the corresponding load range. As in the existing rule, this is only an option when monitor data availability is below 90.0 percent, where the most conservative missing data substitution procedures are required. A designated representative may petition to substitute with a more representative value that does not underestimate emissions if sufficient data exist to demonstrate that the maximum value is an extreme overestimate, based upon periods of improper operation or non-operation of the emission controls. This demonstration requires information such as: CEM data from periods when the add-on emission controls are operating; unit operating load data; parametric data indicating proper operation of the add-on emission controls during the missing data period; and fuel sulfur content. The EPA expects a "representative value" to be no less than the maximum hourly value from when the emission controls were operating during the same lookback period normally used for an SO<sub>2</sub> or NO<sub>x</sub> CEMS.

The EPA has also made minor changes to indicate that petitions are submitted by the designated

representative, rather than the owner or operator. This is consistent with the designated representative's role as the official contact person for EPA for all submissions.

## 2. SO<sub>2</sub> Concentration Missing Data During Gas Combustion

A utility noted that for a unit that combusts either natural gas and some oil or natural gas and some coal, SO<sub>2</sub> emissions due to gas combustion are several orders of magnitude smaller than emissions during combustion of either coal or oil (See II-D-16, Letter from David Rengert, Niagara Mohawk Power Corporation to Ann Zownir, EPA, May 21, 1993). Therefore, if an SO<sub>2</sub> CEMS was not providing quality-assured data when the unit was combusting only natural gas, the standard missing data procedures might substitute vastly overestimate SO<sub>2</sub> concentration values from combustion of coal or oil. In addition, if the unit combusts primarily natural gas, these low SO<sub>2</sub> concentration values could potentially underestimate emissions when combusting oil or coal if the 90th percentile and 95th percentile (and possibly even the maximum value) during the previous 720 quality-assured monitor operating hours were substituted using all data collected from all fuels. To address this concern, EPA revised the missing data procedures to separate SO<sub>2</sub> emissions due to combustion of natural gas and other gaseous fuels with a sulfur content no greater than that of natural gas. SO<sub>2</sub> concentration values measured by an SO<sub>2</sub> monitoring system during combustion of natural gas only are not kept as part of the historical data that is used to substitute SO<sub>2</sub> concentration data. These values are not used to provide the average of the hour before and the hour after a missing data period and are not included in percentile calculations. As a result, substituted missing data will reflect the fuel being used during the missing data period.

As was discussed under Section A above, as of January 1, 1997, SO<sub>2</sub> CEMS will no longer be allowed for measuring SO<sub>2</sub> during combustion of natural gas or other gaseous fuels with a sulfur content no greater than that of natural gas because of the difficulty of accurately measuring and quality assurance testing at such low concentrations.

During those times, a utility will either use the heat input from the flow monitor and diluent monitor and the default SO<sub>2</sub> emission rate for pipeline natural gas of 0.0006 lb/mmBtu according to appendix F of part 75, or the fuel flow and daily sulfur content of the gaseous fuel according to appendix

D of part 75. The utility should use the following to fill in missing data if a fuel flowmeter, a flow monitor or a diluent monitor is not providing quality-assured data. For units combusting pipeline natural gas using a flow monitor, a diluent monitor and the default SO<sub>2</sub> emission rate, the owner or operator should follow the missing data procedures for heat input found in § 75.36 of subpart D of part 75. For other units using gas sampling and analysis and fuel flowmeters, the owner or operator should substitute using the missing data procedures for sulfur content or fuel flow found in appendix D of part 75.

Note that these revised procedures are not needed if a unit is co-firing a high sulfur fuel along with natural gas or other gaseous fuels with a sulfur content no greater than that of natural gas. In this case, the concentration will come predominantly from the higher-sulfur fuel, generally oil or coal. Thus, during periods of co-firing, the owner or operator should be using the SO<sub>2</sub> CEMS or the missing data procedures in §§ 75.31 or 75.33 for an SO<sub>2</sub> CEMS.

## 3. Missing Data for Multiple Stacks and Bypass Stacks

The EPA has added a provision to account for missing data substitution of flow data in the case of multiple stacks or bypass stacks in § 75.30(e) of today's interim final rule. First, this revision accounts for the fact that emissions may not flow through a particular stack during an hour when the unit combusts fuel. To account for this, EPA has added a provision to the missing data procedures such that only hours when emissions pass by the monitors on the stack are included as unit operating hours and as quality-assured monitor operating hours in calculations of availability and substitute values.

A second provision accounts for the fact that some units may be able to shift flow between ducts or stacks. If flow from a unit can shift from one stack to another, such as when flue dampers are moved, then the correlation between load for the entire unit and flow rate measured on one stack is no longer accurate. It would be possible to underestimate flow rate and SO<sub>2</sub> mass emissions during use of the missing data procedures for flow, contrary to EPA's intent for these missing data procedures. In order to avoid this situation, EPA has added a provision in today's rule that requires using a substitute value of the maximum flow rate recorded by the flow monitoring system at the corresponding load range during the previous 2,160 hours of quality-assured monitor data when emissions passed

through the stack if the proportion of flow between stacks has changed during that time. This will avoid potential underestimation that might occur when using an average flow rate in the corresponding load range. As discussed above in this notice, owners or operators may choose to delay compliance with this requirement until January 1, 1997 in order to make changes to their DAHS and to await implementation of these provisions until after EPA has addressed all comments on the interim final rule. In addition, EPA notes that if a utility never changes the flue dampers so that the proportion of flow is constant, then no changes to the standard missing data procedures or to their DAHS are necessary.

## C. Certification and Quality Assurance Testing

### 1. Calibration Error Test

The EPA discovered that some CEMS testers were incorrectly performing the 7-day calibration error test. In the incorrect use of the procedure, the tester checked the calibration error at the zero calibration gas level, made automatic adjustments to the monitor data at that point, checked the calibration error at the high calibration gas level, and then again made adjustments to the data. The EPA clarified that a tester should check the calibration error both at the zero level and the high level before making any adjustments. Both in the preamble to part 75 (January 11, 1993) and in a public issue paper on the 7-day calibration error test, EPA stated that this second interpretation is the correct one. (See Docket Item II-D-27, Issue Paper on Part 75 Calibration Error Testing for Certification, October 8, 1993; Letter from J. White to D. McNeal, and Response to J. White from S. Saile, EPA). The EPA has adopted this interpretation of testing both instrument levels together because instrument errors at the zero and high levels are not always independent of each other. These interim amendments to part 75 clarify this provision.

Another related issue associated with the 7-day calibration error test concerned the kinds of adjustments that could be made. Requirements of the calibration error tests in 40 CFR part 75 and 40 CFR part 60 could be interpreted as requiring either 7 successive daily tests or one cumulative 7-day test. The following statements in the January 11, 1993 rule imply that the 7-day test is cumulative:

Do not make manual adjustments to the monitor setting during the 7-day test. If automatic adjustments are made, conduct the calibration error test in a way that the

magnitude of the adjustments can be determined and recorded. (section 6.3.1 of appendix A.)

However, EPA stated in Section V.G(4)(a) of its January 11, 1993 preamble to part 75 that "the 7-day calibration error test performed during certification is the same 2-point drift test as the daily calibration error test" and referred to 40 CFR part 60, appendix B in Section V.G(4)(b) (58 FR 3641). Industry generally interprets the calibration drift test in 40 CFR part 60 to require 7 separate daily tests, rather than a cumulative test over 7 days. (See Docket Item I-C-3, Jahnke, James A., Excerpt from *Continuous Emission Monitoring*, Van Nostrand Reinhold, New York.) The EPA now clarifies part 75 to state its original intention that the 7-day calibration error test is a series of 7 daily calibration error tests. On each day of the test, the monitor must meet the performance specification of a calibration error no greater than 2.5 percent of span. Because this is a series of tests, a tester may not adjust the monitor or monitor data, either manually or automatically, until the test has been completed at both levels on any given day. However, the tester may make adjustments between daily tests, once the previous day's test results have been recorded.

## 2. Quality Assurance of Data Following Daily Calibration Error Test

During early implementation EPA began developing a series of policies in order to assist in its evaluation of the acceptability of data received in quarterly reports. Among these policies concerned the acceptability of data when a required daily test is not performed. The Agency initially decided that the absence of information on a test during a calendar day means that emissions data for that day are not considered quality-assured. Section 2.1 of appendix B requires daily assessments, such as calibration error tests and interference checks, to be performed on each calendar day. Based on this requirement, EPA initially interpreted data as invalid for a calendar day from midnight to the time of the next successful daily calibration error test if no test results were reported. (See Docket Items II-D-56, ETS User Bulletin #2 and II-D-50, Electronic Data Reporting Supplementary Instructions, June 29, 1994.)

Some utilities expressed concern that a unit might stop operating during the middle of a day before the regularly scheduled time for performing an automated calibration. (See Docket Item II-D-60, Letter from Gary R. Cline, Pennsylvania Electric Co., to Margaret

Sheppard, EPA, August 1, 1994.) Because the testing procedures require the unit to operate during all measurements, the utility would be unable to perform this test and its data would be invalidated beginning at midnight. Some suggestions from utilities included: allowing performance of the test while the unit is off-line, treating the data as quality assured until the time of the next test, and treating the data as quality-assured prospectively for 24 hours from the previous test.

The EPA decided that the approach consistent with the regulatory language that would result in the greatest amount of quality-assured data while still preserving the requirement for a daily test is to retain the calendar day requirement for performing each daily test. However, if a unit stops operating during a calendar day, then data is still considered quality-assured for 24 clock hours from the previous day's test. For example, a unit with monitors that are normally calibrated at 8 a.m. performs the calibration error test at 8 a.m. on January 11. All 24 hours of data from the monitor for January 11 are quality-assured. If the unit suddenly "trips" and stops operating at 6 a.m. on January 12, the data from midnight until 6 a.m. are also considered quality-assured. If the unit starts up again at 3 p.m. but the monitors are not tested between 3 p.m. and midnight, then that block of data is invalidated. As in the January 11, 1993 rule, today's rule still requires a calibration error test to be performed with the unit operating. This is because the readings from the CEMS are affected by temperature and pressure conditions. (See Docket Item II-D-39, Log of telephone conversation between Jon Konings, WEPCo, and M. Sheppard, EPA, on EPA's policy on conducting calibration error test, April 13, 1994.) In order to ensure accurate CEMS measurements for the entire system and to ensure that this test is performed under controlled conditions, EPA requires the daily calibration error tests to be performed while the unit is operating for purposes of quality-assuring the data and testing the CEMS. (See Docket Item II-D-54, Acid Rain CEM (Part 75) Policy Manual.)

## 3. Unit Operation During Testing

This issue is related to provisions of section 6 of appendix A of part 75 and to the tests performed under appendix B of part 75. Under the January 11, 1993 rule, section 6.1 of appendix A requires that a unit be operated during periods when measurements are made for certification testing. Similarly, section 6.2 indicates that when performing a linearity check, testers are to conduct

each test by operating the monitor at its normal (unit) operating temperature and conditions. In this interim rule, EPA further clarifies provisions in the January 11, 1993 rule, providing that the unit must be operating, by adding language to sections 6.3.1, 6.3.2, and 6.4 for the calibration error test and for the cycle time test. These sections are later cited in appendix B. This language addition clarifies EPA's intent that a unit must be operating during all monitor testing, both for initial certification testing and for QA/QC testing.

During the public comment period for the proposed part 75 regulation, some commenters raised this issue. (See Docket A-90-51, Docket Item IV-D-303, Letter from Nicolson, Rober J., Vice President, Fossil & Hydro Operations, Consumers Power Company, Comments on Clean Air Act Amendments—Title IV Part 75 Continuous Emission Monitoring Rule and Docket A-91-69, Item IV-D-66, Letter from Sullivan, J.J., Executive Director, Environmental Programs, PSI Energy, Inc., Comments on the Proposed Acid Rain Program Rule: 40 CFR Part 72, 73, 75 and 77.) Under the new source performance standard for subpart Da of 40 CFR part 60 and under the performance specifications in appendix B of 40 part 60, EPA required a unit to operate for 168 hours in a row in order to perform the 7-day calibration error test for monitors. In part 75, EPA modified this to allow units to operate only during the periods when measurements were performed and by allowing operation on nonconsecutive days. This change was made to account for peaking units, which normally would not operate for every hour of every day. However, EPA still required the unit to be operating during testing so that the test will be performed under the same temperature and pressure conditions as when monitor readings are taken during the program. (See Docket A-90-69, Docket Items V-C-1 and V-C-2, Response to Comment Document.)

The test procedures for linearity checks and for calibration error tests require the entire monitoring system to be tested, rather than just the analyzer. For example, sections 6.2 and 6.3.1 of appendix A requires introducing calibration gas through the gas injection port, which for most systems will be at the probe. The calibration gas must go through as much of the system as possible, including the probe, filters, scrubbers, conditioners, and other monitor components for extractive type monitoring systems, or including all active electronic and optical components for in situ type monitors.

Monitor responses must come from the DAHS. Thus, the test is a test of the complete continuous emission monitoring system. (See Docket Item II-D-68, Memorandum from B. Warren-Hicks, The Cadmus Group to M. Sheppard, EPA, September 6, 1994). In order to make the linearity check and calibration error test a true test of the entire monitoring system, the tests must be performed under the same unit operating conditions that prevail when the monitor reads emissions to include in certification test results and in quarterly emissions reports. The EPA has already stated this policy in question Number 12.17 of its policy guidance manual. (See Docket Item II-D-54, Acid Rain CEM (Part 75) Policy Manual.) Utilities have also commented on the significant effects of temperature and pressure conditions upon monitor readings. (See Docket Items II-D-39, Conversation between J. Konings, WEPCo and M. Sheppard, EPA:ARD, on EPA's policy on conducting calibration error test, April 13, 1994; II-D-40, Meeting Notes from EPA Meeting with J. West of Metropolitan Edison and J. Jahnke of Source Technology Associates, April 18, 1994.)

The procedures of the relative accuracy test and the cycle time test require continuous emission monitoring systems and flow monitors to measure the actual emissions at the stack. Therefore, these tests can only be performed while the unit is operating.

The EPA does not consider test results to be valid if the test is performed while the unit is not operating.

Thus, in this interim rule, EPA clarifies that a unit must be operating when a test is performed in order to provide acceptable results to meet requirements for certification testing or QA/QC testing. This is also consistent in a new provision in section 2.1 of appendix B of part 75. This provision allows data to be considered valid for 24 hours following the last passed calibration error test if a unit stops operating on a calendar day before the utility has performed a calibration error test on that day. However, if a daily calibration error test were failed or if the daily calibration error test were performed while the unit is not operating, the data after that test would not be considered valid.

#### 4. Cycle Time Test

Part 75 included a cycle time/response time test to determine if a CEMS was capable of drawing down and analyzing a sample frequently enough to provide an update at least four times an hour. A tester was required to perform this test on the SO<sub>2</sub>

pollutant concentration monitor, the NO<sub>x</sub> CEMS (in lb/mmBtu), and the CO<sub>2</sub> pollutant concentration monitor. Some testers found the regulatory procedures unclear as to when a source tester samples stack gas. In addition, EPA staff realized that some CEMS cannot perform the cycle time/response time test simultaneously on the NO<sub>x</sub> and diluent gas components of the NO<sub>x</sub> CEMS, because NO<sub>x</sub> and O<sub>2</sub> cannot be kept in the same bottle for reasons of stability.

As a result of these issues raised during implementation, EPA has revised the cycle time/response time test to be a cycle time test patterned after the response time test in Method 20 of appendix A of 40 CFR part 60. A cycle time test is a test to determine the length of time it takes for a CEM system to draw down a sample of gas, analyze the sample, achieve a stable reading, and record the new concentration. More specifically, the cycle time test determines 95 percent of the length of time for the monitor to go from reading a known concentration of calibration gas to reading actual stack emissions. (The 95-percent margin allows for small amounts of error that will prevent a monitor from reading the labelled value of a calibration gas, even when the monitor reading is stable.) A tester starts by introducing calibration gas until the monitor reading is stable. Next, the tester switches the monitor to reading stack gas emissions. When the monitor response is stable, the tester notes the time. The DAHS records each value that the monitor reads and the time of the reading. Once the DAHS has recorded this stable value, the tester introduces the other calibration gas. The procedure is repeated, so that the monitor returns to a stable reading of stack gas and records it. This revised procedure will allow more time-share monitoring systems to pass the cycle time test than the earlier cycle time/response time test, because the revised test eliminates the time it takes for gas to travel from the calibration gas cylinder to the probe.

Stability is considered to be achieved when the monitor reading changes by less than 5 percent from the average concentration over a 5-minute period, or less than 1 percent of the monitor span over 30 seconds. These values were adapted from the response time test found in Method 20 of appendix A, 40 CFR part 60 for testing of stationary gas turbines. The EPA made the definition of stability more flexible by lengthening the time period for averaging concentration from 2 minutes to 5 minutes, in order to apply to coal-fired boilers, which may experience less stable loads than stationary gas turbines.

Based upon results from certification tests at Phase I units, EPA believes that coal-fired units can reliably achieve this definition of stability. (See Docket Item II-D-75, Analysis of Cycle Time/Response Time Data, October 3, 1994.)

The longer of the two times going from calibration gas to stack gas is the cycle time of the component monitor. For a NO<sub>x</sub> or SO<sub>2</sub>-diluent monitoring system, the cycle time is the longer of the two cycle times for the NO<sub>x</sub> or SO<sub>2</sub> pollutant concentration monitor and the diluent monitor. Originally, testers were required to test both component monitors at the same time, which requires injecting both gases simultaneously. Testing the two component monitors separately simplifies performing the cycle time test, since calibration gases do not need to be injected simultaneously. This also resolves the issues raised during certification testing for Phase I units. In addition, the revision provides consistency with existing EPA regulations under 40 CFR part 60.

The EPA has included recordkeeping provisions for this certification test in § 75.56. Furthermore, the rule amendments contain an additional figure at the end of appendix A, to complement the figures for test data and results for other certification tests for CEMS.

#### IV. Impact Analyses

The impact analyses required by Executive Orders 12866 and 12875 and by the Regulatory Flexibility Act, the Unfunded Mandates Act and the Paperwork Reduction Act are found under the notice of direct final rulemaking in today's **Federal Register**.

The control numbers assigned to collections of information in certain EPA regulations by the OMB have been consolidated under 40 CFR part 9. The EPA finds there is "good cause" under Sections 553(b)(B) and 553(d)(3) of the APA to amend the applicable table in 40 CFR part 9 to display the OMB control number for this rule without prior notice and comment. Due to the technical nature of the table, further notice and comment would be unnecessary. For additional information, see 58 FR 18014, April 7, 1993, and 58 FR 27472, May 10, 1993.

#### List of Subjects in 40 CFR Parts 75

Environmental protection, Air pollution control, Carbon dioxide, Continuous emission monitors, Electric utilities, Incorporation by reference, Nitrogen oxides, Reporting and recordkeeping requirements, Sulfur dioxide.

Dated: April 28, 1995.

Carol M. Browner, Administrator.

For the reasons set out in the preamble, part 75 of title 40, chapter I, of the Code of Federal Regulations is amended as follows:

**PART 75—CONTINUOUS EMISSION MONITORING**

1.–3. The authority citation for part 75 is revised to read as follows:

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

4. Section 75.11 is amended by adding a sentence to the end of paragraph (a) and by adding paragraphs (e) and (g) to read as follows:

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

(a) \* \* \* The provisions in this paragraph are suspended from July 17, 1995 through December 31, 1996.

\* \* \* \* \*

(e) *Units with SO<sub>2</sub> continuous emission monitoring systems during the combustion of gaseous fuel.* On or after January 1, 1997, the owner or operator of a unit with an SO<sub>2</sub> continuous emission monitoring system shall, during any hours in which the unit combusts only pipeline natural gas or gaseous fuel with a sulfur content no greater than natural gas, calculate SO<sub>2</sub> emissions in accordance with the following procedures. Prior to January 1, 1997, the owner or operator of such a unit may calculate SO<sub>2</sub> emissions in accordance with the following procedures.

(1) The owner or operator of a unit with an SO<sub>2</sub> continuous emission monitoring system shall, during any hours in which the unit combusts only pipeline natural gas, calculate SO<sub>2</sub> emissions using one of the following two methods in lieu of operating and recording data from the SO<sub>2</sub> continuous emission monitoring system:

(i) By using the heat input calculated using a certified flow monitoring system and a certified diluent monitor, the default SO<sub>2</sub> emission rate for pipeline natural gas from appendix D of this part, and Equation F–23 in appendix F of this part and by certifying this as a system for monitoring SO<sub>2</sub> mass emissions by identification in the monitoring plan, by tests for the data acquisition and handling system under § 75.20(c), and by meeting all quality control and quality assurance requirements in appendix B of this part for a flow monitor and a diluent monitor; or

(ii) By certifying an excepted monitoring system under appendix D of this part under § 75.20, by following the

procedures for determining SO<sub>2</sub> emissions from combustion of gaseous fuels under appendix D of this part, by meeting the recordkeeping requirements of § 75.55, and by meeting all quality control and quality assurance requirements for fuel flowmeters in appendix D of this part.

(2) During any hours in which the unit combusts only gaseous fuel with a sulfur content no greater than natural gas other than pipeline natural gas, the owner or operator shall calculate SO<sub>2</sub> mass emissions by certifying an excepted monitoring system under appendix D of this part under § 75.20, by using the gas sampling and analysis and fuel flow procedures of appendix D of this part, by meeting the recordkeeping requirements of § 75.55, and by meeting all quality control and quality assurance requirements for fuel flowmeters in appendix D of this part.

\* \* \* \* \*

(g) *Coal-fired units.* The owner or operator shall meet the general operating requirements in § 75.10 for an SO<sub>2</sub> continuous emission monitoring system and a flow monitoring system for each affected coal-fired unit while the unit is combusting coal or any fuel other than natural gas or a gaseous fuel with a sulfur content no greater than natural gas, except as provided in § 75.16 and in subpart E of this part.

5. Section 75.21 is amended by adding a sentence to the end of paragraph (a) and by adding paragraph (f) to read as follows:

**§ 75.21 Quality assurance and quality control requirements.**

(a) \* \* \* The provisions in this paragraph are suspended from July 17, 1995 through December 31, 1996.

\* \* \* \* \*

(f) *Continuous emission monitoring systems.* The owner or operator of an affected unit shall operate, calibrate, and maintain each primary and redundant backup continuous emission monitoring system used under the Acid Rain Program according to the quality assurance and quality control procedures in appendix B of this part.

The owner or operator of an affected unit shall ensure that each non-redundant backup continuous emission monitoring system used under the Acid Rain Program complies with the daily and quarterly quality assurance and quality control procedures in appendix B of this part for each day and quarter that the system is used to report data. 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, instead of the procedures specified in appendix B of this part. Notwithstanding the provisions of appendix B of this part, the owner or operator of a unit with an SO<sub>2</sub> continuous emission monitoring system is not required to perform daily or quarterly assessments under appendix B of this part on any day or in any calendar quarter during which the unit combusts only natural gas or a gaseous fuel with a sulfur content no greater than natural gas. In addition, any calendar quarter during which the unit combusts only natural gas or a gaseous fuel with a sulfur content no greater than natural gas shall be excluded in determining the calendar quarter, bypass operating quarter, or unit operating quarter when the next relative accuracy test audit must be performed for the SO<sub>2</sub> continuous emission monitoring system, provided that a relative accuracy test audit is performed on that system at least once every two calendar years. The owner or operator of a unit using a certified flow monitor and a certified diluent monitor and Equation F–23 to calculate SO<sub>2</sub> emissions shall meet all quality control and quality assurance requirements in appendix B of this part for the flow monitor and the diluent monitor.

6. Section 75.30 is amended by adding paragraphs (d) and (e) to read as follows:

**§ 75.30 General provisions.**

\* \* \* \* \*

(d) On or after January 1, 1997, the owner or operator shall comply with the provisions of this paragraph. Prior to January 1, 1997, the owner or operator may comply with the provisions of this paragraph (d) if also complying with the provisions of § 75.11(e).

(1) Whenever a unit with an SO<sub>2</sub> continuous emission monitoring system combusts only pipeline natural gas and the owner or operator is using the procedures in section 7 of appendix F of this part to determine SO<sub>2</sub> mass emissions pursuant to § 75.11(e), the owner or operator shall substitute for missing data from a flow monitoring system, CO<sub>2</sub> diluent monitor or O<sub>2</sub> diluent monitor using the missing data substitution procedures in § 75.36.

(2) Whenever a unit with an SO<sub>2</sub> continuous emission monitoring system combusts gas with a sulfur content no greater than natural gas or pipeline natural gas and the owner or operator is using the gas sampling and analysis and fuel flow procedures in appendix D of this part, to determine SO<sub>2</sub> mass emissions pursuant to § 75.11(e), the owner or operator shall substitute for

missing data using the missing data procedures in appendix D of this part.

(3) The owner or operator shall not use historical data from an SO<sub>2</sub> pollutant concentration monitor to account for SO<sub>2</sub> emissions due to combustion of gas during missing data periods. In addition, the owner or operator shall not include hours when the unit combusts only natural gas (or a gaseous fuel with sulfur content no greater than that of natural gas) in the availability calculations in § 75.32, nor in the calculations of substitute data using the procedures of either § 75.31 or § 75.33. For the purpose of the missing data and availability procedures for SO<sub>2</sub> pollutant concentration monitors in §§ 75.31 through 75.33 only, all hours during which the unit combusts only natural gas, or a gaseous fuel with a sulfur content no greater than natural gas, shall be excluded from the definition of "monitor operating hour," "quality-assured monitor operating hour," "unit operating hour," and "unit operating day."

(e) On or after January 1, 1997, the owner or operator shall comply with the provisions of this paragraph. Prior to January 1, 1997, the owner or operator may comply with the provisions of this paragraph.

(1) For monitoring of emissions at a unit with multiple stacks or a bypass stack, include only those hours when emissions are passing through the stack or duct in the definitions of "unit operating hour" and "quality-assured monitor operating hour" for purposes of applying the missing data and availability procedures in §§ 75.31 through 75.36 to the monitoring system on that stack or duct.

(2) If the proportion of flow going to each stack from a unit with multiple stacks or the proportion of flow going to a bypass stack has changed during the previous 2,160 hours when emissions passed through that stack, then record the maximum flow rate recorded by the flow monitoring system at the corresponding load range during the previous 2,160 hours of quality-assured monitor data when emissions passed through that stack, instead of the value calculated using the missing data substitution procedures in § 75.31 or § 75.33.

7. Section 75.32 is amended by adding a sentence to the end of paragraph (a)(3) and adding paragraph (a)(4) to read as follows:

**§ 75.32 Determination of monitoring data availability for standard missing data procedure.**

(a) \* \* \*

(3) \* \* \* The provisions in this paragraph (a)(3) are suspended from July 17, 1995 through December 31, 1996.

(4) 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, a reference method for that unit, and from an approved alternative monitoring system under subpart E of this part when calculating percent monitor data availability using Equation 8 or 9. The owner or operator shall exclude hours when a unit combusted only natural gas (or gaseous fuel with the same sulfur content as natural gas) from calculations of percent monitor data availability for SO<sub>2</sub> pollutant concentration monitors, as provided in § 75.30(d). No hours from more than three years (26,280 clock hours) earlier shall be used in Equation 8 or 9. When three years from certification have elapsed, replace the words "since certification" or "during previous 8,760 unit operating hours" with "in the previous three years" and replace "8,760" with "total unit operating hours in the previous three years."

\* \* \* \* \*

8. Section 75.34 is revised to read as follows:

**§ 75.34 Units with add-on emission controls.**

(a) The owner or operator of an affected unit equipped with add-on SO<sub>2</sub> and/or NO<sub>x</sub> emission controls shall use at least one of the following options:

(1) The owner or operator may use the missing data substitution procedures as specified for all affected units in §§ 75.31 through 75.33 for substituting data for each hour where the add-on emission controls are operating within the proper operation range specified in the monitoring plan for the unit. The designated representative shall report the range of add-on emission control operating parameters that indicate proper operation in the unit's monitoring plan and the owner or operator shall record data to verify the proper operation of the SO<sub>2</sub> or NO<sub>x</sub> add-on emission controls during each hour, as described in paragraph (d) of this section. In addition, under § 75.64(c) the designated representative shall submit a certified verification of the proper operation of the SO<sub>2</sub> or NO<sub>x</sub> add-on emission control for each missing data period at the end of each quarter.

(2) In addition, 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 monitoring plan) during the time period under petition.

(3) 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 SO<sub>2</sub> pollutant concentration and NO<sub>x</sub> emission rate data in accordance with the requirements of paragraphs (b) and (c) of this section, and appendix C of this part. The owner or operator shall record the data required in appendix C of this part, pursuant to § 75.51(b) until January 1, 1996, or pursuant to § 75.55(b).

(b) For an affected unit equipped with add-on SO<sub>2</sub> 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 SO<sub>2</sub> 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 SO<sub>2</sub> concentration data unless a parametric monitoring procedure has been approved by the Administrator.

(1) Where the monitoring data availability is 90.0 percent or more for an outlet SO<sub>2</sub> 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 SO<sub>2</sub> 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.

(c) For an affected unit with NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> emission rate data prior to receiving the Administrator's approval for a parametric monitoring procedure.

(1) Where monitor data availability for a NO<sub>x</sub> 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<sub>x</sub> 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.

(d) The owner or operator shall keep records of information as described in subpart F of this part to verify the proper operation of the SO<sub>2</sub> or NO<sub>x</sub> emission controls during all periods of missing data. The owner or operator shall provide these records to the Administrator or to the EPA Regional Office upon request. Whenever such records are not provided or such records do not demonstrate that proper operation of the SO<sub>2</sub> or NO<sub>x</sub> add-on emission controls has been maintained in accordance with the range of add-on emission control operating parameters reported in the monitoring plan for the unit, the owner or operator shall substitute the maximum potential NO<sub>x</sub> emission rate, as defined in § 72.2 of this chapter, to report the NO<sub>x</sub> emission rate, and either the maximum hourly SO<sub>2</sub> concentration recorded by the inlet monitor during the previous 720 quality assured monitor operating hours, if available, or the maximum potential concentration for SO<sub>2</sub>, as defined by section 2.1.1.1 of appendix A of this part, to report SO<sub>2</sub> concentration for each hour of missing data until information demonstrating proper operation of the SO<sub>2</sub> or NO<sub>x</sub> emission controls is available.

9. Section 75.53 is amended by revising paragraph (d) introductory text and by adding paragraph (d)(4) to read as follows:

**§ 75.53 Monitoring plan.**

\* \* \* \* \*

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

\* \* \* \* \*

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

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

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

\* \* \* \* \*

10. Section 75.55 is amended by adding paragraphs (b) and (e) to read as follows:

**§ 75.55 General recordkeeping provisions for specific situations.**

(a) \* \* \*

(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 SO<sub>2</sub> concentration data or NO<sub>x</sub> emission rate (in addition to other information), or shall record the information in paragraph (b)(1) of this section for SO<sub>2</sub> or paragraph (b)(2) of this section for NO<sub>x</sub> through an automated data acquisition and handling system, as appropriate to the type of add-on emission controls:

(1) For units with add-on SO<sub>2</sub> emission controls petitioning to use or using the optional parametric monitoring procedures in appendix C of this part, for each hour of missing SO<sub>2</sub> concentration or volumetric flow data:

(i) The information required in § 75.54(b) for SO<sub>2</sub> concentration and volumetric flow if either one of these monitors is still operating;

(ii) Date and hour;

(iii) Number of operating scrubber modules;

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

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

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

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

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

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

(x) For a unit with SO<sub>2</sub> add-on emission controls other than wet or dry

limestone, corresponding parameters approved by the Administrator;

(xi) Method of determination of SO<sub>2</sub> concentration and volumetric flow, using Codes 1-15 in Table 3 of § 75.54; and

(xii) Inlet and outlet SO<sub>2</sub> concentration values recorded by an SO<sub>2</sub> continuous emission monitoring system and the removal efficiency of the add-on emission controls.

(2) For units with add-on NO<sub>x</sub> emission controls petitioning to use or using the optional parametric monitoring procedures in appendix C of this part, for each hour of missing NO<sub>x</sub> emission rate data:

(i) Date and hour;

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

(iii) Excess O<sub>2</sub> concentration of flue gas at stack outlet (percent, rounded to nearest tenth of a percent);

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

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

(vi) Other parameters specific to NO<sub>x</sub> emission controls (e.g., average hourly reagent feedrate);

(vii) Method of determination of NO<sub>x</sub> emission rate using Codes 1-15 in Table 3 of § 75.54; and

(viii) Inlet and outlet NO<sub>x</sub> emission rate values recorded by a NO<sub>x</sub> continuous emission monitoring system and the removal efficiency of the add-on emission controls.

(3) For units with add-on SO<sub>2</sub> or NO<sub>x</sub> emission controls following the provisions of § 75.34(a) (1) or (2), for each hour of missing data record:

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

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

(iii) For units petitioning under § 75.66 for substituting a representative SO<sub>2</sub> concentration during missing data periods, any available inlet and outlet SO<sub>2</sub> concentration values recorded by an SO<sub>2</sub> continuous emission monitoring system; and

(iv) For units petitioning under § 75.66 for substituting a representative NO<sub>x</sub> emission rate during missing data periods, any available inlet and outlet NO<sub>x</sub> emission rate values recorded by a

NO<sub>x</sub> continuous emission monitoring system.

\* \* \* \* \*

(e) *Specific SO<sub>2</sub> emission record* provisions during the combustion of gaseous fuel. In accordance with the provisions in § 75.11(e), the owner or operator of a unit with an SO<sub>2</sub> continuous emission monitoring system may record the information in paragraph (c)(3) of this section in lieu of the information in §§ 75.54(c)(1) and 75.54(c)(3), for those hours when only pipeline natural gas or a gaseous fuel with a sulfur content no greater than natural gas is combusted.

\* \* \* \* \*

11. Section 75.56 is amended by adding paragraph (a)(6) to read as follows:

**§ 75.56 Certification, quality assurance and quality control record provisions.**

(a) \* \* \*

(6) For each SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub>, or O<sub>2</sub> pollutant concentration monitor, NO<sub>x</sub>-diluent continuous emission monitoring system, or SO<sub>2</sub>-diluent continuous emission monitoring system, the owner or operator shall record the following information for the cycle time test:

- (i) Component/system identification code;
- (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; and
- (ix) Cycle time result for the entire system.

\* \* \* \* \*

12. Section 75.64 is amended by revising paragraphs (a)(1) and (c) to read as follows:

**§ 75.64 Quarterly reports.**

(a) \* \* \*

(1) The information and hourly data required in §§ 75.50 through 75.52 (or §§ 75.54 through 75.56), no later than the quarterly report due April 30, 1996), excluding:

- (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 § 75.50(f) or § 75.54(f);
- (iv) For units with SO<sub>2</sub> or NO<sub>x</sub> 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 § 75.55(b)(3); and

(v) The information recorded under § 75.56(a)(7) for the period prior to January 1, 1996.

\* \* \* \* \*

(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. In the event of any missing data periods, the certification must describe the measures taken to cure the causes for the missing data periods. 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 SO<sub>2</sub> or NO<sub>x</sub> emissions, pursuant to § 75.34.

\* \* \* \* \*

13. Section 75.66 is amended by revising paragraphs (e) and (f) to read as follows:

**§ 75.66 Petitions to the Administrator.**

(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 § 75.51(b) (or § 75.55(b), no later than January 1, 1996) for 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.

(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)(2) 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., within the range of operating parameters for the add-on emission controls in the monitoring plan 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 SO<sub>2</sub> concentration or NO<sub>x</sub> emission rate does not underestimate the SO<sub>2</sub> concentration or NO<sub>x</sub> emission rate during the missing data period.
- \* \* \* \* \*

14. Appendix A to Part 75, Section 6.3 is amended by adding a sentence to the last paragraph of sections 6.3.1 and 6.3.2 and by adding section 6.3.3 to read as follows:

**Appendix A—Specifications and Test Procedures**

\* \* \* \* \*

6. Certification Tests and Procedures

\* \* \* \* \*

6.3.1 \* \* \* The provisions in this section are suspended from July 17, 1995 through December 31, 1996.

6.3.2 \* \* \* The provisions in this section are suspended from July 17, 1995 through December 31, 1996.

6.3.3 Pollutant Concentration Monitor and CO<sub>2</sub> or O<sub>2</sub> Monitor 7-day Calibration Error Test

Measure the calibration error of each pollutant concentration monitor and CO<sub>2</sub> or O<sub>2</sub> monitor while the unit is operating once each day for 7 consecutive operating days according to the following procedures. (In the event that extended unit outages occur after the commencement of the test, the 7 consecutive unit operating days need not be 7 consecutive calendar days.) Units using dual span monitors must perform the calibration error test on both high- and low-scales of the pollutant concentration monitor.

Do not make manual adjustments to the monitor settings until after taking measurements at both zero and high

concentration levels for that day during the 7-day test. If automatic adjustments are made, conduct the calibration error test in a way that the magnitude of the adjustments can be determined and recorded. Record and report test results for each day using the unadjusted concentration or flow rate measured in the calibration error test prior to making any manual adjustment or resetting the calibration.

The calibration error tests should be approximately 24 hours apart (unless the 7-day test is performed over non-consecutive days). Perform calibration error tests at two concentrations: (1) Zero-level and (2) high-level, as specified in section 5.2 of this appendix. In addition, repeat the procedure for SO<sub>2</sub> and NO<sub>x</sub> pollutant concentration monitors using the low-scale for units equipped with emission controls or other units with dual span monitors. Use only NIST traceable reference material, standard reference material, NIST/EPA-approved certified reference material, research gas material, Protocol 1 calibration gases certified by the vendor to be within 2 percent of the label value or zero air material for the zero level only.

Introduce the calibration gas at the gas injection port, as specified in section 2.2.1 of this appendix. Operate each monitor in its normal sampling mode. For extractive and dilution type monitors, pass the audit gas through all filters, scrubbers, conditioners, and other monitor components used during normal sampling and through as much of the sampling probe as is practical. For in situ type monitors, perform calibration checking all active electronic and optical components, including the transmitter, receiver, and analyzer. Challenge the pollutant concentration monitors and CO<sub>2</sub> or O<sub>2</sub> monitors once with each gas. Record the monitor response from the data acquisition and handling system. Using Equation A-5 of this appendix, determine the calibration error at each concentration once each day (at 24-hour intervals) for 7 consecutive days according to the procedures given in this section.

Calibration error tests are acceptable for monitor or monitoring system certification if none of these daily calibration error test results exceed the applicable performance specifications in section 3.1 of this appendix.

15. Appendix A to part 75, section 6.3.4 is added to read as follows:

**Appendix A—Specifications and Test Procedures**

**6. Certification Tests and Procedures**

**6.3.4 Flow Monitor 7-day Calibration Error Test**

Measure the calibration error of each flow monitor according to the following procedures.

Introduce the reference signal corresponding to the values specified in section 2.2.2.1 of this appendix to the probe tip (or equivalent), or to the transducer. During the 7-day certification test period, conduct the calibration error test while the unit is operating once each unit operating

day (as close to 24-hour intervals as practicable). In the event that extended unit outages occur after the commencement of the test, the 7 consecutive operating days need not be 7 consecutive calendar days. Record the flow monitor responses by means of the data acquisition and handling system. Calculate the calibration error using Equation A-6 of this appendix.

Do not perform any corrective maintenance, repair, or replacement upon the flow monitor during the 7-day certification test period other than that required in the quality assurance/quality control (QA/QC) plan required by appendix B of this part. Do not make adjustments between the zero and high reference level measurements on any day during the 7-day test. If the flow monitor operates within the calibration error performance specification (i.e., less than or equal to 3 percent error each day and requiring no corrective maintenance, repair, or replacement during the 7-day test period) the flow monitor passes the calibration error test portion of the certification test. Record all maintenance activities and the magnitude of any adjustments. Record output readings from the data acquisition and handling system before and after all adjustments. Record and report all calibration error test results using the unadjusted flow rate measured in the calibration error test prior to resetting the calibration. Record all adjustments made during the seven day period at the time the adjustment is made and report them in the certification application.

16. Appendix A to part 75, is amended by adding a sentence to the end of section 6.4 and by adding section 6.4.1 to read as follows:

**6. Certification Tests and Procedures**

6.4 \* \* \* The provisions in this section 6.4 are suspended from July 17, 1995 through December 31, 1996.

**6.4.1 Cycle Time Test**

Perform cycle time tests for each pollutant concentration monitor, and continuous emission monitoring system while the unit is operating according to the following procedures.

Use a zero-level and a high-level calibration gas (as defined in section 5.2 of this appendix) alternately. To determine the upscale elapsed time, inject a zero-level concentration calibration gas into the probe tip (or injection port leading to the calibration cell, for in situ systems with no probe). Record the stable starting monitor value and start time. Next, allow the monitor to measure the concentration of flue gas emissions until the response stabilizes. Determine the upscale elapsed time as the time at which 95.0 percent of the step change is achieved between the stable starting gas value and the stable ending monitor value. Record the stable ending monitor value, the end time, and the upscale elapsed time for the monitor using data acquisition and handling system output. Then repeat the procedure, starting by injecting the high-level gas concentration to determine the

downscale elapsed time, which is the time at which 95.0 percent of the step change is achieved between the stable starting gas value and the stable ending monitor value. End the downscale test by measuring the concentration of flue gas emissions. Record the stable starting and ending monitor values, the start and end times, and the downscale elapsed time for the monitor using data acquisition and handling system output. A stable value is equivalent to a reading with a change of less than 1 percent of the span value for 30 seconds, or a reading with a change of less than 5 percent from the measured average concentration over 5 minutes.

For monitors or monitoring systems that perform a series of operations (such as purge, sample, and analyze), time the injections of the calibration gases so they will produce the longest possible cycle time. Record the span, the zero and high gas concentrations, the start and end times, the stable starting and ending monitor values, and the upscale and downscale elapsed times. Report the slower of the two elapsed times as the cycle time for the analyzer. (See Figure 5 at the end of this appendix.) For the NO<sub>x</sub> continuous emission monitoring system test and SO<sub>2</sub>-diluent continuous emission monitoring system test, record and report the longer cycle time of the two component analyzers as the system cycle time.

For time-shared systems, this procedure must be done for all probe locations that will be polled within the same 15-minute period during monitoring system operations. For cycle time results for a time-shared system, add together the longest cycle time obtained from each location. Report the sum of the cycle time at each location plus the time required for all purge cycles (as determined by the CEMS manufacturer) for each location as the cycle time for each and all of those systems. For monitors with dual ranges, perform the test on the range giving the longest cycle time.

Cycle time test results are acceptable for monitor or monitoring system certification if none of the cycle times exceed 15 minutes.

17. Appendix A to part 75 is amended by adding Figure 5 at the end of the appendix to read as follows:

**Figure 5—Cycle Time**

Date of test \_\_\_\_\_  
 Component/system ID#: \_\_\_\_\_  
 Analyzer type \_\_\_\_\_  
 Serial Number \_\_\_\_\_  
 High level gas concentration: \_\_\_\_\_ ppm/%  
 (circle one)  
 Zero level gas concentration: \_\_\_\_\_ ppm/%  
 (circle one)  
 Analyzer span setting: \_\_\_\_\_ ppm/% (circle one)  
 Upscale:  
 Stable starting monitor value: \_\_\_\_\_ ppm/% (circle one)  
 Stable ending monitor reading: \_\_\_\_\_ ppm/% (circle one)  
 Elapsed time: \_\_\_\_\_ seconds  
 Downscale:  
 Stable starting monitor value: \_\_\_\_\_ ppm/% (circle one)

Stable ending monitor value: \_\_\_\_\_ ppm/  
 % (circle one)  
 Elapsed time: \_\_\_\_\_ seconds  
 Component cycle time= \_\_\_\_\_ seconds  
 System cycle time= \_\_\_\_\_ seconds  
 \* \* \* \* \*

18. Appendix B to part 75 is amended by adding a sentence to the end of section 2.1 and by adding section 2.1.7 to read as follows:

**Appendix B—Quality Assurance and Quality Control Procedures**

\* \* \* \* \*

**2. Frequency of Testing**

2.1 \* \* \* The provisions in this section 2.1 are suspended from July 17, 1995 through December 31, 1996.

\* \* \* \* \*

**2.1.7 Daily Assessments**

For each monitor or continuous emission monitoring system, perform the following assessments during each day in which the

unit combusts any fuel (hereafter referred to as a "unit operating day"), or for a monitor on a bypass stack/duct, during each day that emissions pass through the by-pass stack or duct. If the unit discontinues operation or if use of the by-pass stack or duct is discontinued prior to performance of the calibration error test, data from the monitor or continuous emission monitoring system may be considered quality assured prospectively for 24 consecutive clock hours from the time of successful completion of the previous daily test performed while the unit is operating. These requirements are effective as of the date when the monitor or continuous emission monitoring system completes certification testing.

\* \* \* \* \*

**Appendix F to Part 75—Conversion Procedures**

19. Appendix F is amended by adding section 7 to read as follows:

\* \* \* \* \*

**7. Procedures for SO<sub>2</sub> Mass Emissions at Units With SO<sub>2</sub> Continuous Emission Monitoring Systems During the Combustion of Gaseous Fuel**

Use the following equation to calculate hourly SO<sub>2</sub> mass emissions as allowed for units with SO<sub>2</sub> continuous emission monitoring systems during the combustion of pipeline natural gas under § 75.11(e). These procedures are optional prior to January 1, 1997 and are required on or after January 1, 1997.

$$E_h = (0.0006) HI \quad (\text{Eq. F-23})$$

where,

E<sub>h</sub>=Hourly SO<sub>2</sub> mass emissions, lb/hr.

0.0006=Default SO<sub>2</sub> emission rate for pipeline natural gas, lb/mmBtu.

HI=Hourly heat input, as determined using the procedures of section 5.2 of this appendix.

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