

POLLUTION CONTROL BOARD

NOTICE OF PROPOSED RULES

- 1) Heading of the Part: Control of Emissions from Large Combustion Sources
- 2) Code Citation: 35 Ill. Adm. Code Part 225
- 3)

<u>Section Numbers:</u>	<u>Proposed Action:</u>
225.100	New
225.120	New
225.130	New
225.140	New
225.200	New
225.202	New
225.205	New
225.210	New
225.220	New
225.230	New
225.232	New
225.235	New
225.237	New
225.240	New
225.250	New
225.260	New
225.261	New
225.263	New
225.265	New
225.270	New
225.290	New
225.295	New
- 4) Statutory Authority: 415 ILCS 5/9.10, 27 and 28.5 (2005)
- 5) A Complete Description of the Subjects and Issues Involved: This rulemaking is proposed to meet certain obligations of the State of Illinois under the Clean Air Act, 42 USC § 7401 *et seq.*; specifically, to satisfy Illinois' obligation to submit a State Implementation Plan to address the requirements of the Clean Air Mercury Rule, 70 Fed. Reg. 28606, and to address the applicable requirements of Section 9.10 of the Environmental Protection Act, 415 ILCS 5/9.10. This proposal will require Illinois coal-fired EGUs that serve a generator greater than 25 megawatts producing electricity for sale to begin to utilize control technology for mercury as necessary to achieve the numerical standards set by the proposed rule beginning July 1, 2009. To achieve this goal while

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preserving flexibility, the regulations provide new and existing sources with two alternative mercury emission standards to demonstrate compliance. The first alternative allows a source to comply with a mercury emission standard of 0.0080 lb mercury/GWh gross electrical output for each EGU. In the alternative, sources may control emissions by a minimum of 90% from input mercury levels. In addition, through December 31, 2013, companies with several sources with EGUs may utilize averaging demonstrations between the sources. Those sources that have no sister plants are grouped into a co-op so that they may also average amongst the listed facilities. However, every source in the averaging demonstration must attain at least a 75% reduction of input mercury or 0.020 lb mercury/GWh gross electrical output. This proposal also sets forth permitting, monitoring, recordkeeping, and reporting requirements for affected sources.

- 6) Published studies or reports, and sources of underlying data, used to compose this rulemaking: The regulatory proposal included the Illinois EPA's *Technical Support Document for Reducing Mercury Emissions from Coal-Fired Electric Generating Units (TSD)* that relied on several published studies and reports. Copies of the documents the Illinois EPA relied upon are available for review with the Pollution Control Board and are listed below. The *TSD* includes an executive summary of the results from the Integrated Planning Model that was performed by ICF Resources, Inc. contracted by the Illinois EPA. The underlying data used to perform the modeling and the results are also available for review at the Pollution Control Board.

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- 7) Will this rulemaking replace any emergency rule currently in effect? No

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- 8) Does this rulemaking contain an automatic repeal date? No
- 9) Does this rulemaking contain incorporations by reference? Yes
- 10) Are there any other proposed rules pending on this Part? No
- 11) Statement of Statewide Policy Objective: This rulemaking does not create or enlarge a State mandate, as defined in Section 3(b) of the State Mandates Act. [30 ILCS 805/3(b) (2004)].
- 12) Time, Place, and Manner in which interested persons may comment on this proposed rulemaking: The Board will accept written public comment on this proposal for 45 days after the date of publication in the *Illinois Register*. Comments should reference Docket R06-25 and be addressed to:

Clerk's Office
Illinois Pollution Control Board
100 W. Randolph St., Suite 11-500
Chicago, IL 60601

Interested persons may request copies of the Board's opinion and order by calling Dorothy Gunn at 312-814-3620, or download from the Board's Web site at www.ipcb.state.il.us.

For more information contact Marie Tipsord at 312/814-4925 or email at tipsordm@ipcb.state.il.us.

- 13) Initial Regulatory Flexibility Analysis:
- A) Types of small businesses, small municipalities and not for profit corporations affected: None
- B) Reporting, bookkeeping or other procedures required for compliance: The proposed rulemaking requires the owner or operator of an affected source to install required emissions monitoring systems, complete required certification tests, and record, report, and quality-assure the data from such systems. The owner or operator of an affected source must also maintain emissions monitoring information, submit quarterly reports, compliance certifications, and annual certifications of compliance.

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C) Types of Professional skills necessary for compliance: No professional skills beyond those currently required by the existing State and federal air pollution control regulations applicable to affected sources will be required.

14) Regulatory Agenda on which this rulemaking was summarized: January 2006

The full text of the Proposed Rules begins on the next page:

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: EMISSION STANDARDS AND LIMITATIONS
FOR STATIONARY SOURCES

PART 225
CONTROL OF EMISSIONS FROM LARGE COMBUSTION SOURCES

SUBPART A: GENERAL PROVISIONS

Section
225.100 Severability
225.120 Abbreviations and Acronyms
225.130 Definitions
225.140 Incorporations by Reference

SUBPART B: CONTROL OF MERCURY EMISSIONS
FROM COAL-FIRED ELECTRIC GENERATING UNITS

Section
225.200 Purpose
225.202 Measurement Methods
225.205 Applicability
225.210 Compliance Requirements
225.220 Clean Air Act Permit Program (CAAPP) ~~Permitting~~ Permit Requirements
225.230 Emission Standards for EGUs at Existing Sources
225.232 Averaging Demonstrations for Existing Sources
225.235 Units Scheduled for Permanent Shut Down
225.237 Emission Standards for New Sources with EGUs
225.240 General Monitoring and Reporting Requirements
225.250 Initial Certification and Recertification Procedures for Emissions
Monitoring
225.260 Out of Control Periods for Emission Monitors
225.261 Additional Requirements to Provide Heat Input Data
225.263 Monitoring of Gross Electrical Output
225.265 Coal Analysis for Input Mercury Levels
225.270 Notifications
225.290 Recordkeeping and Reporting
225.295 Treatment of Mercury Allowances

AUTHORITY: Implementing Section 9.10 and authorized by Sections 27 and 28.5 of the Environmental Protection Act [415 ILCS 5/9.10, 27 and 28.5].

SOURCE: Adopted at 30 Ill. Reg. _____, effective _____.

SUBPART A: GENERAL PROVISIONS

Section 225.100 Severability

If any Section, subsection or clause of this Part is found invalid, such finding shall not affect the validity of this Part as a whole or any Section, subsection or clause not found invalid.

Section 225.120 Abbreviations and Acronyms

Unless otherwise specified within this Part, the abbreviations used in this Part shall be the same as those found in 35 Ill. Adm. Code 211. The following abbreviations and acronyms are used in this Part:

Act	Environmental Protection Act [415 ILCS 5/1 et seq.]
Btu	British thermal unit
CAA	Clean Air Act [42 U.S.C. <u>USC</u> 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CO2	carbon dioxide
EGU	electric generating unit
GWh	gigawatt hour
hr	hour
lb	pound
MW	megawatt
MWe	megawatt electrical
MWh	megawatt hour
NOx	nitrogen oxides
O2	oxygen
RATA	relative accuracy test audit
SO2	sulfur dioxide
USEPA	United States Environmental Protection Agency

Section 225.130 Definitions

The definitions contained in this Section apply only to the provisions of this Part. Unless otherwise defined herein in this Section and unless a different meaning of a term is clear from its context, the definitions of terms used in this Part shall have the meanings specified for those terms in 35 Ill. Adm. Code ~~Part~~ 211.

"Averaging demonstration" means, with regard to Subpart B of this Part, a demonstration of compliance that is based on the combined performance of EGUs at two or more sources.

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

"Bottoming-cycle cogeneration unit" means a cogeneration unit in which the energy input to the unit is first used to produce useful thermal energy and at least some of the reject heat from the useful thermal energy application or process is then used for electricity production.

"Coal" means any solid fuel classified as anthracite, bituminous, subbituminous, or lignite by the American Society for Testing and Materials (ASTM) Standard Specification for Classification of Coals by Rank D388-77, 90, 91, 95, 98a, or 99 (Reapproved 2004).

"Coal-derived fuel" means any fuel (whether in a solid, liquid or gaseous state) produced by the mechanical, thermal, or chemical process.

"Coal-fired" means combusting any amount of coal or coal-derived fuel, alone or in combination with any amount of any other fuel, during a specified year.

"Cogeneration unit" means a stationary, fossil fuel-fired boiler or stationary, fossil fuel-fired combustion turbine:

Having equipment used to produce electricity and useful thermal energy for industrial, commercial, heating, or cooling purposes through the sequential use of energy; and

Producing during the 12-month period starting on the date the unit first produces electricity and during any calendar year after the calendar year in which the unit first produces electricity:

For a topping-cycle cogeneration unit:

Useful thermal energy not less than 5 percent of total energy output; and

Useful power that, when added to one-half of useful thermal energy produced, is not less ~~than~~ 42.5 percent of total energy input, if useful thermal energy produced is 15 percent or more of total energy output, or not less than 45 percent of total energy input, if useful thermal energy produced is less than 15 percent of total energy output.

For a bottoming-cycle cogeneration unit, useful power not less than 45 percent of total energy input.

"Combustion turbine" means:

An enclosed device comprising a compressor, a combustor, and a turbine and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine; and

If the enclosed device under the above paragraph of this definition is combined cycle, any associated heat recovery steam generator and steam turbine.

"Commence commercial operation" means, with regard to Subpart B of this Part, with regard to an Electric Generating Unit that serves a generator, to have begun to produce steam, gas, or other heated medium used to generate electricity for sale or use, including test generation. Such date shall remain the unit's date of commencement of operation even if the Electric Generating Unit is subsequently modified, reconstructed or repowered.

"Designated representative" means, with regard to Subpart B of this Part, the same as defined in 40 CFR 60.4102.

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

"Gross electrical output" means the total electrical output from an Electric Generating Unit before making any deductions for energy output used in any way related to the production of energy. For an Electric Generating Unit generating only electricity, the gross electrical output is the output from the turbine/generator set.

"Input mercury" means the mass of mercury that is contained in the coal combusted within an Electric Generating Unit.

"Nameplate capacity" means, starting from the initial installation of a generator, the maximum electrical generating output (in MWe) that the generator is capable of producing on a steady-state basis and during continuous operation (when not restricted by seasonal or other deratings) as specified by the manufacturer of the generator or, starting from the completion of any subsequent physical change in the generator resulting in an increase in the maximum electrical generating output (in MWe) that the generator is capable of producing on a steady-state basis and during continuous operation (when not restricted by seasonal or other deratings), such increased maximum amount as specified by the person conducting the physical change.

"Output-based emission standard" means, with regard to Subpart B of this Part, a maximum allowable rate of emissions of mercury per unit of gross electrical output from an Electric Generating Unit.

"Repowered" means, with regard to an EGU, replacement of a coal-fired boiler with one of the following coal-fired technologies at the same source as the coal-fired boiler:

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 USEPA in consultation with the United States Department of Energy, a derivative of one or more of the technologies under this definition and any other coal-fired 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 January 1, 2005.

"Rolling 12-month basis" means, with regard to Subpart B of this Part, a determination made on a monthly basis from the relevant data for a particular calendar month and the preceding 11 calendar months (total of 12 months of data), with two exceptions. For determinations involving one EGU, calendar months in which the EGU does not operate (zero EGU operating hours) shall not be included in the determination, and shall be replaced by a preceding month or months in which the EGU does operate, so that the determination is still based on 12 months of data. For determinations involving two or more EGUs, calendar months in which none of the EGUs covered by the determination operates (zero EGU operating hours) shall not be included in the determination, and shall be replaced by preceding months in which at least one of the EGU covered by the determination does operate, so that the determination is still based on 12 months of data.

Section 225.140 Incorporations by Reference

The following materials are incorporated by reference. These incorporations do not include any later amendments or editions.

a) 40 CFR ~~Part~~ 60, § 60.17, § 60.45a, § 60.49a(k)(1), § 60.49a(p), § 60.50a(h), and §§ 60.4170 through 60.4176 (2005).

b) 40 CFR ~~Part~~ 75 (2005).

c) ASTM. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, (610) 832-9585:

1) ASTM D388-77, 90, 91, 95, 98a, or 99, Classification of Coals by Rank (Reapproved 2004).

2) ASTM D3173-03, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke (Approved April 10, 2003).

3) ASTM D3684-01, Standard Test Method for Total Mercury in Coal by the Oxygen Bomb Combustion/Atomic Absorption Method (Approved October 10, 2001).

4) ASTM D5865-04, Standard Test Method for Gross Calorific Value of Coal and Coke (Approved April 1, 2004).

5) ASTM D6414-01, Standard Test Method for Total Mercury in Coal and Coal Combustion Residues by Acid Extraction or Wet Oxidation/Cold Vapor Atomic Absorption (Approved October 10, 2001).

6) 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) (Approved April 10, 2002).

SUBPART B: CONTROL OF MERCURY EMISSIONS
FROM COAL-FIRED ELECTRIC GENERATING UNITS

Section 225.200 Purpose

The purpose of this Subpart is to control the emissions of mercury from coal-fired electrical generating units in Illinois.

Section 225.202 Measurement Methods

Measurement of mercury shall be according to the following:

a) Continuous emission monitoring pursuant to 40 CFR ~~Part~~ 75 (2005).

b) ASTM D3173-03, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke (Approved April 10, 2003).

c) ASTM D3684-01, Standard Test Method for Total Mercury in Coal by the Oxygen Bomb Combustion/Atomic Absorption Method (Approved October 10, 2001).

d) ASTM D5865-04, Standard Test Method for Gross Calorific Value of Coal and Coke (Approved April 1, 2004).

e) ASTM D6414-01, Standard Test Method for Total Mercury in Coal and Coal Combustion Residues by Acid Extraction or Wet Oxidation/Cold Vapor Atomic Absorption (Approved October 10, 2001).

f) 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) (Approved April 10, 2002).

Section 225.205 Applicability

The following stationary coal-fired boilers and stationary coal-fired combustion turbines are EGUs and are subject to this Subpart:

- a) Except as provided in subsection (b) of this Section, a unit serving, at any time since the start-up of the unit's combustion chamber, a generator with nameplate capacity of more than 25 MWe producing electricity for sale.
- b) For a unit that qualifies as a cogeneration unit during the 12-month period starting on the date the unit first produces electricity and continues to qualify as a cogeneration unit, a cogeneration unit serving at any time a generator with nameplate capacity of more than 25 MWe and supplying in any calendar year more than one-third of the unit's potential electric output capacity or 219,000 MWh, whichever is greater, to any utility power distribution system for sale. If a unit qualifies as a cogeneration unit during the 12-month period starting on the date the unit first produces electricity but subsequently no longer qualifies as a cogeneration unit, the unit shall be subject to subsection (a) of this Section starting on the day on which the unit first no longer qualifies as a cogeneration unit.

Section 225.210 Compliance Requirements

a) Permit Requirements

The owner or operator of each source with one or more EGUs subject to this Subpart at the source must apply for a CAAPP permit that addresses the applicable requirements of this Subpart.

b) Monitoring Requirements

1) The owner or operator of each source and each EGU at the source must comply with the monitoring requirements of Sections 225.240 through 225.290 of this Subpart.

2) The compliance of each EGU with the mercury requirements under Sections 225.230 and 225.237 of this Subpart shall be determined by the emissions measurements recorded and reported in accordance with Sections 225.240 through 225.290 of this Subpart.

c) Mercury Emission Reduction Requirements

The owner or operator of any EGU subject to this Subpart shall comply with applicable requirements for control of mercury emissions under Section 225.230 or Section 225.237 of this Subpart.

d) Recordkeeping and Reporting Requirements

Unless otherwise provided, the owner or operator of a source with one or more EGUs at the source shall keep on site at the source each of the documents listed in subsections (d)(1) through (d)(3) of this Section for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Agency.

1) All emissions monitoring information, in accordance with Sections 225.240 through 225.290 of this Subpart.

2) Copies of all reports, compliance certifications, and other submissions and all records made or required or documents necessary to demonstrate compliance with the requirements of this Subpart.

3) Copies of all documents used to complete a permit application and any other submission under this Subpart.

e) Liability

1) The owner or operator of each source with one or more EGUs shall meet the requirements of this Subpart.

2) Any provision of this Subpart that applies to a source shall also apply to the owner and operator of such source and to the owner and operator of each EGU at the source.

3) Any provision of this Subpart that applies to an EGU shall also apply to the owner and operator of such EGU.

f) Effect on Other Authorities. No provision of this Subpart shall be construed as exempting or excluding the owner and operator of a source or EGU from compliance with any other provision of an approved State Implementation Plan, a permit, the Act, or the CAA.

Section 225.220 Clean Air Act Permit Program (CAAPP) Permit Requirements

a) Application Requirements

1) Each source with one or more EGUs subject to the requirements of this Subpart is required to submit a CAAPP permit application that addresses all applicable requirements of this Subpart, applicable to each EGU at the source.

2) A) For ~~EGUs~~any EGU that commenced commercial operation :

A) on or before December 31, 2008, the owner or operator of ~~such EGUs~~that EGU must submit an initial permit application or application for CAAPP permit modification that meets the requirements of this Section by December 31, 2008.

~~B) For any EGU that commences commercial operation after December 31, 2008,~~ the owner or operator of any such EGU must submit an initial CAAPP permit application or application for CAAPP modification that meets the requirements of this Section not later than 180 days before initial startup of the EGU, unless the construction permit issued for the EGU addresses the requirements of this Subpart.

b) Contents of Permit Applications

In addition to other information required for a complete application for CAAPP permit or CAAPP permit modification, the application shall include the following information:

1) The ORIS (Office of Regulatory Information Systems) or facility code assigned to the source by the Energy Information Administration, if applicable.

2) Identification of each EGU at the source.

3) The intended approach to the monitoring requirements of Sections 225.240 through 225.290 of this Subpart.

4) The intended approach to the mercury emission reduction requirements of Section 225.230 or 225.237 of this Subpart, as applicable.

c) Permit Contents

1) Each CAAPP permit issued by the Agency for a source with one or more EGUs subject to the requirements of this Subpart shall contain federally enforceable conditions addressing all applicable requirements of this Subpart, which conditions shall be a complete and segregable portion of the source's entire CAAPP permit.

2) In addition to conditions related to the applicable requirements of this Subpart, each such CAAPP permit shall also contain the information specified under subsection (b) of this Section.

Section 225.230 Emission Standards for EGUs at Existing Sources

a) Emission Standards

1) Beginning July 1, 2009, the owner or operator of a source with one or more EGUs subject to this Subpart that commenced commercial operation on or before December 31, ~~2008~~, 2008 shall comply with one of the following standards for each EGU on a rolling 12-month basis:

- A) An emission standard of 0.0080 lb mercury/GWh gross electrical output; or
- B) A minimum 90-percent reduction of input mercury.

2) For an EGU complying with subsection (a)(1)(A) of this Section, the actual mercury emission rate of the EGU for each 12-month rolling period, as monitored in accordance with this Subpart and calculated as follows, shall not exceed the applicable emission standard:

Where:

ER = Actual mercury emissions rate of the EGU for the particular 12-month rolling period, expressed in lb/GWh.

E_i = Actual mercury emissions of the EGU, in lbs, in an individual month in the 12-month rolling period, as determined in accordance with the emissions monitoring provisions of this Subpart.

O_i = Gross electrical output of the EGU, in GWh, in an individual month in the 12-month rolling period, as determined in accordance with Section 225.263 of this Subpart.

3) For an EGU complying with subsection (a)(1)(B) of this Section, the actual control efficiency for mercury emissions achieved by the EGU for each 12-month rolling period, as monitored in accordance with this Subpart and calculated as follows, shall meet or exceed the applicable efficiency requirement:

Where:

CE = Actual control efficiency for mercury emissions of the EGU for the particular 12-month rolling period, expressed as a percent.
Ei = Actual mercury emissions of the EGU, in lbs, in an individual month in the 12-month rolling period, as determined in accordance with the emissions monitoring provisions of this Subpart.
Ii = Amount of mercury in the fuel fired in the EGU, in pounds, in an individual month in the 12-month rolling period, as determined in accordance with Section 225.265 of this Subpart.

b) Alternative Emission Standards for Single EGUs

1) As an alternative to compliance with one of the above emission standards in subsection (a) of this Section, the owner or operator of the EGU may comply with the emission standards of this Subpart by demonstrating that the actual emissions of mercury from the EGU are less than the allowable emissions of mercury from the EGU on a rolling 12-month basis.

2) For this purpose, for each rolling 12-month period, the actual emissions of mercury from the EGU, as monitored in accordance with this Subpart, must not exceed the allowable emissions of mercury from the EGU, as further provided by the following formulas:

$$E_{12} = A_{12}$$

$$E_{12} = 12 E_i S_i = 1$$

$$A_{12} = 12 A_i S_i = 1$$

Where:

E₁₂ = Actual mercury emissions of the EGU for the particular 12-month rolling period.

A₁₂ = Allowable mercury emissions of the EGU for the particular 12-month rolling period.

E_i = Actual mercury emissions of the EGU in an individual month in the 12-month rolling period.

A_i = Allowable mercury emissions of the EGU in an individual month in the 12-month rolling period, based on either the input mercury to the unit (A_{Input i}) or the electrical output from the EGU (A_{Output i}), as selected by the owner or operator of the EGU for that given month.

A_{Input i} = Allowable mercury emissions of the EGU in an individual month based on the input mercury to the EGU, calculated as 10.0 percent (or 0.100) of the input mercury to the EGU.

A_{Output i} = Allowable mercury emissions of the EGU in a particular month based on the electrical output from the EGU, calculated as the product of the output based mercury limit, i.e., 0.0080 lb/GWh, and the electrical output from the EGU, in GWh.

3) If the owner or operator of an EGU does not conduct the necessary sampling, analysis, and recordkeeping, in accordance with Section 225.265 of this Subpart, to determine the mercury input to the EGU, the allowable emissions of the EGU must be calculated based on the electrical output of the EGU.

c) If two or more EGUs are served by common stack(s) and the owner or operator conducts monitoring for mercury emissions in the common stack(s), as provided for by 40 CFR Part 75, Subpart I, such that the mercury emissions of each EGU are not determined separately, compliance of the EGUs with the applicable emission standards of this Subpart shall be determined as if the EGUs were a single EGU.

d) Alternative Emission Standards for Multiple EGUs

1) As an alternative to compliance with the emission standards of subsection (a) of this Section, the owner or operator of a source with an EGU may comply with the emission standards of this Subpart by demonstrating that the actual emissions of mercury from all EGUs at the source are less than the allowable emissions of mercury from all EGUs at the source on a rolling 12-month basis.

2) For this purpose, for each rolling 12-month period, the actual emissions of mercury from all the EGUs at the source, as monitored in accordance with this Subpart, must not exceed the sum of the allowable emissions of mercury from all the EGUs at the source, as further provided by the following formulas:

$$ES=AS$$

$$ES=nE_iS_i=1$$

$$AS=nA_iS_i=1$$

Where:

ES = Sum of the actual mercury emissions of the EGUs at the source.

AS = Sum of the allowable mercury emissions of the EGUs at the source.

E_i = Actual mercury emissions of an individual EGU at the source, as determined in accordance with subsection (b) (2) of this Section.

A_i = Allowable mercury emissions of an individual EGU at the source, as determined in accordance with subsection (b) (2) of this Section.

n = Number of EGUs covered by the demonstration.

3) If an owner or operator of a source with two or more EGUs that is relying on this subsection (d) to demonstrate compliance fails to meet the requirements of this subsection (d) in a given 12-month rolling period, all EGUs at such source covered by the compliance demonstration are considered out of compliance with the applicable emission standards of this Subpart for the entire last month of that period.

Section 225.232 Averaging Demonstrations for Existing Sources

a) Through December 31, 2013, as an alternative to compliance with the emission standards of Section 225.230(a) of this Subpart, the owner or operator of an EGU may comply with the emission standards of this Subpart by means of an Averaging Demonstration (Demonstration) that shows that the actual emissions of mercury from the EGU and other EGUs at the source and other EGUs at other sources covered by the Demonstration are less than the allowable emissions of mercury from all EGUs covered by the Demonstration on a rolling 12-month basis.

b) The EGUs at each source covered by a Demonstration must also comply with one of the following emission standards on a source-wide basis for the period covered by the Demonstration:

- 1) An emission standard of 0.020 lb mercury/GWh gross electrical output; or
- 2) A minimum 75- percent reduction of input mercury.

c) For the purpose of this Section, compliance shall be determined using the equations in Section 225.230(a)(2), (a)(3), or (d)(2) of this Subpart, as applicable, addressing all EGUs at the sources covered by the Demonstration, rather than only EGUs at one source.

d) Limitations on Demonstrations

~~a)~~ 1) The owners or operators of more than one existing source with EGUs can only participate in Demonstrations that include other existing sources that they own or operate.

2) Single Existing Source Demonstrations

A) The owner or operator of only a single existing source with EGUs (i.e., City, Water, Light & Power, City of Springfield, ID 167120AAO; Electric Energy, Inc., ID 127855AAC; Kincaid Generating Station, ID 021814AAB; and Southern Illinois Power Cooperative/Marion Generating Station, ID 199856AAC) can only participate in Demonstrations with other such owners or operators of a single existing source of EGUs.

~~iiB)~~ Participation in Demonstrations under this Section by the owner or operator of only a single existing source with EGUs must be authorized through federally enforceable permit conditions for each such source participating in the Demonstration.

e) A source may be included in only one Demonstration during each rolling 12-month period.

f) The owner or operator of EGUs using Demonstrations to show compliance with this Subpart must complete the determination of compliance for each 12-month rolling period no later than 60 days following the end of the period.

g) If averaging is used to demonstrate compliance with this Subpart, the effect of a failure to demonstrate compliance shall be that the compliance status of each source shall be determined under Section 225.230 of this Subpart as if the sources were not covered by a Demonstration.

h) For purposes of this Section, if the owner or operator of any source that participates in a Demonstration with an owner or operator of a source that does not maintain the required records, data, and reports for the EGUs at the source, or does not submit copies of such records, data, or reports to the Agency upon request, then the effect of this failure will be deemed to be a failure to demonstrate compliance and the compliance status of each source shall be determined under Section 225.230 of this Subpart as if the sources were not covered by a Demonstration.

a) The emission standards of Section 225.230(a) of this Subpart are not applicable to an EGU that will be permanently shut down as ~~further specified below:~~follows:

1) The owner or operator of an EGU for which this Section is being relied upon shall by no later than June 30, 2009:

A) Have notified the Illinois EPA that it is planning to permanently shut down the EGU by the applicable date specified in subsection (a)(3) or (4) of this Section. This notification shall be accompanied by a description of the actions that have already been taken to allow the shut down of the EGU and a description of the future actions that must be accomplished to complete the shut down of the EGU, with the anticipated schedule for those actions and the anticipated date of permanent ~~shutdown~~shut down of the unit.

B) Have applied for a construction permit or be actively pursuing a federally enforceable agreement that requires the EGU to be permanently shut down in accordance with this Section.

C) Have applied for revisions to the operating permit(s) for the EGU to include provisions that terminate the authorization to operate the unit in accordance with this Section.

2) The owner or operator of an EGU for which this Section is being relied upon shall by no later than June 30, 2010:

A) Have obtained a construction permit or entered into a federally enforceable agreement as addressed by subsection (a)(1)(B) of this Section; or

B) Have obtained revised operating permit(s) in accordance with subsection (a)(1)(C) of this Section.

3) The plan for permanent shut down of the EGU must provide for the EGU to be permanently shut down by no later than the applicable date specified below:

A) If the owner or operator of the EGU is not constructing a new EGU or other generating units to specifically replace the existing EGU, by December 31, 2010.

B) If the owner or operator of the EGU is constructing a new EGU or other generating units to specifically replace the existing EGU, by December 31, 2011.

4) The owner or operator of the EGU must permanently shut down the EGU by the date specified in subsection (a)(3) of this Section, unless the owner or operator submits a demonstration to the Illinois EPA before such date showing that circumstances beyond its reasonable control (such as protracted delays in construction activity, unanticipated outage of another EGU, or protracted shakedown of a replacement unit) have occurred that interfere with the plan for permanent shut down of the EGU, in which case the date for shut down of the EGU may be extended as follows:

A) If the owner or operator of the EGU is not constructing a new EGU or other generating units to specifically replace the existing EGU, for up to one year, i.e., permanent shut down of the EGU to occur by no later than December 31, 2011.

B) If the owner or operator of the EGU is constructing a new EGU or other generating units to specifically replace the existing EGU, for up to 18 months,

i.e., permanent shutdown of the EGU to occur by no later than June 30, ~~2013, 2013;~~ provided, however, that after December 31, 2012, the existing EGU shall only operate as a back-up unit to address periods when the new generating units are not in service.

b) Notwithstanding Sections 225.230 and 225.232 of this Subpart, any EGU that is not required to comply with Section 225.230 of this Subpart pursuant to this Section shall not be included when determining whether any other EGUs at the source or other sources are in compliance with Section 225.230 of this Subpart.

c) If an EGU for which the owner or operator of the source has relied upon this Section in lieu of complying with Section 225.230(a) of this Subpart is not permanently shut down as required by this Section, the EGU shall be considered to be a new EGU subject to the emission standards in Section 225.237(a) of this Subpart beginning in the month after the EGU was required to be permanently shut down, in addition to any other penalties that may be imposed for failure to permanently shut down the EGU in accordance with this Section.

Section 225.237 Emission Standards for New Sources with EGUs

a) Standards

1) The owner or operator of a source with one or more EGUs, but that previously had not had any EGUs that commenced commercial operation before January 1, 2009, shall comply with one of the following emission standards for each EGU on a rolling 12-month basis:

A) An emission standard of 0.0080 lb mercury/GWh gross electrical output; or

B) A minimum 90- percent reduction of input mercury.

2) For this purpose, compliance may be demonstrated using the equations in Section 225.230(a)(2), (a)(3), or (b)(2) of this Subpart.

b) The initial 12-month rolling period for which compliance with the emission standards of subsection (a)(1) of this Section must be demonstrated for a new EGU shall commence on the date that the initial performance test for the mercury emission standard under 40 CFR 60.45a also commences. The continuous emission monitoring systems required by this Subpart for mercury emissions from the EGU must be certified prior to this date. Thereafter, compliance shall be demonstrated on a rolling-12 month basis in terms of calendar months.

Section 225.240 General Monitoring and Reporting Requirements

The owner or operator of an EGU shall comply with the monitoring, recordkeeping, and reporting requirements as provided in this Section, Sections 225.250 through 225.290 of this Subpart, and Subpart I of 40 CFR ~~Part~~ 75. If the EGU utilizes a common stack with units that are not EGUs and the owner or operator of the EGU does not conduct emissions monitoring in the duct to the common stack from each EGU, the owner or operator of the EGU shall conduct emissions monitoring in accordance with 40 CFR 75.82(b)(2) and this Section, including monitoring in the duct to the common stack from each unit that is not an EGU, unless the owner or operator of the EGU counts the combined emissions measured at the common stack as the mass emissions of mercury for the EGUs for recordkeeping and compliance purposes.

a) Requirements for installation, certification, and data accounting. The owner or operator of each EGU shall:

1) Install all monitoring systems required under this Section and Sections 225.250 through 225.290 of this Subpart for monitoring mercury mass emissions (including all systems required to monitor mercury concentration, stack gas moisture content, stack gas flow rate, and CO₂ or O₂ concentration, as applicable, in accordance with 40 CFR 75.81 and 75.82) +.

2) Successfully complete all certification tests required under Section 225.250 and meet all other requirements of this Section, Sections 225.250 through 225.290 of this Subpart, and Subpart I of 40 CFR ~~Part~~ 75 applicable to the monitoring systems required under subsection (a) (1) of this Section + ~~and~~ .

3) Record, report, and quality-assure the data from the monitoring systems required under subsection (a) (1) of this Section.

4) If the owner or operator elects to use the low mass emissions excepted monitoring methodology for an EGU that emits no more than 464 ounces (29 pounds) of mercury per year pursuant to 40 CFR 75.81(b), also perform emissions testing in accordance with 40 CFR 75.81(c) to demonstrate that the EGU is eligible to use this excepted emissions monitoring methodology + as well as comply with all other applicable requirements of 40 CFR 75.81(b) through (f), and submit a copy of any information required to be submitted to the USEPA under these provisions to the Illinois EPA. The initial emissions testing to demonstrate eligibility of an EGU for the low mass emissions excepted methodology shall be conducted by the following dates:

A) If the EGU has commenced commercial operation before July 1, 2008, at least by January 1, 2009, or 45 days prior to relying on the low mass emissions excepted methodology, whichever date is later.

B) If the EGU has commenced commercial operation on or after July 1, 2008, at least 45 days prior to the applicable date specified under subsection (b) (2) of this Section or 45 days prior to relying on the low mass emissions excepted methodology, whichever date is later +.

b) ~~Emissions monitoring deadlines~~ Monitoring Deadlines. The owner or operator shall meet the emissions monitoring system certification and other emissions monitoring requirements of subsections (a) (1) and (a) (2) of this Section on or before the following dates. The owner or operator shall record, report, and quality-assure the data from the emissions monitoring systems required under subsection (a) (1) of this Section on and after the following dates:

1) For the owner or operator of an EGU that commences commercial operation before July 1, 2008, by January 1, 2009.

2) For the owner or operator of an EGU that commences commercial operation on or after July 1, 2008, by 90 unit operating days or 180 calendar days, whichever occurs first, after the date on which the EGU commences commercial operation.

3) For the owner or operator of an EGU for which construction of a new stack or flue or installation of add-on mercury emission controls, a flue gas desulfurization system, a selective catalytic reduction system, a fabric filter, or a compact hybrid particulate collector system is completed after the applicable deadline under subsection (b) (1) or (2) of this Section, by 90 unit operating days or 180 calendar days, whichever occurs first, after the date on

which emissions first exit to the atmosphere through the new stack or flue, add-on mercury emissions controls, flue gas desulfurization system, selective catalytic reduction system, a fabric filter, or compact hybrid particulate collector system.

c) Reporting ~~data~~Data

1) Except as provided in subsection (c)(2) of this Section, the owner or operator of an EGU that does not meet the applicable emissions monitoring date set forth in subsection (b) of this Section for any emissions monitoring system required under subsection (a)(1) of this Section shall, for each such monitoring system, determine, record, and report maximum potential (or, as appropriate, minimum potential) values for mercury concentration, stack gas flow rate, stack gas moisture content, and any other parameters required to determine mercury mass emissions in accordance with 40 CFR 75.80(g).

2) The owner or operator of an EGU that does not meet the applicable emissions monitoring date set forth in subsection (b)(3) of this Section for any emissions monitoring system required under subsection (a)(1) of this Section shall, for each such monitoring system, determine, record, and report substitute data using the applicable missing data procedures in 40 CFR 75.80(f), in lieu of the maximum potential (or, as appropriate, minimum potential) values, for a parameter, if the owner or operator demonstrates that there is continuity between the data streams for that parameter before and after the construction or installation under subsection (b)(3) of this Section.

d) Prohibitions

1) No owner or operator of an EGU shall use any alternative emissions monitoring system, alternative reference method for measuring emissions, or any other alternative to the emissions monitoring and measurement requirements of this Section and Sections 225.250 through 225.290 of this Subpart, unless such alternative is promulgated by the USEPA and approved in writing by the Agency or the use of such alternative is approved in writing by the Agency and USEPA.

2) No owner or operator of an EGU shall operate the EGU so as to discharge, or allow to be discharged, mercury emissions to the atmosphere without accounting for all such emissions in accordance with the applicable provisions of this Section, Sections 225.250 through 225.290 of this Subpart, and Subpart I of 40 CFR ~~Part~~ 75.

3) No owner or operator of an EGU shall disrupt the continuous emission monitoring system, any portion thereof, or any other approved emission monitoring method, and thereby avoid monitoring and recording mercury 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 applicable provisions of this Section, Sections 225.250 through 225.290 of this Subpart, and Subpart I of 40 CFR ~~Part~~ 75.

4) No owner or operator of an EGU shall retire or permanently discontinue use of the continuous emission monitoring system or any component thereof, or any other approved monitoring system under this Subpart, except under any one of the following circumstances:

A) The owner or operator is monitoring emissions from the EGU with another certified monitoring system that has been approved, in accordance with the applicable provisions of this Section, Sections 225.250 through 225.290 of this

Subpart, and Subpart I of 40 CFR ~~Part~~ 75, by the Agency for use at that EGU and that provides emission data for the same pollutant or parameter as the retired or discontinued monitoring system; or

B) The owner or operator or designated representative submits notification of the date of certification testing of a replacement monitoring system for the retired or discontinued monitoring system in accordance with Section 225.250(a)(3)(A) of this Subpart.

e) ~~Long-term cold storage~~ Cold Storage

The owner or operator of an EGU that is in long-term cold storage is subject to the applicable provisions of 40 CFR ~~Part~~ 75 for monitoring, recordkeeping, and reporting for units in long-term cold storage.

Section 225.250 Initial Certification and Recertification Procedures for Emissions Monitoring

a) The owner or operator of an EGU shall comply with the following initial certification and recertification procedures for a continuous emissions monitoring system (i.e., a continuous emission monitoring system or an excepted monitoring system (sorbet trap monitoring system) under 40 CFR 75.15) required by Section 225.240(a)(1). The owner or operator of an EGU that qualifies for and for which the owner or operator elects to use the low mass emissions excepted methodology under 40 CFR 75.81(b) shall comply with the procedures in subsection (c) of this Section.

1) Requirements for ~~initial certification~~ Initial Certification. The owner or operator of an EGU shall ensure that for each continuous emissions monitoring system required by Section 225.240(a)(1) of this Subpart (including the automated data acquisition and handling system) the owner or operator successfully completes all of the initial certification testing required under 40 CFR 75.80(d) by the applicable deadline in Section 225.240(b) of this Subpart. In addition, whenever the owner or operator of an EGU installs a monitoring system to meet the requirements of this Subpart in a location where no such monitoring system was previously installed, the owner or operator must successfully complete the initial certification requirements of 40 CFR 75.80(d).

2) Requirements for ~~recertification~~ Recertification. Whenever the owner or operator of an EGU makes a replacement, modification, or change in any certified continuous emission monitoring system, or an excepted monitoring system (sorbet trap monitoring system) under 40 CFR 75.15, and required by Section 225.240(a)(1) of this Subpart, that may significantly affect the ability of the system to accurately measure or record mercury mass emissions or heat input rate or to meet the quality-assurance and quality-control requirements of 40 CFR 75.21 or Appendix B to 40 CFR ~~Part~~ 75, the owner or operator of an EGU shall recertify the monitoring system in accordance with 40 CFR 75.20(b). Furthermore, whenever the owner or operator of an EGU makes a replacement, modification, or change to the flue gas handling system or the EGU's operation that may significantly change the stack flow or concentration profile, the owner or operator shall recertify each continuous emission monitoring system, and each excepted monitoring system (sorbet trap monitoring system) under 40 CFR 75.15, whose accuracy is potentially affected by the change, all in accordance with 40 CFR 75.20(b). Examples of changes to a continuous emission monitoring system that require recertification include replacement of the analyzer, complete replacement of an existing continuous emission monitoring system, or change in location or orientation of the sampling probe or site.

3) — ~~Approval process for initial certification and recertification~~ Approval Process for Initial Certification and Recertification. Subsections (a) (3) (A) through (D) of this Section apply to both initial certification and recertification of a continuous monitoring system required by Section 225.240(a) (1) of this Subpart. For recertifications, replace the words "certification" and "initial certification" with the word "recertification", replace the word "certified" with the word "recertified", and follow the procedures in 40 CFR 75.20(b) (5) in lieu of the procedures in subsection (a) (3) (E) of this Section.

A) ~~Notification of certification~~ Certification. The owner or operator shall submit to the Agency, USEPA Region 5, and the Administrator of the USEPA written notice of the dates of certification testing, in accordance with Section 225.270 of this Subpart.

B) ~~Certification application~~ Application. The owner or operator shall submit to the Agency a certification application for each monitoring system. A complete certification application shall include the information specified in 40 CFR 75.63.

C) ~~Provisional certification date~~ Certification Date. The provisional certification date for a monitoring system shall be determined in accordance with 40 CFR 75.20(a) (3). A provisionally certified monitoring system may be used under this Subpart for a period not to exceed 120 days after receipt by the Agency of the complete certification application for the monitoring system under subsection (a) (3) (B) of this Section. Data measured and recorded by the provisionally certified monitoring system, in accordance with the requirements of 40 CFR Part 75, will be considered valid quality-assured data (retroactive to the date and time of provisional certification), provided that the Agency does not invalidate the provisional certification by issuing a notice of disapproval within 120 days ~~of~~ after the date of receipt by the Agency of the complete certification application.

D) ~~Certification application approval process~~ Application Approval Process. The Agency will issue a written notice of approval or disapproval of the certification application to the owner or operator within 120 days ~~of~~ after receipt of the complete certification application required by subsection (a) (3) (B) of this Section. In the event the Agency does not issue such a notice within ~~such~~ the 120-day period, each monitoring system that meets the applicable performance requirements of 40 CFR Part 75 and is included in the certification application will be deemed certified for use under this Subpart.

i) ~~Approval notice~~ Notice. If the certification application is complete and shows that each monitoring system meets the applicable performance requirements of 40 CFR Part 75, then the Agency will issue a written notice of approval of the certification application within 120 days ~~of~~ after receipt.

ii) ~~Incomplete application notice~~ Application Notice. If the certification application is not complete, then the Agency will issue a written notice of incompleteness that sets a reasonable date by which the owner or operator must submit the additional information required to complete the certification application. If the owner or operator does not comply with the notice of incompleteness by the specified date, then the Agency may issue a notice of disapproval under subsection (a) (3) (D) (iii) of this Section. The 120-day review period shall not begin before receipt of a complete certification application.

iii) ~~Disapproval notice~~Notice. If the certification application shows that any monitoring system does not meet the performance requirements of 40 CFR-~~Part~~ 75 or if the certification application is incomplete and the requirement for disapproval under subsection (a)(3)(D)(ii) of this Section is met, then the Agency will issue a written notice of disapproval of the certification application. Upon issuance of such notice of disapproval, the provisional certification is invalidated by the Agency and the data measured and recorded by each uncertified monitoring system shall not be considered valid quality-assured data beginning with the date and hour of provisional certification (as defined under 40 CFR 75.20(a)(3)). The owner or operator shall follow the procedures for loss of certification in subsection (a)(3)(E) of this Section for each monitoring system that is disapproved for initial certification.

iv) ~~Audit decertification~~Decertification. The Agency may issue a notice of disapproval of the certification status of a monitor in accordance with Section 225.260(b) of this Subpart.

E) Procedures for ~~loss~~Loss of ~~certification~~Certification. If the Agency issues a notice of disapproval of a certification application under subsection (a)(3)(D)(iii) of this Section or a notice of disapproval of certification status under subsection (a)(3)(D)(iv) of this Section, then:

i) The owner or operator shall substitute the following values, for each disapproved monitoring system, for each hour of EGU operation during the period of invalid data specified under 40 CFR 75.20(a)(4)(iii) or 75.21(e) and continuing until the applicable date and hour specified under 40 CFR 75.20(a)(5)(i). For a disapproved mercury pollutant concentration monitor and disapproved flow monitor, respectively, the maximum potential concentration of mercury and the maximum potential flow rate, as defined in Sections 2.1.7.1 and 2.1.4.1 of Appendix A to 40 CFR ~~Part~~-75. For a disapproved moisture monitoring system and disapproved diluent gas monitoring system, respectively, the minimum potential moisture percentage and either the maximum potential CO2 concentration or the minimum potential O2 concentration (as applicable), as defined in Sections 2.1.5, 2.1.3.1, and 2.1.3.2 of Appendix A to 40 CFR ~~Part~~-75. For a disapproved excepted monitoring system (sorbent trap monitoring system) under 40 CFR 75.15 and disapproved flow monitor, respectively, the maximum potential concentration of mercury and maximum potential flow rate, as defined in Sections 2.1.7.1 and 2.1.4.1 of Appendix A to 40 CFR ~~Part~~-75.

ii) The owner or operator shall submit a notification of certification retest dates and a new certification application in accordance with subsections (a)(3)(A) and (B) of this Section.

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

b) Exemption

1) If an emissions monitoring system has been previously certified in accordance with 40 CFR ~~Part~~-75 and the applicable quality assurance and quality control requirements of 40 CFR 75.21 and Appendix B to 40 CFR ~~Part~~-75 are fully met, the monitoring system shall be exempt from the initial certification requirements of this Section.

2) The recertification provisions of this Section shall apply to an emissions monitoring system required by Section 225.240(a)(1) of this Subpart exempt from initial certification requirements under subsection (a)(1) of this Section.

c) Initial certification and recertification procedures for EGUs using the mercury low mass emissions excepted methodology under 40 CFR 75.81(b). The owner or operator of an EGU qualified to use the mercury low mass emissions excepted methodology under 40 CFR 75.81(b) shall meet the applicable certification and recertification requirements in 40 CFR 75.81(c) through (f).

d) Certification Applications. The owner or operator of an EGU shall submit an application to the Agency within 45 days after completing all initial certification or recertification tests required under this Section, including the information required under 40 CFR 75.63.

Section 225.260 Out of Control Periods for Emission Monitors

a) Whenever any emissions monitoring system fails to meet the quality-assurance and quality-control requirements or data validation requirements of 40 CFR ~~Part~~ 75, data shall be substituted using the applicable missing data procedures in Subparts D and I of 40 CFR ~~Part~~ 75.

b) ~~Audit decertification~~ Decertification. Whenever both an audit of an emissions monitoring system and a review of the initial certification or recertification application reveal that any emissions monitoring system should not have been certified or recertified because it did not meet a particular performance specification or other requirement under Section 225.250 of this Subpart or the applicable provisions of 40 CFR ~~Part~~ 75, both at the time of the initial certification or recertification application submission and at the time of the audit, the Agency will issue a notice of disapproval of the certification status of such monitoring system. For the purposes of this subsection, an audit shall be either a field audit or an audit of any information submitted to the Agency. By issuing the notice of disapproval, the Agency revokes prospectively the certification status of the emissions monitoring system. The data measured and recorded by the monitoring 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 for the monitoring system. The owner or operator shall follow the applicable initial certification or recertification procedures in Section 225.250 of this Subpart for each disapproved monitoring system.

Section 225.261 Additional Requirements to Provide Heat Input Data

The owner or operator of an EGU that monitors and reports mercury mass emissions using a mercury concentration monitoring system and a flow monitoring system shall also monitor and report heat input rate at the EGU level using the procedures set forth in 40 CFR ~~Part~~ 75.

Section 225.263 Monitoring of Gross Electrical Output

The owner or operator of an EGU complying with this Subpart by means of Section 225.230(a)(1) or using electrical output (O_i) and complying by means of Section 225.230(b) or (d) or Section 225.232 of this Subpart shall monitor gross electrical output of the associated generator(s) in MWh on an hourly basis.

Section 225.265 Coal Analysis for Input Mercury Levels

a) The owner or operator of an EGU complying with this Subpart by means of Section 225.230(a)(2) or using input mercury levels (Ii) and complying by means of Section 225.230(b) or (d) or Section 225.232 of this Subpart shall:

1) Perform daily sampling of the coal combusted in the EGU for mercury content. The owner or operator of such EGU shall collect a minimum of one 2-lb grab sample per day of operation from the belt feeders anywhere between the crusher house or breaker building and the boiler. ~~Such~~The sample shall be taken in such a manner so as to provide a representative mercury content for the coal burned on that day.

2) Analyze the grab coal sample for the following:

A) Determine the heat content using ASTM D5865-04 or equivalent approved in writing by the Agency.

B) Determine the moisture content using ASTM D3173-03 or equivalent approved in writing by the Agency.

C) Measure the mercury content using ASTM D6414-01, ASTM D3684-01, or equivalent approved in writing by the Agency.

3) The owner or operator of multiple EGUs at the same source using the same crusher house or breaker building may take one sample per crusher house or breaker building, rather than one per EGU.

4) The owner or operator of an EGU shall use the data analyzed under subsection (b) of this Section to determine the mercury content in terms of lbs/trillion Btu.

b) The owner or operator of an EGU that must conduct sampling and analysis of coal pursuant to subsection (a) of this Section, shall begin such activity by the following date:

1) If the EGU is in daily service, at least 30 days before the start of the month for which such activity will be required.

2) If the EGU is not in daily service, on the day that the EGU resumes operation.

Section 225.270 Notifications

The owner or operator of a source with one or more EGUs shall submit written notice to the Agency according to the provisions in 40 CFR 75.61 for each EGU or group of EGUs monitored at a common stack and each non-EGU monitored under 40 CFR 75.82(b)(2)(ii).

Section 225.290 Recordkeeping and Reporting

a) ~~General provisions.~~ Provisions

1) The owner or operator of an EGU and its designated representative shall comply with all applicable recordkeeping and reporting requirements in this Section and with all applicable recordkeeping and reporting requirements of 40 CFR 75.84.

2) The owner or operator of an EGU shall maintain records for each month identifying the emission standard in Section 225.230(a) or 225.237(a) of this Section with which it is complying or ~~which~~that is applicable for the EGU and the following records related to the emissions of mercury that the EGU is allowed to emit:

A) For an EGU for which the owner or operator is complying with this Subpart by means of Section 225.230(a)(2) or 225.237(a)(1)(B) or using input mercury levels to determine the allowable emissions of the EGU, records of the daily mercury content of coal used (lbs/trillion Btu) and the daily and monthly input mercury (lbs), which shall be kept in the file required under 40 CFR 75.84(a).

B) For an EGU for which the owner or operator of an EGU complying with this Subpart by means of Section 225.230(a)(1) or 225.237(a)(1)(A) or using electrical output to determine the allowable emissions of the EGU, records of the daily and monthly gross electrical output (GWh), which shall be kept in the file required under 40 CFR 75.84(a).

3) The owner or operator of an EGU shall maintain records of the following for each EGU:

A) Monthly emissions of mercury from the EGU.

B) For an EGU for which the owner or operator is complying by means of Section 225.230(b) or (d) of this Subpart, records of the monthly allowable emissions of mercury from the EGU.

4) The owner or operator of an EGU that is participating in an Averaging Demonstration pursuant to Section 225.232 of this Subpart shall maintain records identifying all sources and EGUs covered by the Demonstration for each month and, within 60 days ~~of~~after the end of each calendar month, calculate and record the actual and allowable mercury emissions of the EGU for the month and the applicable 12-month rolling period.

5) The owner or operator of an EGU shall maintain the following records related to quality assurance activities conducted for emissions monitoring systems:

A) The results of quarterly assessments conducted under Section 2.2 of Appendix B of 40 CFR ~~Part~~ 75; and

B) Daily/weekly system integrity checks under Section 2.6 of Appendix B of 40 CFR ~~Part~~ 75.

6) The owner or operator of an EGU shall maintain an electronic copy of all electronic submittals to the USEPA under 40 CFR 75.84(f).

7) The owner or operator of an EGU shall retain all records required by this Section at the source unless otherwise provided in the CAAPP permit issued for the source and shall make a copy of any record available to the Agency upon request.

b) Quarterly ~~reports~~Reports. The owner or operator of a source with one or more EGUs shall submit quarterly reports to the Agency as follows:

1) These reports shall include the following information for operation of the EGUs during the quarter:

A) The total operating hours of each EGU and the mercury CEMS, as also reported in accordance with 40 CFR ~~Part~~ 75.

B) A discussion of any significant changes in the measures used to control emissions of mercury from the EGUs or the coal supply to the EGUs, including changes in the source of coal.

C) Summary information on the performance of the mercury CEMS. When the mercury CEMS was not inoperative, repaired, or adjusted, except for routine zero and span checks, this shall be stated in the report.

D) If the CEMS downtime was more than 5.0 percent of the total operating time for the EGU: the date and time identifying each period during which the CEMS was inoperative, except for routine zero and span checks; the nature of CEMS repairs or adjustments and a summary of quality assurance data consistent with 40 CFR ~~Part~~ 75, i.e., the dates and results of the Linearity Test(s) and any Relative Accuracy Test Audit(s) during the quarter; a listing of any days when a required daily calibration was not performed; and the date and duration of any periods when the CEMS was out-of-control as addressed by Section 225.260 of this Subpart.

2) The owner or operator shall submit each quarterly report to the Agency within 45 days following the end of the calendar quarter covered by the report.

c) ~~Compliance certification~~Certification. The owner or operator of a source with one or more EGUs shall submit to the Agency a compliance certification in support of each quarterly report based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the EGUs' emissions are correctly and fully monitored. The certification shall state ~~that~~:

1) ~~The That the~~ monitoring data submitted were recorded in accordance with the applicable requirements of this Section, Sections 225.240 through 225.270, and ~~Section 225.290 of this Subpart, 225.270~~ and 40 CFR ~~Part~~ 75, including the quality assurance procedures and specifications; and

2) For an EGU with add-on mercury emission controls, a flue gas desulfurization system, a selective catalytic reduction system, or a compact hybrid particulate collector system and for all hours where mercury data are substituted in accordance with 40 CFR 75.34(a)(1):

~~(A) That:~~

i) The mercury add-on emission controls, flue gas desulfurization system, selective catalytic reduction system, or compact hybrid particulate collector system ~~were~~was operating within the range of parameters listed in the quality assurance/quality control program under Appendix B to 40 CFR ~~Part~~ 75; or

ii) With regard to a flue gas desulfurization system or a selective catalytic reduction system, quality-assured SO₂ emission data recorded in accordance with 40 CFR ~~Part~~ 75 document that the flue gas desulfurization system was operating properly, or quality-assured NO_x emission data recorded in accordance with 40 CFR ~~Part~~ 75 document that the selective catalytic reduction system ~~was~~ operating properly, as applicable; and

B) The substitute data values do not systematically underestimate mercury emissions.

d) Annual Certification of Compliance

1) The owner or operator of a source with one or more EGUs subject to this Subpart shall submit to the Agency an Annual Certification of Compliance with this Subpart no later than May 1 of each year and shall address compliance for the previous calendar year. Such certification shall be submitted to the Agency, Air Compliance and Enforcement Section, and the Air Regional Field Office.

2) Annual Certifications of Compliance shall indicate whether compliance existed for each EGU for each month in the year covered by the Certification and certification to that effect. In addition, for each EGU, the owner or operator shall provide the following:

A) If complying with this Subpart by means of Section 225.230(a)(1)(A) or 225.237(a)(1)(A):

i) Actual emissions rate, in lb/GWh, for each 12-month rolling period ending in the year covered by the Certification;

ii) Actual emissions, in lbs, and gross electrical output, in GWh, for each 12-month rolling period ending in the year covered by the Certification; and

iii) Actual emissions, in lbs, and gross electrical output, in GWh, for each month in the year covered by the Certification and in the previous year.

B) If complying with this Subpart by means of Section 225.230(a)(1)(B) or 225.237(a)(1)(B):

i) Actual control efficiency for emissions for each 12-month rolling period ending in the year covered by the Certification, expressed as a percent;

ii) Actual emissions, in lbs, and mercury content in the fuel fired in such EGU, in lbs, for each 12-month rolling period ending in the year covered by the Certification; and

iii) Actual emissions, in lbs, and mercury content in the fuel fired in such EGU, in lbs, for each month in the year covered by the Certification and in the previous year.

C) If complying with this Subpart by means of Section 225.230(b):

i) Actual emissions and allowable emissions for each 12-month rolling period ending in the year covered by the Certification; and

ii) Actual emissions and allowable emissions, and which standard of compliance the owner or operator was utilizing for each month in the year covered by the Certification and in the previous year.

D) If complying with this Subpart by means of Section 225.230(d):

i) Actual emissions and allowable emissions for all EGUs at the source for each 12-month rolling period ending in the year covered by the Certification; and

ii) Actual emissions and allowable emissions, and which standard of compliance the owner or operator was utilizing for each month in the year covered by the Certification and in the previous year.

E) If complying with this Subpart by means of Section 225.232:

i) Actual emissions and allowable emissions for all EGUs at the source in an Averaging Demonstration for each 12-month rolling period ending in the year covered by the Certification; and

ii) Actual emissions and allowable emissions, with the standard of compliance the owner or operator was utilizing for each EGU at the source in an Averaging Demonstration for each month for all EGUs at the source in an Averaging Demonstration in the year covered by the Certification and in the previous year.

F) Any deviations, data substitutions, or exceptions each month and discussion of the reasons for such deviations, data substitutions, or exceptions.

3) All Annual Certifications of Compliance required to be submitted shall include the following certification by a responsible official:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

4) The owner or operator of an EGU shall submit its first Annual Certification of Compliance to address calendar year 2009 or the calendar year in which the EGU commences commercial operation, whichever is later. Notwithstanding subsection (d) (2) of this Section, in the Annual Certifications of Compliance that are required to be submitted by May 1, ~~2010, 2010~~ and May 1, ~~2011, 2011~~ to address calendar years 2009 and 2010, respectively, the owner or operator is not required to provide 12-month rolling data for any period that ends before June 30, 2010.

e) ~~Deviation reports~~Reports. For each EGU, the owner or operator shall promptly notify the Agency of deviations from requirements of this Subpart. At a minimum, these notifications shall include a description of such deviations within 30 days ~~of~~after discovery of the deviations, and a discussion of the possible cause of such deviations, any corrective actions, and any preventative measures taken.

f) ~~Quality assurance~~Assurance RATA ~~reports~~Reports. The owner or operator of an EGU shall submit to the Agency, Air Compliance and Enforcement Section, the quality assurance RATA report for each EGU or group of EGUs monitored at a common stack and each non-EGU under 40 CFR 75.82(b) (2) (ii) within 45 days after completing a quality assurance RATA.

Any mercury allowances allocated to the Agency by the USEPA shall be treated as follows:

a) No such allowances shall be allocated to any owner or operator of an EGU or other sources of mercury emissions into the atmosphere or discharges into the waters of the State.

b) The Agency shall hold all allowances allocated by the USEPA to the State. At the end of each calendar year, the Agency shall instruct the USEPA to retire permanently all such allowances.

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~~ILLINOIS REGISTER~~

~~POLLUTION CONTROL BOARD~~

~~NOTICE OF PROPOSED RULE~~

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Style change	0
Format changed	0
Total changes	198

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2 SUBTITLE B: AIR POLLUTION
3 CHAPTER I: POLLUTION CONTROL BOARD
4 SUBCHAPTER c: EMISSION STANDARDS AND LIMITATIONS
5 FOR STATIONARY SOURCES

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7 PART 225
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35 225.263 Monitoring of Gross Electrical Output
36 225.265 Coal Analysis for Input Mercury Levels
37 225.270 Notifications
38 225.290 Recordkeeping and Reporting
39 225.295 Treatment of Mercury Allowances

40
41 AUTHORITY: Implementing Section 9.10 and authorized by Sections 27 and 28.5 of the
42 Environmental Protection Act [415 ILCS 5/9.10, 27 and 28.5].
43

44 SOURCE: Adopted at 30 Ill. Reg. _____, effective _____.

45

46

SUBPART A: GENERAL PROVISIONS

47

48 **Section 225.100 Severability**

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50 If any Section, subsection or clause of this Part is found invalid, such finding shall not affect the
51 validity of this Part as a whole or any Section, subsection or clause not found invalid.

52

53 **Section 225.120 Abbreviations and Acronyms**

54

55 Unless otherwise specified within this Part, the abbreviations used in this Part shall be the same
56 as those found in 35 Ill. Adm. Code 211. The following abbreviations and acronyms are used in
57 this Part:

58

59 Act	Environmental Protection Act [415 ILCS 5]
60 Btu	British thermal unit
61 CAA	Clean Air Act [42 USC 7401 et seq.]
62 CAAPP	Clean Air Act Permit Program
63 CO ₂	carbon dioxide
64 EGU	electric generating unit
65 GWh	gigawatt hour
66 hr	hour
67 lb	pound
68 MW	megawatt
69 MWe	megawatt electrical
70 MWh	megawatt hour
71 NO _x	nitrogen oxides
72 O ₂	oxygen
73 RATA	relative accuracy test audit
74 SO ₂	sulfur dioxide
75 USEPA	United States Environmental Protection Agency

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77 **Section 225.130 Definitions**

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79 The definitions contained in this Section apply only to the provisions of this Part. Unless
80 otherwise defined in this Section and unless a different meaning of a term is clear from its
81 context, the definitions of terms used in this Part shall have the meanings specified for those
82 terms in 35 Ill. Adm. Code 211.

83

84 "Averaging demonstration" means, with regard to Subpart B of this Part, a
85 demonstration of compliance that is based on the combined performance of EGUs
86 at two or more sources.

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

"Bottoming-cycle cogeneration unit" means a cogeneration unit in which the energy input to the unit is first used to produce useful thermal energy and at least some of the reject heat from the useful thermal energy application or process is then used for electricity production.

"Coal" means any solid fuel classified as anthracite, bituminous, subbituminous, or lignite by the American Society for Testing and Materials (ASTM) Standard Specification for Classification of Coals by Rank D388-77, 90, 91, 95, 98a, or 99 (Reapproved 2004).

"Coal-derived fuel" means any fuel (whether in a solid, liquid or gaseous state) produced by the mechanical, thermal, or chemical process.

"Coal-fired" means combusting any amount of coal or coal-derived fuel, alone or in combination with any amount of any other fuel, during a specified year.

"Cogeneration unit" means a stationary, fossil fuel-fired boiler or stationary, fossil fuel-fired combustion turbine:

Having equipment used to produce electricity and useful thermal energy for industrial, commercial, heating, or cooling purposes through the sequential use of energy; and

Producing during the 12-month period starting on the date the unit first produces electricity and during any calendar year after the calendar year in which the unit first produces electricity:

For a topping-cycle cogeneration unit:

Useful thermal energy not less than 5 percent of total energy output; and

Useful power that, when added to one-half of useful thermal energy produced, is not less than 42.5 percent of total energy input, if useful thermal energy produced is 15 percent or more of total energy output, or not less than 45 percent of total energy input, if useful thermal energy produced is less than 15 percent of total energy output.

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For a bottoming-cycle cogeneration unit, useful power not less than 45 percent of total energy input.

"Combustion turbine" means:

An enclosed device comprising a compressor, a combustor, and a turbine and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine; and

If the enclosed device under the above paragraph of this definition is combined cycle, any associated heat recovery steam generator and steam turbine.

"Commence commercial operation" means, with regard to Subpart B of this Part, with regard to an Electric Generating Unit that serves a generator, to have begun to produce steam, gas, or other heated medium used to generate electricity for sale or use, including test generation. Such date shall remain the unit's date of commencement of operation even if the Electric Generating Unit is subsequently modified, reconstructed or repowered.

"Designated representative" means, with regard to Subpart B of this Part, the same as defined in 40 CFR 60.4102.

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

"Gross electrical output" means the total electrical output from an Electric Generating Unit before making any deductions for energy output used in any way related to the production of energy. For an Electric Generating Unit generating only electricity, the gross electrical output is the output from the turbine/generator set.

"Input mercury" means the mass of mercury that is contained in the coal combusted within an Electric Generating Unit.

"Nameplate capacity" means, starting from the initial installation of a generator, the maximum electrical generating output (in MWe) that the generator is capable of producing on a steady-state basis and during continuous operation (when not restricted by seasonal or other deratings) as specified by the manufacturer of the generator or, starting from the completion of any subsequent physical change in the generator resulting in an increase in the maximum electrical generating output (in MWe) that the generator is capable of producing on a steady-state basis and during continuous operation (when not restricted by seasonal or other deratings),

173 such increased maximum amount as specified by the person conducting the
174 physical change.

175
176 "Output-based emission standard" means, with regard to Subpart B of this Part, a
177 maximum allowable rate of emissions of mercury per unit of gross electrical
178 output from an Electric Generating Unit.

179
180 "Repowered" means, with regard to an EGU, replacement of a coal-fired boiler
181 with one of the following coal-fired technologies at the same source as the coal-
182 fired boiler:

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184 Atmospheric or pressurized fluidized bed combustion;

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186 Integrated gasification combined cycle;

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188 Magnetohydrodynamics;

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190 Direct and indirect coal-fired turbines;

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192 Integrated gasification fuel cells; or

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194 As determined by the USEPA in consultation with the United States Department
195 of Energy, a derivative of one or more of the technologies under this definition
196 and any other coal-fired technology capable of controlling multiple combustion
197 emissions simultaneously with improved boiler or generation efficiency and with
198 significantly greater waste reduction relative to the performance of technology in
199 widespread commercial use as of January 1, 2005.

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201 "Rolling 12-month basis" means, with regard to Subpart B of this Part, a
202 determination made on a monthly basis from the relevant data for a particular
203 calendar month and the preceding 11 calendar months (total of 12 months of
204 data), with two exceptions. For determinations involving one EGU, calendar
205 months in which the EGU does not operate (zero EGU operating hours) shall not
206 be included in the determination, and shall be replaced by a preceding month or
207 months in which the EGU does operate, so that the determination is still based on
208 12 months of data. For determinations involving two or more EGUs, calendar
209 months in which none of the EGUs covered by the determination operates (zero
210 EGU operating hours) shall not be included in the determination, and shall be
211 replaced by preceding months in which at least one of the EGU covered by the
212 determination does operate, so that the determination is still based on 12 months
213 of data.

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215 **Section 225.140 Incorporations by Reference**

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The following materials are incorporated by reference. These incorporations do not include any later amendments or editions.

- a) 40 CFR 60, § 60.17, § 60.45a, § 60.49a(k)(1), § 60.49a(p), § 60.50a(h), and §§ 60.4170 through 60.4176 (2005).
- b) 40 CFR 75 (2005).
- c) ASTM. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken PA 19428-2959, (610) 832-9585:
 - 1) ASTM D388-77, 90, 91, 95, 98a, or 99, Classification of Coals by Rank (Reapproved 2004).
 - 2) ASTM D3173-03, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke (Approved April 10, 2003).
 - 3) ASTM D3684-01, Standard Test Method for Total Mercury in Coal by the Oxygen Bomb Combustion/Atomic Absorption Method (Approved October 10, 2001).
 - 4) ASTM D5865-04, Standard Test Method for Gross Calorific Value of Coal and Coke (Approved April 1, 2004).
 - 5) ASTM D6414-01, Standard Test Method for Total Mercury in Coal and Coal Combustion Residues by Acid Extraction or Wet Oxidation/Cold Vapor Atomic Absorption (Approved October 10, 2001).
 - 6) 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) (Approved April 10, 2002).

SUBPART B: CONTROL OF MERCURY EMISSIONS
 FROM COAL-FIRED ELECTRIC GENERATING UNITS

Section 225.200 Purpose

The purpose of this Subpart is to control the emissions of mercury from coal-fired electrical generating units in Illinois.

Section 225.202 Measurement Methods

259 Measurement of mercury shall be according to the following:

260

261 a)

Continuous emission monitoring pursuant to 40 CFR 75 (2005).

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263 b)

ASTM D3173-03, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke (Approved April 10, 2003).

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266 c)

ASTM D3684-01, Standard Test Method for Total Mercury in Coal by the Oxygen Bomb Combustion/Atomic Absorption Method (Approved October 10, 2001).

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270 d)

ASTM D5865-04, Standard Test Method for Gross Calorific Value of Coal and Coke (Approved April 1, 2004).

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273 e)

ASTM D6414-01, Standard Test Method for Total Mercury in Coal and Coal Combustion Residues by Acid Extraction or Wet Oxidation/Cold Vapor Atomic Absorption (Approved October 10, 2001).

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277 f)

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) (Approved April 10, 2002).

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280

281 **Section 225.205 Applicability**

282

283 The following stationary coal-fired boilers and stationary coal-fired combustion turbines are
284 EGUs and are subject to this Subpart:

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286 a)

Except as provided in subsection (b) of this Section, a unit serving, at any time since the start-up of the unit's combustion chamber, a generator with nameplate capacity of more than 25 MWe producing electricity for sale.

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290 b)

For a unit that qualifies as a cogeneration unit during the 12-month period starting on the date the unit first produces electricity and continues to qualify as a cogeneration unit, a cogeneration unit serving at any time a generator with nameplate capacity of more than 25 MWe and supplying in any calendar year more than one-third of the unit's potential electric output capacity or 219,000 MWh, whichever is greater, to any utility power distribution system for sale. If a unit qualifies as a cogeneration unit during the 12-month period starting on the date the unit first produces electricity but subsequently no longer qualifies as a cogeneration unit, the unit shall be subject to subsection (a) of this Section starting on the day on which the unit first no longer qualifies as a cogeneration unit.

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302 **Section 225.210 Compliance Requirements**

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- a) **Permit Requirements**
The owner or operator of each source with one or more EGUs subject to this Subpart at the source must apply for a CAAPP permit that addresses the applicable requirements of this Subpart.

- b) **Monitoring Requirements**
 - 1) The owner or operator of each source and each EGU at the source must comply with the monitoring requirements of Sections 225.240 through 225.290 of this Subpart.

 - 2) The compliance of each EGU with the mercury requirements under Sections 225.230 and 225.237 of this Subpart shall be determined by the emissions measurements recorded and reported in accordance with Sections 225.240 through 225.290 of this Subpart.

- c) **Mercury Emission Reduction Requirements**
The owner or operator of any EGU subject to this Subpart shall comply with applicable requirements for control of mercury emissions under Section 225.230 or Section 225.237 of this Subpart.

- d) **Recordkeeping and Reporting Requirements**
Unless otherwise provided, the owner or operator of a source with one or more EGUs at the source shall keep on site at the source each of the documents listed in subsections (d)(1) through (d)(3) of this Section for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Agency.
 - 1) All emissions monitoring information, in accordance with Sections 225.240 through 225.290 of this Subpart.

 - 2) Copies of all reports, compliance certifications, and other submissions and all records made or required or documents necessary to demonstrate compliance with the requirements of this Subpart.

 - 3) Copies of all documents used to complete a permit application and any other submission under this Subpart.

- e) **Liability**

- 344 1) The owner or operator of each source with one or more EGUs shall meet
345 the requirements of this Subpart.
346
347 2) Any provision of this Subpart that applies to a source shall also apply to
348 the owner and operator of such source and to the owner and operator of
349 each EGU at the source.
350
351 3) Any provision of this Subpart that applies to an EGU shall also apply to
352 the owner and operator of such EGU.
353
354 f) Effect on Other Authorities. No provision of this Subpart shall be construed as
355 exempting or excluding the owner and operator of a source or EGU from
356 compliance with any other provision of an approved State Implementation Plan, a
357 permit, the Act, or the CAA.
358

359 **Section 225.220 Clean Air Act Permit Program (CAAPP) Permit Requirements**
360

- 361 a) Application Requirements
362
363 1) Each source with one or more EGUs subject to the requirements of this
364 Subpart is required to submit a CAAPP permit application that addresses
365 all applicable requirements of this Subpart, applicable to each EGU at the
366 source.
367
368 2) For any EGU that commenced commercial operation:
369
370 A) on or before December 31, 2008, the owner or operator of that
371 EGU must submit an initial permit application or application for
372 CAAPP permit modification that meets the requirements of this
373 Section by December 31, 2008.
374
375 B) after December 31, 2008, the owner or operator of any such EGU
376 must submit an initial CAAPP permit application or application for
377 CAAPP modification that meets the requirements of this Section
378 not later than 180 days before initial startup of the EGU, unless the
379 construction permit issued for the EGU addresses the requirements
380 of this Subpart.
381
382 b) Contents of Permit Applications
383 In addition to other information required for a complete application for CAAPP
384 permit or CAAPP permit modification, the application shall include the following
385 information:
386

- 387 1) The ORIS (Office of Regulatory Information Systems) or facility code
 388 assigned to the source by the Energy Information Administration, if
 389 applicable.
 390
 391 2) Identification of each EGU at the source.
 392
 393 3) The intended approach to the monitoring requirements of Sections
 394 225.240 through 225.290 of this Subpart.
 395
 396 4) The intended approach to the mercury emission reduction requirements of
 397 Section 225.230 or 225.237 of this Subpart, as applicable.
 398

399 c) Permit Contents
 400

- 401 1) Each CAAPP permit issued by the Agency for a source with one or more
 402 EGUs subject to the requirements of this Subpart shall contain federally
 403 enforceable conditions addressing all applicable requirements of this
 404 Subpart, which conditions shall be a complete and segregable portion of
 405 the source's entire CAAPP permit.
 406
 407 2) In addition to conditions related to the applicable requirements of this
 408 Subpart, each such CAAPP permit shall also contain the information
 409 specified under subsection (b) of this Section.
 410

411 **Section 225.230 Emission Standards for EGUs at Existing Sources**
 412

413 a) Emission Standards
 414

- 415 1) Beginning July 1, 2009, the owner or operator of a source with one
 416 or more EGUs subject to this Subpart that commenced commercial
 417 operation on or before December 31, 2008 shall comply with one of the
 418 following standards for each EGU on a rolling 12-month basis:
 419
 420 A) An emission standard of 0.0080 lb mercury/GWh gross electrical
 421 output; or
 422
 423 B) A minimum 90-percent reduction of input mercury.
 424
 425 2) For an EGU complying with subsection (a)(1)(A) of this Section, the
 426 actual mercury emission rate of the EGU for each 12-month rolling period,
 427 as monitored in accordance with this Subpart and calculated as follows,
 428 shall not exceed the applicable emission standard:
 429

430

$$ER = \sum_{i=1}^{12} E_i \div \sum_{i=1}^{12} O_i$$

431

432

Where:

433

ER = Actual mercury emissions rate of the EGU for the particular 12-month rolling period, expressed in lb/GWh.

434

435

E_i = Actual mercury emissions of the EGU, in lbs, in an individual month in the 12-month rolling period, as determined in accordance with the emissions monitoring provisions of this Subpart.

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O_i = Gross electrical output of the EGU, in GWh, in an individual month in the 12-month rolling period, as determined in accordance with Section 225.263 of this Subpart.

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- 3) For an EGU complying with subsection (a)(1)(B) of this Section, the actual control efficiency for mercury emissions achieved by the EGU for each 12-month rolling period, as monitored in accordance with this Subpart and calculated as follows, shall meet or exceed the applicable efficiency requirement:

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449

$$CE = 100 \times \{1 - (\sum_{i=1}^{12} E_i \div \sum_{i=1}^{12} I_i)\}$$

450

451

Where:

452

453

CE = Actual control efficiency for mercury emissions of the EGU for the particular 12-month rolling period, expressed as a percent.

454

455

E_i = Actual mercury emissions of the EGU, in lbs, in an individual month in the 12-month rolling period, as determined in accordance with the emissions monitoring provisions of this Subpart.

456

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I_i = Amount of mercury in the fuel fired in the EGU, in pounds, in an individual month in the 12-month rolling period, as determined in accordance with Section 225.265 of this Subpart.

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- b) Alternative Emission Standards for Single EGUs

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465

- 1) As an alternative to compliance with one of the above emission standards in subsection (a) of this Section, the owner or operator of the EGU may comply with the emission standards of this Subpart by demonstrating that the actual emissions of mercury from the EGU are less than the allowable emissions of mercury from the EGU on a rolling 12-month basis.

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- 2) For this purpose, for each rolling 12-month period, the actual emissions of mercury from the EGU, as monitored in accordance with this Subpart, must not exceed the allowable emissions of mercury from the EGU, as further provided by the following formulas:

$$E_{12} \leq A_{12}$$

$$E_{12} = \sum_{i=1}^{12} E_i$$

$$A_{12} = \sum_{i=1}^{12} A_i$$

Where:

- E_{12} = Actual mercury emissions of the EGU for the particular 12-month rolling period.
 - A_{12} = Allowable mercury emissions of the EGU for the particular 12-month rolling period
 - E_i = Actual mercury emissions of the EGU in an individual month in the 12-month rolling period.
 - A_i = Allowable mercury emissions of the EGU in an individual month in the 12-month rolling period, based on either the input mercury to the unit ($A_{Input\ i}$) or the electrical output from the EGU ($A_{Output\ i}$), as selected by the owner or operator of the EGU for that given month.
 - $A_{Input\ i}$ = Allowable mercury emissions of the EGU in an individual month based on the input mercury to the EGU, calculated as 10.0 percent (or 0.100) of the input mercury to the EGU.
 - $A_{Output\ i}$ = Allowable mercury emissions of the EGU in a particular month based on the electrical output from the EGU, calculated as the product of the output based mercury limit, i.e., 0.0080 lb/GWh, and the electrical output from the EGU, in GWh.
- 3) If the owner or operator of an EGU does not conduct the necessary sampling, analysis, and recordkeeping, in accordance with Section 225.265 of this Subpart, to determine the mercury input to the EGU, the allowable emissions of the EGU must be calculated based on the electrical output of the EGU.

508 c) If two or more EGUs are served by common stack(s) and the owner or operator
 509 conducts monitoring for mercury emissions in the common stack(s), as provided
 510 for by 40 CFR 75, Subpart I, such that the mercury emissions of each EGU are
 511 not determined separately, compliance of the EGUs with the applicable emission
 512 standards of this Subpart shall be determined as if the EGUs were a single EGU.

513
 514 d) Alternative Emission Standards for Multiple EGUs

515
 516 1) As an alternative to compliance with the emission standards of subsection
 517 (a) of this Section, the owner or operator of a source with an EGU may
 518 comply with the emission standards of this Subpart by demonstrating that
 519 the actual emissions of mercury from all EGUs at the source are less than
 520 the allowable emissions of mercury from all EGUs at the source on a
 521 rolling 12-month basis.

522
 523 2) For this purpose, for each rolling 12-month period, the actual emissions of
 524 mercury from all the EGUs at the source, as monitored in accordance with
 525 this Subpart, must not exceed the sum of the allowable emissions of
 526 mercury from all the EGUs at the source, as further provided by the
 527 following formulas:
 528

$$E_S \leq A_S$$

$$E_S = \sum_{i=1}^n E_i$$

$$A_S = \sum_{i=1}^n A_i$$

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Where:

E_S = Sum of the actual mercury emissions of the EGUs at the source.

A_S = Sum of the allowable mercury emissions of the EGUs at the source.

E_i = Actual mercury emissions of an individual EGU at the source, as determined in accordance with subsection (b)(2) of this Section.

A_i = Allowable mercury emissions of an individual EGU at the source, as determined in accordance with subsection (b)(2) of this Section.

n = Number of EGUs covered by the demonstration.

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- 3) If an owner or operator of a source with two or more EGUs that is relying on this subsection (d) to demonstrate compliance fails to meet the requirements of this subsection (d) in a given 12-month rolling period, all EGUs at such source covered by the compliance demonstration are considered out of compliance with the applicable emission standards of this Subpart for the entire last month of that period.

Section 225.232 Averaging Demonstrations for Existing Sources

- a) Through December 31, 2013, as an alternative to compliance with the emission standards of Section 225.230(a) of this Subpart, the owner or operator of an EGU may comply with the emission standards of this Subpart by means of an Averaging Demonstration (Demonstration) that shows that the actual emissions of mercury from the EGU and other EGUs at the source and other EGUs at other sources covered by the Demonstration are less than the allowable emissions of mercury from all EGUs covered by the Demonstration on a rolling 12-month basis.
- b) The EGUs at each source covered by a Demonstration must also comply with one of the following emission standards on a source-wide basis for the period covered by the Demonstration:
 - 1) An emission standard of 0.020 lb mercury/GWh gross electrical output; or
 - 2) A minimum 75 percent reduction of input mercury.
- c) For the purpose of this Section, compliance shall be determined using the equations in Section 225.230(a)(2), (a)(3), or (d)(2) of this Subpart, as applicable, addressing all EGUs at the sources covered by the Demonstration, rather than only EGUs at one source.
- d) Limitations on Demonstrations
 - 1) The owners or operators of more than one existing source with EGUs can only participate in Demonstrations that include other existing sources that they own or operate.
 - 2) Single Existing Source Demonstrations
 - A) The owner or operator of only a single existing source with EGUs (i.e., City, Water, Light & Power, City of Springfield, ID 167120AAO; Electric Energy, Inc., ID 127855AAC; Kincaid Generating Station, ID 021814AAB; and Southern Illinois Power

587 Cooperative/Marion Generating Station, ID 199856AAC) can only
 588 participate in Demonstrations with other such owners or operators
 589 of a single existing source of EGUs.

590
 591 B) Participation in Demonstrations under this Section by the owner or
 592 operator of only a single existing source with EGUs must be
 593 authorized through federally enforceable permit conditions for
 594 each such source participating in the Demonstration.

595
 596 e) A source may be included in only one Demonstration during each rolling 12-
 597 month period.

598
 599 f) The owner or operator of EGUs using Demonstrations to show compliance with
 600 this Subpart must complete the determination of compliance for each 12-month
 601 rolling period no later than 60 days following the end of the period.

602
 603 g) If averaging is used to demonstrate compliance with this Subpart, the effect of a
 604 failure to demonstrate compliance shall be that the compliance status of each
 605 source shall be determined under Section 225.230 of this Subpart as if the sources
 606 were not covered by a Demonstration.

607
 608 h) For purposes of this Section, if the owner or operator of any source that
 609 participates in a Demonstration with an owner or operator of a source that does
 610 not maintain the required records, data, and reports for the EGUs at the source, or
 611 does not submit copies of such records, data, or reports to the Agency upon
 612 request, then the effect of this failure will be deemed to be a failure to
 613 demonstrate compliance and the compliance status of each source shall be
 614 determined under Section 225.230 of this Subpart as if the sources were not
 615 covered by a Demonstration.

616
 617 **Section 225.235 Units Scheduled for Permanent Shut Down**

618
 619 a) The emission standards of Section 225.230(a) of this Subpart are not applicable to
 620 an EGU that will be permanently shut down as follows:

621
 622 1) The owner or operator of an EGU for which this Section is being relied
 623 upon shall by no later than June 30, 2009:

624
 625 A) Have notified the Illinois EPA that it is planning to permanently
 626 shut down the EGU by the applicable date specified in subsection
 627 (a)(3) or (4) of this Section. This notification shall be
 628 accompanied by a description of the actions that have already been
 629 taken to allow the shut down of the EGU and a description of the

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future actions that must be accomplished to complete the shut down of the EGU, with the anticipated schedule for those actions and the anticipated date of permanent shut down of the unit.

- B) Have applied for a construction permit or be actively pursuing a federally enforceable agreement that requires the EGU to be permanently shut down in accordance with this Section.
 - C) Have applied for revisions to the operating permit(s) for the EGU to include provisions that terminate the authorization to operate the unit in accordance with this Section.
- 2) The owner or operator of an EGU for which this Section is being relied upon shall by no later than June 30, 2010:
- A) Have obtained a construction permit or entered into a federally enforceable agreement as addressed by subsection (a)(1)(B) of this Section; or
 - B) Have obtained revised operating permit(s) in accordance with subsection (a)(1)(C) of this Section.
- 3) The plan for permanent shut down of the EGU must provide for the EGU to be permanently shut down by no later than the applicable date specified below:
- A) If the owner or operator of the EGU is not constructing a new EGU or other generating units to specifically replace the existing EGU, by December 31, 2010.
 - B) If the owner or operator of the EGU is constructing a new EGU or other generating units to specifically replace the existing EGU, by December 31, 2011.
- 4) The owner or operator of the EGU must permanently shut down the EGU by the date specified in subsection (a)(3) of this Section, unless the owner or operator submits a demonstration to the Illinois EPA before such date showing that circumstances beyond its reasonable control (such as protracted delays in construction activity, unanticipated outage of another EGU, or protracted shakedown of a replacement unit) have occurred that interfere with the plan for permanent shut down of the EGU, in which case the date for shut down of the EGU may be extended as follows:

- 673 A) If the owner or operator of the EGU is not constructing a new EGU
 674 or other generating units to specifically replace the existing EGU,
 675 for up to one year, i.e., permanent shut down of the EGU to occur
 676 by no later than December 31, 2011.
 677
- 678 B) If the owner or operator of the EGU is constructing a new EGU or
 679 other generating units to specifically replace the existing EGU, for
 680 up to 18 months, i.e., permanent shutdown of the EGU to occur by
 681 no later than June 30, 2013; provided, however, that after
 682 December 31, 2012, the existing EGU shall only operate as a back-
 683 up unit to address periods when the new generating units are not in
 684 service.
 685
- 686 b) Notwithstanding Sections 225.230 and 225.232 of this Subpart, any EGU that is
 687 not required to comply with Section 225.230 of this Subpart pursuant to this
 688 Section shall not be included when determining whether any other EGUs at the
 689 source or other sources are in compliance with Section 225.230 of this Subpart.
 690
- 691 c) If an EGU, for which the owner or operator of the source has relied upon this
 692 Section in lieu of complying with Section 225.230(a) of this Subpart, is not
 693 permanently shut down as required by this Section, the EGU shall be considered
 694 to be a new EGU subject to the emission standards in Section 225.237(a) of this
 695 Subpart beginning in the month after the EGU was required to be permanently
 696 shut down, in addition to any other penalties that may be imposed for failure to
 697 permanently shut down the EGU in accordance with this Section.
 698

699 **Section 225.237 Emission Standards for New Sources with EGUs**
 700

- 701 a) Standards
 702
- 703 1) The owner or operator of a source with one or more EGUs, but that
 704 previously had not had any EGUs that commenced commercial operation
 705 before January 1, 2009, shall comply with one of the following emission
 706 standards for each EGU on a rolling 12-month basis:
 707
- 708 A) An emission standard of 0.0080 lb mercury/GWh gross electrical
 709 output; or
 710
- 711 B) A minimum 90 percent reduction of input mercury.
 712
- 713 2) For this purpose, compliance may be demonstrated using the equations in
 714 Section 225.230(a)(2), (a)(3), or (b)(2) of this Subpart.
 715

716 b) The initial 12-month rolling period for which compliance with the emission
 717 standards of subsection (a)(1) of this Section must be demonstrated for a new
 718 EGU shall commence on the date that the initial performance test for the mercury
 719 emission standard under 40 CFR 60.45a also commences. The continuous
 720 emission monitoring systems required by this Subpart for mercury emissions from
 721 the EGU must be certified prior to this date. Thereafter, compliance shall be
 722 demonstrated on a rolling 12-month basis in terms of calendar months.
 723

724 **Section 225.240 General Monitoring and Reporting Requirements**
 725

726 The owner or operator of an EGU shall comply with the monitoring, recordkeeping, and
 727 reporting requirements as provided in this Section, Sections 225.250 through 225.290 of this
 728 Subpart, and Subpart I of 40 CFR 75. If the EGU utilizes a common stack with units that are not
 729 EGUs and the owner or operator of the EGU does not conduct emissions monitoring in the duct
 730 to the common stack from each EGU, the owner or operator of the EGU shall conduct emissions
 731 monitoring in accordance with 40 CFR 75.82(b)(2) and this Section, including monitoring in the
 732 duct to the common stack from each unit that is not an EGU, unless the owner or operator of the
 733 EGU counts the combined emissions measured at the common stack as the mass emissions of
 734 mercury for the EGUs for recordkeeping and compliance purposes.
 735

736 a) Requirements for installation, certification, and data accounting. The owner or
 737 operator of each EGU shall:
 738

- 739 1) Install all monitoring systems required under this Section and Sections
 740 225.250 through 225.290 of this Subpart for monitoring mercury mass
 741 emissions (including all systems required to monitor mercury
 742 concentration, stack gas moisture content, stack gas flow rate, and CO₂ or
 743 O₂ concentration, as applicable, in accordance with 40 CFR 75.81 and
 744 75.82).
 745
- 746 2) Successfully complete all certification tests required under Section
 747 225.250 and meet all other requirements of this Section, Sections 225.250
 748 through 225.290 of this Subpart, and Subpart I of 40 CFR 75 applicable to
 749 the monitoring systems required under subsection (a)(1) of this Section.
 750
- 751 3) Record, report, and quality-assure the data from the monitoring systems
 752 required under subsection (a)(1) of this Section.
 753
- 754 4) If the owner or operator elects to use the low mass emissions excepted
 755 monitoring methodology for an EGU that emits no more than 464 ounces
 756 (29 pounds) of mercury per year pursuant to 40 CFR 75.81(b), also
 757 perform emissions testing in accordance with 40 CFR 75.81(c) to
 758 demonstrate that the EGU is eligible to use this excepted emissions

759 monitoring methodology, as well as comply with all other applicable
 760 requirements of 40 CFR 75.81(b) through (f), and submit a copy of any
 761 information required to be submitted to the USEPA under these provisions
 762 to the Illinois EPA. The initial emissions testing to demonstrate eligibility
 763 of an EGU for the low mass emissions excepted methodology shall be
 764 conducted by the following dates:

- 765
- 766 A) If the EGU has commenced commercial operation before July 1,
 767 2008, at least by January 1, 2009, or 45 days prior to relying on the
 768 low mass emissions excepted methodology, whichever date is
 769 later.
- 770
- 771 B) If the EGU has commenced commercial operation on or after July
 772 1, 2008, at least 45 days prior to the applicable date specified under
 773 subsection (b)(2) of this Section or 45 days prior to relying on the
 774 low mass emissions excepted methodology, whichever date is
 775 later.
- 776

777 b) Emissions Monitoring Deadlines. The owner or operator shall meet the emissions
 778 monitoring system certification and other emissions monitoring requirements of
 779 subsections (a)(1) and (a)(2) of this Section on or before the following dates. The
 780 owner or operator shall record, report, and quality-assure the data from the
 781 emissions monitoring systems required under subsection (a)(1) of this Section on
 782 and after the following dates:

- 783
- 784 1) For the owner or operator of an EGU that commences commercial
 785 operation before July 1, 2008, by January 1, 2009.
- 786
- 787 2) For the owner or operator of an EGU that commences commercial
 788 operation on or after July 1, 2008, by 90 unit operating days or 180
 789 calendar days, whichever occurs first, after the date on which the EGU
 790 commences commercial operation.
- 791
- 792 3) For the owner or operator of an EGU for which construction of a new
 793 stack or flue or installation of add-on mercury emission controls, a flue
 794 gas desulfurization system, a selective catalytic reduction system, a fabric
 795 filter, or a compact hybrid particulate collector system is completed after
 796 the applicable deadline under subsection (b)(1) or (2) of this Section, by
 797 90 unit operating days or 180 calendar days, whichever occurs first, after
 798 the date on which emissions first exit to the atmosphere through the new
 799 stack or flue, add-on mercury emissions controls, flue gas desulfurization
 800 system, selective catalytic reduction system, fabric filter, or compact
 801 hybrid particulate collector system.

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c) Reporting Data

- 1) Except as provided in subsection (c)(2) of this Section, the owner or operator of an EGU that does not meet the applicable emissions monitoring date set forth in subsection (b) of this Section for any emissions monitoring system required under subsection (a)(1) of this Section shall, for each such monitoring system, determine, record, and report maximum potential (or, as appropriate, minimum potential) values for mercury concentration, stack gas flow rate, stack gas moisture content, and any other parameters required to determine mercury mass emissions in accordance with 40 CFR 75.80(g).
- 2) The owner or operator of an EGU that does not meet the applicable emissions monitoring date set forth in subsection (b)(3) of this Section for any emissions monitoring system required under subsection (a)(1) of this Section shall, for each such monitoring system, determine, record, and report substitute data using the applicable missing data procedures in 40 CFR 75.80(f), in lieu of the maximum potential (or, as appropriate, minimum potential) values for a parameter, if the owner or operator demonstrates that there is continuity between the data streams for that parameter before and after the construction or installation under subsection (b)(3) of this Section.

d) Prohibitions

- 1) No owner or operator of an EGU shall use any alternative emissions monitoring system, alternative reference method for measuring emissions, or any other alternative to the emissions monitoring and measurement requirements of this Section and Sections 225.250 through 225.290 of this Subpart, unless such alternative is promulgated by the USEPA and approved in writing by the Agency or the use of such alternative is approved in writing by the Agency and USEPA.
- 2) No owner or operator of an EGU shall operate the EGU so as to discharge, or allow to be discharged, mercury emissions to the atmosphere without accounting for all such emissions in accordance with the applicable provisions of this Section, Sections 225.250 through 225.290 of this Subpart, and Subpart I of 40 CFR 75.
- 3) No owner or operator of an EGU shall disrupt the continuous emission monitoring system, any portion thereof, or any other approved emission monitoring method, and thereby avoid monitoring and recording mercury

845 mass emissions discharged into the atmosphere, except for periods of
 846 recertification or periods when calibration, quality assurance testing, or
 847 maintenance is performed in accordance with the applicable provisions of
 848 this Section, Sections 225.250 through 225.290 of this Subpart, and
 849 Subpart I of 40 CFR 75.

850
 851 4) No owner or operator of an EGU shall retire or permanently discontinue
 852 use of the continuous emission monitoring system or any component
 853 thereof, or any other approved monitoring system under this Subpart,
 854 except under any one of the following circumstances:

855
 856 A) The owner or operator is monitoring emissions from the EGU with
 857 another certified monitoring system that has been approved, in
 858 accordance with the applicable provisions of this Section, Sections
 859 225.250 through 225.290 of this Subpart, and Subpart I of 40 CFR
 860 75, by the Agency for use at that EGU and that provides emission
 861 data for the same pollutant or parameter as the retired or
 862 discontinued monitoring system; or

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 864 B) The owner or operator or designated representative submits
 865 notification of the date of certification testing of a replacement
 866 monitoring system for the retired or discontinued monitoring
 867 system in accordance with Section 225.250(a)(3)(A) of this
 868 Subpart.

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 870 e) Long-term Cold Storage
 871 The owner or operator of an EGU that is in long-term cold storage is subject to
 872 the applicable provisions of 40 CFR 75 for monitoring, recordkeeping, and
 873 reporting for units in long-term cold storage.

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 875 **Section 225.250 Initial Certification and Recertification Procedures for Emissions**
 876 **Monitoring**

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 878 a) The owner or operator of an EGU shall comply with the following initial
 879 certification and recertification procedures for a continuous emissions monitoring
 880 system (i.e., a continuous emission monitoring system or an excepted monitoring
 881 system (sorbent trap monitoring system) under 40 CFR 75.15) required by Section
 882 225.240(a)(1). The owner or operator of an EGU that qualifies for, and for which
 883 the owner or operator elects to use, the low mass emissions excepted
 884 methodology under 40 CFR 75.81(b) shall comply with the procedures in
 885 subsection (c) of this Section.
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- 1) Requirements for Initial Certification. The owner or operator of an EGU shall ensure that, for each continuous emissions monitoring system required by Section 225.240(a)(1) of this Subpart (including the automated data acquisition and handling system), the owner or operator successfully completes all of the initial certification testing required under 40 CFR 75.80(d) by the applicable deadline in Section 225.240(b) of this Subpart. In addition, whenever the owner or operator of an EGU installs a monitoring system to meet the requirements of this Subpart in a location where no such monitoring system was previously installed, the owner or operator must successfully complete the initial certification requirements of 40 CFR 75.80(d).
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- 2) Requirements for Recertification. Whenever the owner or operator of an EGU makes a replacement, modification, or change in any certified continuous emission monitoring system, or an excepted monitoring system (sorbent trap monitoring system) under 40 CFR 75.15, and required by Section 225.240(a)(1) of this Subpart, that may significantly affect the ability of the system to accurately measure or record mercury mass emissions or heat input rate or to meet the quality-assurance and quality-control requirements of 40 CFR 75.21 or Appendix B to 40 CFR 75, the owner or operator of an EGU shall recertify the monitoring system in accordance with 40 CFR 75.20(b). Furthermore, whenever the owner or operator of an EGU makes a replacement, modification, or change to the flue gas handling system or the EGU's operation that may significantly change the stack flow or concentration profile, the owner or operator shall recertify each continuous emission monitoring system, and each excepted monitoring system (sorbent trap monitoring system) under 40 CFR 75.15, whose accuracy is potentially affected by the change, all in accordance with 40 CFR 75.20(b). Examples of changes to a continuous emission monitoring system that require recertification include replacement of the analyzer, complete replacement of an existing continuous emission monitoring system, or change in location or orientation of the sampling probe or site.
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- 3) Approval Process for Initial Certification and Recertification. Subsections (a)(3)(A) through (D) of this Section apply to both initial certification and recertification of a continuous monitoring system required by Section 225.240(a)(1) of this Subpart. For recertifications, replace the words "certification" and "initial certification" with the word "recertification", replace the word "certified" with the word "recertified", and follow the procedures in 40 CFR 75.20(b)(5) in lieu of the procedures in subsection (a)(3)(E) of this Section.

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- A) Notification of Certification. The owner or operator shall submit to the Agency, USEPA Region 5, and the Administrator of the USEPA written notice of the dates of certification testing, in accordance with Section 225.270 of this Subpart.
 - B) Certification Application. The owner or operator shall submit to the Agency a certification application for each monitoring system. A complete certification application shall include the information specified in 40 CFR 75.63.
 - C) Provisional Certification Date. The provisional certification date for a monitoring system shall be determined in accordance with 40 CFR 75.20(a)(3). A provisionally certified monitoring system may be used under this Subpart for a period not to exceed 120 days after receipt by the Agency of the complete certification application for the monitoring system under subsection (a)(3)(B) of this Section. Data measured and recorded by the provisionally certified monitoring system, in accordance with the requirements of 40 CFR 75, will be considered valid quality-assured data (retroactive to the date and time of provisional certification), provided that the Agency does not invalidate the provisional certification by issuing a notice of disapproval within 120 days after the date of receipt by the Agency of the complete certification application.
 - D) Certification Application Approval Process. The Agency will issue a written notice of approval or disapproval of the certification application to the owner or operator within 120 days after receipt of the complete certification application required by subsection (a)(3)(B) of this Section. In the event the Agency does not issue such a notice within the 120-day period, each monitoring system that meets the applicable performance requirements of 40 CFR 75 and is included in the certification application will be deemed certified for use under this Subpart.
 - i) Approval Notice. If the certification application is complete and shows that each monitoring system meets the applicable performance requirements of 40 CFR 75, then the Agency will issue a written notice of approval of the certification application within 120 days after receipt.
 - ii) Incomplete Application Notice. If the certification application is not complete, then the Agency will issue a

written notice of incompleteness that sets a reasonable date by which the owner or operator must submit the additional information required to complete the certification application. If the owner or operator does not comply with the notice of incompleteness by the specified date, then the Agency may issue a notice of disapproval under subsection (a)(3)(D)(iii) of this Section. The 120-day review period shall not begin before receipt of a complete certification application.

iii) Disapproval Notice. If the certification application shows that any monitoring system does not meet the performance requirements of 40 CFR 75 or if the certification application is incomplete and the requirement for disapproval under subsection (a)(3)(D)(ii) of this Section is met, then the Agency will issue a written notice of disapproval of the certification application. Upon issuance of such notice of disapproval, the provisional certification is invalidated by the Agency and the data measured and recorded by each uncertified monitoring system shall not be considered valid quality-assured data beginning with the date and hour of provisional certification (as defined under 40 CFR 75.20(a)(3)). The owner or operator shall follow the procedures for loss of certification in subsection (a)(3)(E) of this Section for each monitoring system that is disapproved for initial certification.

iv) Audit Decertification. The Agency may issue a notice of disapproval of the certification status of a monitor in accordance with Section 225.260(b) of this Subpart.

E) Procedures for Loss of Certification. If the Agency issues a notice of disapproval of a certification application under subsection (a)(3)(D)(iii) of this Section or a notice of disapproval of certification status under subsection (a)(3)(D)(iv) of this Section, then:

i) The owner or operator shall substitute the following values, for each disapproved monitoring system, for each hour of EGU operation during the period of invalid data specified under 40 CFR 75.20(a)(4)(iii) or 75.21(e) and continuing until the applicable date and hour specified under 40 CFR 75.20(a)(5)(i). For a disapproved mercury pollutant

1016 concentration monitor and disapproved flow monitor,
 1017 respectively, the maximum potential concentration of
 1018 mercury and the maximum potential flow rate, as defined in
 1019 Sections 2.1.7.1 and 2.1.4.1 of Appendix A to 40 CFR 75.
 1020 For a disapproved moisture monitoring system and
 1021 disapproved diluent gas monitoring system, respectively,
 1022 the minimum potential moisture percentage and either the
 1023 maximum potential CO₂ concentration or the minimum
 1024 potential O₂ concentration (as applicable), as defined in
 1025 Sections 2.1.5, 2.1.3.1, and 2.1.3.2 of Appendix A to 40
 1026 CFR 75. For a disapproved excepted monitoring system
 1027 (sorbent trap monitoring system) under 40 CFR 75.15 and
 1028 disapproved flow monitor, respectively, the maximum
 1029 potential concentration of mercury and maximum potential
 1030 flow rate, as defined in Sections 2.1.7.1 and 2.1.4.1 of
 1031 Appendix A to 40 CFR 75.
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- 1033 ii) The owner or operator shall submit a notification of
 1034 certification retest dates and a new certification application
 1035 in accordance with subsections (a)(3)(A) and (B) of this
 1036 Section.
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- 1038 iii) The owner or operator shall repeat all certification tests or
 1039 other requirements that were failed by the monitoring
 1040 system, as indicated in the Agency's notice of disapproval,
 1041 no later than 30 unit operating days after the date of
 1042 issuance of the notice of disapproval.
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1044 b) Exemption

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- 1046 1) If an emissions monitoring system has been previously certified in
 1047 accordance with 40 CFR 75 and the applicable quality assurance and
 1048 quality control requirements of 40 CFR 75.21 and Appendix B to 40 CFR
 1049 75 are fully met, the monitoring system shall be exempt from the initial
 1050 certification requirements of this Section.
 1051
- 1052 2) The recertification provisions of this Section shall apply to an emissions
 1053 monitoring system required by Section 225.240(a)(1) of this Subpart
 1054 exempt from initial certification requirements under subsection (a)(1) of
 1055 this Section.
 1056

1057 c) Initial certification and recertification procedures for EGUs using the mercury low
 1058 mass emissions excepted methodology under 40 CFR 75.81(b). The owner or

1059 operator of an EGU qualified to use the mercury low mass emissions excepted
 1060 methodology under 40 CFR 75.81(b) shall meet the applicable certification and
 1061 recertification requirements in 40 CFR 75.81(c) through (f).
 1062

- 1063 d) Certification Applications. The owner or operator of an EGU shall submit an
 1064 application to the Agency within 45 days after completing all initial certification
 1065 or recertification tests required under this Section, including the information
 1066 required under 40 CFR 75.63.
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1068 **Section 225.260 Out of Control Periods for Emission Monitors**
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- 1070 a) Whenever any emissions monitoring system fails to meet the quality-assurance
 1071 and quality-control requirements or data validation requirements of 40 CFR 75,
 1072 data shall be substituted using the applicable missing data procedures in Subparts
 1073 D and I of 40 CFR 75.
 1074

- 1075 b) Audit Decertification. Whenever both an audit of an emissions monitoring
 1076 system and a review of the initial certification or recertification application reveal
 1077 that any emissions monitoring system should not have been certified or recertified
 1078 because it did not meet a particular performance specification or other
 1079 requirement under Section 225.250 of this Subpart or the applicable provisions of
 1080 40 CFR 75, both at the time of the initial certification or recertification application
 1081 submission and at the time of the audit, the Agency will issue a notice of
 1082 disapproval of the certification status of such monitoring system. For the
 1083 purposes of this subsection, an audit shall be either a field audit or an audit of any
 1084 information submitted to the Agency. By issuing the notice of disapproval, the
 1085 Agency revokes prospectively the certification status of the emissions monitoring
 1086 system. The data measured and recorded by the monitoring system shall not be
 1087 considered valid quality-assured data from the date of issuance of the notification
 1088 of the revoked certification status until the date and time that the owner or
 1089 operator completes subsequently approved initial certification or recertification
 1090 tests for the monitoring system. The owner or operator shall follow the applicable
 1091 initial certification or recertification procedures in Section 225.250 of this Subpart
 1092 for each disapproved monitoring system.
 1093

1094 **Section 225.261 Additional Requirements to Provide Heat Input Data**
 1095

1096 The owner or operator of an EGU that monitors and reports mercury mass emissions using a
 1097 mercury concentration monitoring system and a flow monitoring system shall also monitor and
 1098 report heat input rate at the EGU level using the procedures set forth in 40 CFR 75.
 1099

1100 **Section 225.263 Monitoring of Gross Electrical Output**
 1101

1102 The owner or operator of an EGU complying with this Subpart by means of Section
 1103 225.230(a)(1) or using electrical output (O_i) and complying by means of Section 225.230(b) or
 1104 (d) or Section 225.232 of this Subpart shall monitor gross electrical output of the associated
 1105 generator(s) in MWh on an hourly basis.

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1107 **Section 225.265 Coal Analysis for Input Mercury Levels**

1108

1109 a) The owner or operator of an EGU complying with this Subpart by means of
 1110 Section 225.230(a)(2) or using input mercury levels (Ii) and complying by means
 1111 of Section 225.230(b) or (d) or Section 225.232 of this Subpart shall:

1112

1113 1) Perform daily sampling of the coal combusted in the EGU for mercury
 1114 content. The owner or operator of such EGU shall collect a minimum of
 1115 one 2-lb grab sample per day of operation from the belt feeders anywhere
 1116 between the crusher house or breaker building and the boiler. The sample
 1117 shall be taken in such a manner so as to provide a representative mercury
 1118 content for the coal burned on that day.

1119

1120 2) Analyze the grab coal sample for the following:

1121

1122 A) Determine the heat content using ASTM D5865-04 or equivalent
 1123 approved in writing by the Agency.

1124

1125 B) Determine the moisture content using ASTM D3173-03 or
 1126 equivalent approved in writing by the Agency.

1127

1128 C) Measure the mercury content using ASTM D6414-01, ASTM
 1129 D3684-01, or equivalent approved in writing by the Agency.

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1131 3) The owner or operator of multiple EGUs at the same source using the
 1132 same crusher house or breaker building may take one sample per crusher
 1133 house or breaker building, rather than one per EGU.

1134

1135 4) The owner or operator of an EGU shall use the data analyzed under
 1136 subsection (b) of this Section to determine the mercury content in terms of
 1137 lbs/trillion Btu.

1138

1139 b) The owner or operator of an EGU that must conduct sampling and analysis of coal
 1140 pursuant to subsection (a) of this Section shall begin such activity by the
 1141 following date:

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1143 1) If the EGU is in daily service, at least 30 days before the start of the month
 1144 for which such activity will be required.

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- 2) If the EGU is not in daily service, on the day that the EGU resumes operation.

Section 225.270 Notifications

The owner or operator of a source with one or more EGUs shall submit written notice to the Agency according to the provisions in 40 CFR 75.61 for each EGU or group of EGUs monitored at a common stack and each non-EGU monitored under 40 CFR 75.82(b)(2)(ii).

Section 225.290 Recordkeeping and Reporting

a) General Provisions

- 1) The owner or operator of an EGU and its designated representative shall comply with all applicable recordkeeping and reporting requirements in this Section and with all applicable recordkeeping and reporting requirements of 40 CFR 75.84.
- 2) The owner or operator of an EGU shall maintain records for each month identifying the emission standard in Section 225.230(a) or 225.237(a) of this Section with which it is complying or that is applicable for the EGU and the following records related to the emissions of mercury that the EGU is allowed to emit:
 - A) For an EGU for which the owner or operator is complying with this Subpart by means of Section 225.230(a)(2) or 225.237(a)(1)(B) or using input mercury levels to determine the allowable emissions of the EGU, records of the daily mercury content of coal used (lbs/trillion Btu) and the daily and monthly input mercury (lbs), which shall be kept in the file required under 40 CFR 75.84(a).
 - B) For an EGU for which the owner or operator of an EGU complying with this Subpart by means of Section 225.230(a)(1) or 225.237(a)(1)(A) or using electrical output to determine the allowable emissions of the EGU, records of the daily and monthly gross electrical output (GWh), which shall be kept in the file required under 40 CFR 75.84(a).
- 3) The owner or operator of an EGU shall maintain records of the following for each EGU:

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- A) Monthly emissions of mercury from the EGU.
- B) For an EGU for which the owner or operator is complying by means of Section 225.230(b) or (d) of this Subpart, records of the monthly allowable emissions of mercury from the EGU.
- 4) The owner or operator of an EGU that is participating in an Averaging Demonstration pursuant to Section 225.232 of this Subpart shall maintain records identifying all sources and EGUs covered by the Demonstration for each month and, within 60 days after the end of each calendar month, calculate and record the actual and allowable mercury emissions of the EGU for the month and the applicable 12-month rolling period.
- 5) The owner or operator of an EGU shall maintain the following records related to quality assurance activities conducted for emissions monitoring systems:
 - A) The results of quarterly assessments conducted under Section 2.2 of Appendix B of 40 CFR 75; and
 - B) Daily/weekly system integrity checks under Section 2.6 of Appendix B of 40 CFR 75.
- 6) The owner or operator of an EGU shall maintain an electronic copy of all electronic submittals to the USEPA under 40 CFR 75.84(f).
- 7) The owner or operator of an EGU shall retain all records required by this Section at the source unless otherwise provided in the CAAPP permit issued for the source and shall make a copy of any record available to the Agency upon request.
- b) Quarterly Reports. The owner or operator of a source with one or more EGUs shall submit quarterly reports to the Agency as follows:
 - 1) These reports shall include the following information for operation of the EGUs during the quarter:
 - A) The total operating hours of each EGU and the mercury CEMS, as also reported in accordance with 40 CFR 75.
 - B) A discussion of any significant changes in the measures used to control emissions of mercury from the EGUs or the coal supply to the EGUs, including changes in the source of coal.

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- C) Summary information on the performance of the mercury CEMS. When the mercury CEMS was not inoperative, repaired, or adjusted, except for routine zero and span checks, this shall be stated in the report.
 - D) If the CEMS downtime was more than 5.0 percent of the total operating time for the EGU: the date and time identifying each period during which the CEMS was inoperative, except for routine zero and span checks; the nature of CEMS repairs or adjustments and a summary of quality assurance data consistent with 40 CFR 75, i.e., the dates and results of the Linearity Test(s) and any Relative Accuracy Test Audit(s) during the quarter; a listing of any days when a required daily calibration was not performed; and the date and duration of any periods when the CEMS was out-of-control as addressed by Section 225.260 of this Subpart.
- 2) The owner or operator shall submit each quarterly report to the Agency within 45 days following the end of the calendar quarter covered by the report.
- c) Compliance Certification. The owner or operator of a source with one or more EGUs shall submit to the Agency a compliance certification in support of each quarterly report based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the EGUs' emissions are correctly and fully monitored. The certification shall state:
- 1) That the monitoring data submitted were recorded in accordance with the applicable requirements of this Section, Sections 225.240 through 225.270 and 40 CFR 75, including the quality assurance procedures and specifications; and
 - 2) For an EGU with add-on mercury emission controls, a flue gas desulfurization system, a selective catalytic reduction system, or a compact hybrid particulate collector system and for all hours where mercury data are substituted in accordance with 40 CFR 75.34(a)(1):
 - A) That:
 - i) The mercury add-on emission controls, flue gas desulfurization system, selective catalytic reduction system, or compact hybrid particulate collector system was operating within the range of parameters listed in the

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quality assurance/quality control program under Appendix B to 40 CFR 75; or

- ii) With regard to a flue gas desulfurization system or a selective catalytic reduction system, quality-assured SO₂ emission data recorded in accordance with 40 CFR 75 document that the flue gas desulfurization system was operating properly, or quality-assured NO_x emission data recorded in accordance with 40 CFR 75 document that the selective catalytic reduction system was operating properly, as applicable; and

B) The substitute data values do not systematically underestimate mercury emissions.

d) Annual Certification of Compliance

1) The owner or operator of a source with one or more EGUs subject to this Subpart shall submit to the Agency an Annual Certification of Compliance with this Subpart no later than May 1 of each year and shall address compliance for the previous calendar year. Such certification shall be submitted to the Agency, Air Compliance and Enforcement Section, and the Air Regional Field Office.

2) Annual Certifications of Compliance shall indicate whether compliance existed for each EGU for each month in the year covered by the Certification and certification to that effect. In addition, for each EGU, the owner or operator shall provide the following:

A) If complying with this Subpart by means of Section 225.230(a)(1)(A) or 225.237(a)(1)(A):

- i) Actual emissions rate, in lb/GWh, for each 12-month rolling period ending in the year covered by the Certification;
- ii) Actual emissions, in lbs, and gross electrical output, in GWh, for each 12-month rolling period ending in the year covered by the Certification; and
- iii) Actual emissions, in lbs, and gross electrical output, in GWh, for each month in the year covered by the Certification and in the previous year.

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- B) If complying with this Subpart by means of Section 225.230(a)(1)(B) or 225.237(a)(1)(B):
 - i) Actual control efficiency for emissions for each 12-month rolling period ending in the year covered by the Certification, expressed as a percent;
 - ii) Actual emissions, in lbs, and mercury content in the fuel fired in such EGU, in lbs, for each 12-month rolling period ending in the year covered by the Certification; and
 - iii) Actual emissions, in lbs, and mercury content in the fuel fired in such EGU, in lbs, for each month in the year covered by the Certification and in the previous year.
- C) If complying with this Subpart by means of Section 225.230(b):
 - i) Actual emissions and allowable emissions for each 12-month rolling period ending in the year covered by the Certification; and
 - ii) Actual emissions and allowable emissions, and which standard of compliance the owner or operator was utilizing for each month in the year covered by the Certification and in the previous year.
- D) If complying with this Subpart by means of Section 225.230(d):
 - i) Actual emissions and allowable emissions for all EGUs at the source for each 12-month rolling period ending in the year covered by the Certification; and
 - ii) Actual emissions and allowable emissions, and which standard of compliance the owner or operator was utilizing for each month in the year covered by the Certification and in the previous year.
- E) If complying with this Subpart by means of Section 225.232:
 - i) Actual emissions and allowable emissions for all EGUs at the source in an Averaging Demonstration for each 12-

1359 month rolling period ending in the year covered by the
1360 Certification; and

1361
1362 ii) Actual emissions and allowable emissions, with the
1363 standard of compliance the owner or operator was utilizing
1364 for each EGU at the source in an Averaging Demonstration
1365 for each month for all EGUs at the source in an Averaging
1366 Demonstration in the year covered by the Certification and
1367 in the previous year.

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1369 F) Any deviations, data substitutions, or exceptions each month and
1370 discussion of the reasons for such deviations, data substitutions, or
1371 exceptions.

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1373 3) All Annual Certifications of Compliance required to be submitted shall
1374 include the following certification by a responsible official:

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1376 I certify under penalty of law that this document and all attachments were
1377 prepared under my direction or supervision in accordance with a system
1378 designed to assure that qualified personnel properly gather and evaluate
1379 the information submitted. Based on my inquiry of the person or persons
1380 directly responsible for gathering the information, the information
1381 submitted is, to the best of my knowledge and belief, true, accurate, and
1382 complete. I am aware that there are significant penalties for submitting
1383 false information, including the possibility of fine and imprisonment for
1384 knowing violations.

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1386 4) The owner or operator of an EGU shall submit its first Annual
1387 Certification of Compliance to address calendar year 2009 or the calendar
1388 year in which the EGU commences commercial operation, whichever is
1389 later. Notwithstanding subsection (d)(2) of this Section, in the Annual
1390 Certifications of Compliance that are required to be submitted by May 1,
1391 2010 and May 1, 2011 to address calendar years 2009 and 2010,
1392 respectively, the owner or operator is not required to provide 12-month
1393 rolling data for any period that ends before June 30, 2010.

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1395 e) Deviation Reports. For each EGU, the owner or operator shall promptly notify
1396 the Agency of deviations from requirements of this Subpart. At a minimum, these
1397 notifications shall include a description of such deviations within 30 days after
1398 discovery of the deviations, and a discussion of the possible cause of such
1399 deviations, any corrective actions, and any preventative measures taken.

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- 1401 f) Quality Assurance RATA Reports. The owner or operator of an EGU shall
1402 submit to the Agency, Air Compliance and Enforcement Section, the quality
1403 assurance RATA report for each EGU or group of EGUs monitored at a common
1404 stack and each non-EGU under 40 CFR 75.82(b)(2)(ii) within 45 days after
1405 completing a quality assurance RATA.
1406

1407 **Section 225.295 Treatment of Mercury Allowances**
1408

1409 Any mercury allowances allocated to the Agency by the USEPA shall be treated as follows:
1410

- 1411 a) No such allowances shall be allocated to any owner or operator of an EGU or
1412 other sources of mercury emissions into the atmosphere or discharges into the
1413 waters of the State.
1414
1415 b) The Agency shall hold all allowances allocated by the USEPA to the State. At the
1416 end of each calendar year, the Agency shall instruct the USEPA to retire
1417 permanently all such allowances.