

# **DRAFT 02/07/06**

## **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**

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

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**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].

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SOURCE: Adopted at \_\_\_ 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 <i>et seq.</i> ]
CAA	Clean Air Act [42 U.S.C. 7401 <i>et seq.</i> ]
CAAPP	Clean Air Act Permit Program
CO <sub>2</sub>	carbon dioxide
EGU	electric generating unit
GWh	gigawatt hour
lbs	pounds
MW	megawatt
MWe	megawatt electrical
MWh	megawatt hour
NO <sub>x</sub>	nitrogen oxides
O <sub>2</sub>	oxygen
RATA	relative accuracy test audit
SO <sub>2</sub>	sulfur dioxide
USEPA	United States Environmental Protection Agency
W-hr	watt-hour

### Section 225.130 Definitions

The definitions contained in this Section apply only to the provisions of this Part. Unless otherwise defined herein 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 a demonstration of compliance that is based on the combined performance of EGUs 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 any 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.

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"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 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.

"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 through that Electric Generating Unit. 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 a maximum allowable rate of emissions of mercury per unit of gross electrical output from an Electric Generating Unit.

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"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 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, § 60.49a(k)(1), § 60.49a(p), § 60.50(h), and §§ 60.4170 through 60.4176 (2005).
- b) 40 CFR Part 63, § 63.7521(c) and (d) (2005).

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- c) 40 CFR Part 75 (2005).
- d) 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.
  - 2) 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.
  - 3) 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).

### **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 electric generating units.

#### Section 225.202 Measurement Methods

Measurement of mercury shall be according to the following:

- a) Continuous emissions monitoring pursuant to 40 CFR Part 75 (2005).
- b) 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.
- c) 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).

#### Section 225.205 Applicability

The following stationary coal-fired boilers and stationary coal-fired combustion turbines are Electric Generating Units (EGUs) and are subject to this Subpart:

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- 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.

### 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 Section 225.230 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 the mercury emission reduction requirements under Section 225.230 of this Subpart.

- d) Recordkeeping and Reporting Requirements

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Unless otherwise provided, the owner or operator of the 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 the applicable, approved State Implementation Plan, an applicable 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 CAAPP permit applications that address all applicable requirements of this Subpart, applicable to each EGU at the source.



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- 2) A) For EGUs that commenced commercial operation on or before December 31, 2008, the owner or operator of such EGUs 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 EGUs that commence commercial operation after December 31, 2008, the owner or operator of such EGUs 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 EGUs 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 compliance requirements of Section 225.210 of this Subpart.

### 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

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- a) 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, shall comply with one of the following standards for each EGU on a rolling 12-month basis:
- A) An emission standard of 0.0080 lbs mercury/GWh gross electrical output; or
- B) A minimum 90-percent reduction of input mercury.
- 2) For an EGU complying with Section 225.230(a)(1)(A) of this Subpart, 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:

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

*(Notation for the summations not properly placed)*

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 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 Section 225.230(a)(1)(B) of this Subpart, 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:

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

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*(Notation for the summations not properly placed)*

Where:

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

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

$I_i$  = 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.

- b) 1) As an alternative to compliance with one of the above emission standards in Section 225.230(a) of this Subpart, 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:

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

$$E_{12} = \sum_{i=1}^{12} E_i \quad (\text{Notation for the summations not properly placed})$$

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

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

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$A_i$  = 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 ( $A_{\text{Input } i}$ ) or the electrical output from the EGU ( $A_{\text{Output } i}$ ), as selected by the owner or operator of the EGU for that given month.

$A_{\text{Input } i}$  = 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.

$A_{\text{Output } i}$  = 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 lbs/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, 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) 1) As an alternative to compliance with the emission standards of Section 225.230(a) of this Subpart, 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 SECTION X.X, must not exceed the sum of the allowable emissions of mercury from all the EGUs at the source, as determined in accordance with SECTION X.X and X.X, as further provided by the following formulas:

$$E_S \leq A_S$$

$$E_S = \sum_{i=1}^n E_i \quad (\textit{Notation for the summations not properly placed})$$

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

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 Section 225.230(b)(2).

$A_i$  = Allowable mercury emissions of an individual EGU at the source, as determined in accordance with Section 225.230(b)(2).

$n$  = Number of EGUs covered by the Demonstration

- 3) If an owner or operator of a source with one or more EGUs fails to meet the requirements of this Section in a given 12-month rolling period, such source is considered out of compliance with this Subpart for the entire final 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 EGU covered by the Demonstration on a rolling 12-month basis.
- b) The EGU at each source covered by a Demonstration shall 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 0.0096 lbs 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, addressing all EGUs at the sources covered by the Demonstration, rather than only EGUs at one source.

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- d) 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) i) 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.
- ii) 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.
- 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, the owner or operator of any source that elects to participate in a Demonstration to show compliance with this Subpart cannot average with any other source for which the owner or operator of such source 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.

Section 225.234      Technology-Based Temporary Compliance Extension for Existing EGUs

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- \_) Notwithstanding Sections 225.230 and 225.232, any EGU that is excused from compliance with Section 225.230 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 during the period in which the compliance extension is in effect.

### Section 225.235 Future Shutdowns

[For Discussion]

### Section 225.237 Emission Standards for New Sources with EGUs

- a) 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:
  - i) An emission standard of 0.0080 lbs mercury/GWh gross electrical output; or
  - ii) 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) 1) The owner or operator shall begin to comply with subsection (a) of this Section in the first full calendar month that is within 150 days of commencement of commercial operation of the EGU.
- 2) Notwithstanding subsection (b)(1) of this Section, for an EGU that commences commercial operation between January 1, 2009, and June 30, 2012, the owner or operator shall begin to comply with subsection (a) of this Section in the first full calendar month that is within 180 days after commencement of commercial operation of the EGU.

### 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. For purposes of complying with such requirements, the definitions in Section 225.130 and in 40 CFR 72.2 shall apply, and the

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terms "affected unit" and "designated representative" in 40 CFR Part 75 shall be deemed to refer to the terms "EGU" and "owner or operator," respectively. The owner or operator of an EGU that is not subject to this Subpart, but that is monitored under 40 CFR 75.82(b)(2)(i), shall comply with the same monitoring, recordkeeping, and reporting requirements as an EGU.

- 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 CO<sub>2</sub> or O<sub>2</sub> 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.
- b) Monitoring deadlines. The owner or operator shall meet the monitoring system certification and other 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 monitoring systems required under subsection (a)(1) of this Section on and after the following dates:
  - 1) March 1, 2009; or
  - 2) 90 unit operating days or 180 calendar days, whichever occurs first, after the date on which the EGU commences commercial operation.
- 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 monitoring date set forth in subsection (b) of this Section for any monitoring system required under subsection (a)(1) of this Section



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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 monitoring date set forth in subsection (b) of this Section for any 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) of this Section.

### d) Prohibitions

- 1) No owner or operator of an EGU shall use any alternative monitoring system, alternative reference method, or any other alternative to the 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.

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- 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 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. The owner or operator of an EGU is subject to the applicable provisions of 40 CFR Part 75 concerning EGUs 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 monitoring system (i.e., a continuous emission monitoring system and an excepted monitoring system (sorbent trap monitoring system) under 40 CFR 75.15) required by Section 225.240(a)(1):
  - 1) Requirements for initial certification. The owner or operator of an EGU shall ensure that each continuous monitoring system required by Section 225.240(a)(1) (including the automated data acquisition and handling system) 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, initial certification meeting the requirements of 40 CFR 75.80(d) is required.

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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, required by Section 225.240(a)(1) 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 (sorbent trap monitoring system) under 40 CFR 75.15, whose accuracy is potentially affected by the change, 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. 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). 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. The owner or operator shall submit to the Agency, the appropriate USEPA Regional Office, 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.

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- 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 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 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 of 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 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. 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 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

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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 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. 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):
    - I) For a disapproved mercury pollutant concentration monitor and disapproved flow monitor, respectively, the maximum

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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.

- II) For a disapproved moisture monitoring system and disapproved diluent gas monitoring system, respectively, the minimum potential moisture percentage and either the maximum potential CO<sub>2</sub> concentration or the minimum potential O<sub>2</sub> 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.
  - III) 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)
    - 1) If a 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 a monitoring system required by Section 225.240(a)(1) exempt from

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initial certification requirements under subsection (a)(1) of this Section.

- c) **Monitoring Plans.** The owner or operator of an EGU shall comply with the requirements of 40 CFR 75.84(e).
- d) **Certification Applications.** The owner or operator shall submit an application to the Agency within 45 days after completing all initial certification or recertification tests required under Section 225.250 of this Subpart, including the information required under 40 CFR 75.63.

### Section 225.260 Out of Control Periods for Emissions 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.** Whenever both an audit of a monitoring system and a review of the initial certification or recertification application reveal that any 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 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.

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### 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 (Oi) and complying by means of Section 225.230(b) shall monitor gross electrical output of the associated generator(s) in W-hr/hour.

### 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 shall:
  - 1) Perform daily sampling of the coal combusted in the EGU for mercury content, in lbs/trillion Btu, as follows:
    - A) Collect coal samples from the feeders or other representative location in accordance with 40 CFR 63.7521(c).
    - B) Composite coal samples in accordance with 40 CFR 63.7521(d).
  - 2) Analyze each of the composited coal samples for mercury content in accordance with ASTM D6414-01.
- b) The owner or operator of an EGU shall use the data analyzed under subsection (a) of this Section to determine the mercury content in terms of lbs/trillion Btu.

### 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 under 40 CFR 75.82(b)(2)(ii).

### Section 225.290      Recordkeeping and Reporting

- a) General provisions.
  - 1) The owner or operator shall comply with all recordkeeping and reporting requirements in this Section and the applicable recordkeeping and reporting requirements of 40 CFR 75.84.



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- 2)
  - 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 to determine the allowable emissions of the EGU shall maintain the daily mercury content of coal used (lbs/trillion Btu) and the daily input mercury (lbs) in the file required under 40 CFR 75.84(a).
  - B) The owner or operator of an EGU complying with this Subpart by means of Section 225.230(a)(1) or using electrical output to determine the allowable emissions of the EGU shall maintain the daily gross electrical output (GWh) in the file required under 40 CFR 75.84(a).
- 3) The owner or operator shall maintain records of the following:
  - A) Daily outlet mercury or output mercury data on such time period as appropriate if using the excepted methodology.
  - B) If using an averaging methodology, all other information collected on a daily basis necessary to calculate the average.
- 4) The owner or operator shall record on a monthly basis the method by which each EGU was demonstrating compliance for each month.
- 5) An owner or operator who utilizes the averaging methodology of Section 225.230 shall calculate and record the monthly allowable and actual mercury emissions within 60 days of the end of each month. In addition, the owner or operator shall calculate and record the 12-month rolling allowable and actual emissions each month.
- 6) The owner or operator shall maintain the following on site and any records shall be made available to the Agency upon request:
  - 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.

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- 7) The owner or operator shall maintain on site an electronic copy of all electronic submittals to the USEPA under 40 CFR 75.84(f). Such copy shall be made available to the Agency upon request.
- b) Quarterly reports. The owner or operator 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 the EGU and the mercury CEMS, as also reported in accordance with 40 CFR Part 75.
    - B) The greatest load achieved by each EGU (steam flow or gross megawatts).
    - C) A discussion of significant changes in the fuel supply to the EGUs, if any, including changes in the source of coal, the introduction of new fuel materials other than coal, gas and oil, and changes in the source of such other fuel materials or the maximum rate at which they will be fired.
    - D) Summary information on the performance of the mercury CEMS. When the mercury CEMS was not inoperative, repaired, or adjusted, except for zero and span checks, this shall be stated in the report.
    - E) If the CEMS downtime was more than 5 percent of the total operating time for the affected boiler: the date and time identifying each period during which the CEMS was inoperative except for zero and span checks, and 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.
  - 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.

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- c) Compliance certification. The owner or operator 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 EGU's emissions are correctly and fully monitored. The certification shall state that:
- 1) 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, 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)(i) The mercury add-on emission controls, flue gas desulfurization system, selective catalytic reduction system, or compact hybrid particulate collector system were 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 SO<sub>2</sub> emission data recorded in accordance with 40 CFR Part 75 document that the flue gas desulfurization system was operating properly, or quality-assured NO<sub>x</sub> 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 shall submit an Annual Certification of Compliance with this Subpart. The Annual Certification of Compliance shall be submitted no later than May 1 of each year and shall address compliance for the previous calendar year. Such

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certification shall be submitted to the Agency, Air Compliance Section, and the Agency, Air Regional Field Office.

- 2) Annual Certifications of Compliance shall indicate whether compliance existed for each EGU for each month and certification to that effect. In addition, for each EGU, the owner or operator shall provide the following:
  - A) Actual and allowable emissions.
  - B) Twelve-month rolling actual emissions and 12-month rolling allowable emissions for each month.
  - C) Which standard of compliance the owner or operator was utilizing for each month.
  - D) Any deviations, data substitutions, or exceptions each month.
- 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.

- e) Deviation 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 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 RATA reports. The owner or operator of an EGU shall submit to the Agency, Air Compliance Section, the quality assurance RATA report for each EGU or group of EGUs monitored at a common

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stack and each non-EGU under 40 CFR 75.82(b)(2)(ii) within 45 days after completing a quality assurance RATA.

### Section 225.295 Treatment of Mercury Allowances

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.