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TITLE 35: ENVIRONMENTAL PROTECTION SUBTITLE B: AIR POLLUTION CHAPTER I: POLLUTION CONTROL BOARD

# 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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225.APPENDIX B Continuous Emission Monitoring Systems for Mercury

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

SOURCE: Adopted in R06-25 at 31 Ill. Reg. 129, effective December 21, 2006; amended in R06-26 at 31 Ill. Reg. 12864, effective August 31, 2007.

# SUBPART A: GENERAL PROVISIONS

Section 225.100 Severability

If any Section, subsection or clause of this Part is found invalid, such finding must 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 must 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]      |
|-----------------|--|
| ACI             | activated carbon injection                     |
| AETB            | Air Emission Testing Body                      |
| Agency          | Illinois Environmental Protection Agency       |
| Btu             | British thermal unit                           |
| CAA             | Clean Air Act [42 USC 7401 et seq.]            |
| CAAPP           | Clean Air Act Permit Program                   |
| CAIR            | Clean Air Interstate Rule                      |
| CASA            | Clean Air Set-Aside                            |
| CEMS            | continuous emission monitoring system          |
| CO <sub>2</sub> | carbon dioxide                                 |
| CPS             | Combined Pollutant Standard                    |
| CGO             | converted gross electrical output              |
| CRM             | certified reference materials                  |
| CUTE            | converted useful thermal energy                |
| DAHS            | data acquisition and handling system           |
| dscm            | dry standard cubic meters                      |
| EGU             | electric generating unit                       |
| ESP             | electrostatic precipitator                     |
| FGD             | flue gas desulfurization                       |
| fpm             | feet per minute                                |
| GO              | gross electrical output                        |
| GWh             | gigawatt hour                                  |
| HI              | heat input                                     |
| Hg              | mercury  |
| hr              | hour   |
| ISO             | International Organization for Standardization |
| kg              | kilogram                                       |
| lb              | pound  |
| MPS             | Multi-Pollutant Standard                       |
| MSDS            | Material Safety Data Sheet                     |

| MW                | megawatt  |
|-------------------|---|
| Mwe               | megawatt electrical                             |
| MWh               | megawatt hour                                   |
| NAAQS             | National Ambient Air Quality Standards          |
| NIST              | National Institute of Standards and Technology  |
| NO <sub>x</sub>   | nitrogen oxides                                 |
| NTRM              | NIST Traceable Reference Material               |
| NUSA              | New Unit Set-Aside                              |
| ORIS              | Office of Regulatory Information Systems        |
| O <sub>2</sub>    | oxygen  |
| PM <sub>2.5</sub> | particles less than 2.5 micrometers in diameter |
| <u>QA</u>         | quality assurance                               |
| QC                | quality certification                           |
| RATA              | relative accuracy test audit                    |
| <u>RGFM</u>       | reference gas flow meter                        |
| SÓ <sub>2</sub>   | sulfur dioxide                                  |
| $SNCR \cdot$      | selective noncatalytic reduction                |
| TTBS              | Temporary Technology Based Standard             |
| TCGO              | total converted useful thermal energy           |
| UTE               | useful thermal energy                           |
| USEPA             | United States Environmental Protection Agency   |
| yr                | year  |
|                   |   |

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.130 Definitions

The following definitions apply for the purposes of this Part. Unless otherwise defined in this Section or a different meaning for a term is clear from its context, the terms used in this Part have the meanings specified in 35 Ill. Adm. Code 211.

"Agency" means the Illinois Environmental Protection Agency. [415 ILCS 5/3.105]

"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.

"Base Emission Rate" means, for a group of EGUs subject to emission standards for NOx and SO<sub>2</sub> pursuant to Section 225.233, the average emission rate of NO<sub>x</sub> or SO<sub>2</sub> from the EGUs, in pounds per million Btu heat input, for calendar years 2003 through 2005 (or, for seasonal NO<sub>x</sub>, the 2003 through 2005 ozone seasons), as determined from the data collected and quality assured by the USEPA, pursuant to the 40 CFR 72 and 96 federal Acid Rain and NO<sub>x</sub> Budget Trading Programs, for the emissions and heat input of that group of EGUs.

### "Board" means the Illinois Pollution Control Board. [415 ILCS 5/3.130]

"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.

"CAIR authorized account representative" means, for the purpose of general accounts, a responsible natural person who is authorized, in accordance with 40 CFR 96, subparts BB, FF, BBB, FFF, BBBB, and FFFF to transfer and otherwise dispose of CAIR  $NO_x$ , SO<sub>2</sub>, and  $NO_x$  Ozone Season allowances, as applicable, held in the CAIR  $NO_x$ , SO<sub>2</sub>, and  $NO_x$  Ozone Season general account, and for the purpose of a CAIR  $NO_x$  compliance account, a CAIR SO<sub>2</sub> compliance account, or a CAIR  $NO_x$  Ozone Season compliance account, the CAIR designated representative of the source.

"CAIR designated representative" means, for a CAIR NO<sub>x</sub> source, a CAIR SO<sub>2</sub> source, and a CAIR NO<sub>x</sub> Ozone Season source and each CAIR NO<sub>x</sub> unit, CAIR SO<sub>2</sub> unit and CAIR NO<sub>x</sub> Ozone Season unit at the source, the natural person who is authorized by the owners and operators of the source and all such units at the source, in accordance with 40 CFR 96, subparts BB, FF, BBB, FFF, BBBB, and FFFF as applicable, to represent and legally bind each owner and operator in matters pertaining to the CAIR NO<sub>x</sub> Annual Trading Program, CAIR SO<sub>2</sub> Trading Program, and CAIR NO<sub>x</sub> Ozone Season Trading Program, as applicable. For any unit that is subject to one or more of the following programs: CAIR NO<sub>x</sub> Annual Trading Program, CAIR SO<sub>2</sub> Trading Program, CAIR NO<sub>x</sub> Ozone Season Trading Program, or the federal Acid Rain Program, the designated representative for the unit must be the same natural person for all programs applicable to the unit.

"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 processing of coal.

"Coal-fired" means:

For purposes of Subparts B-and F, or for purposes of allocating allowances under Sections 225.435, 225.445, 225.535, and 225.545, combusting any amount of coal or coal-derived fuel, alone or in combination with any amount of any other fuel, during a specified year;

Except as provided above, combusting any amount of coal or coal-derived fuel, alone or in combination with any amount of any other fuel.

"Cogeneration unit" means, for the purposes of Subparts C, D, and E, a stationary, fossil fuel-fired boiler or a stationary, fossil fuel-fired combustion turbine of which both of the following conditions are true:

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

It produces either of the following during the 12-month period beginning on the date the unit first produces electricity and during any subsequent calendar year after that in which the unit first produces electricity:

For a topping-cycle cogeneration unit, both of the following:

Useful thermal energy not less than five 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; or

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

"Combined cycle system" means a system comprised of one or more combustion turbines, heat recovery steam generators, and steam turbines configured to improve overall efficiency of electricity generation or steam production.

"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 described in the above paragraph of this definition is combined cycle, any associated duct burner, heat recovery steam generator and steam turbine.

"Commence commercial operation" means, for the purposes of Subparts B and F of this Part, with regard to an EGU 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 must remain the unit's date of commencement of operation even if the EGU is subsequently modified, reconstructed or repowered. For the purposes of Subparts C, D and E, "commence commercial operation" is as defined in Section 225.150.

"Commence construction" means, for the purposes of Section 225.460(f), 225.470, 225.560(f), and 225.570, that the owner or owner's designee has obtained all necessary preconstruction approvals (e.g., zoning) or permits and either has:

Begun, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or

Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.

For purposes of this definition:

"Construction" shall be determined as any physical change or change in the method of operation, including but not limited to fabrication, erection, installation, demolition, or modification of projects eligible for CASA allowances, as set forth in Sections 225.460 and 225.560.

"A reasonable time" shall be determined considering but not limited to the following factors: the nature and size of the project, the extent of design engineering, the amount of off-site preparation, whether equipment can be fabricated or can be purchased, when the project begins (considering both the seasonal nature of the construction activity and the existence of other projects competing for construction labor at the same time, the place of the environmental permit in the sequence of corporate and overall governmental approval), and the nature of the project sponsor (e.g., private, public, regulated).

"Commence operation", for purposes of Subparts C, D and E, means:

To have begun any mechanical, chemical, or electronic process, including, for the purpose of a unit, start-up of a unit's combustion chamber, except as provided in 40 CFR 96.105, 96.205, or 96.305, as incorporated by reference in Section 225.140.

For a unit that undergoes a physical change (other than replacement of the unit by a unit at the same source) after the date the unit commences operation as set forth in the first paragraph of this definition, such date will remain the date of commencement of operation of the unit, which will continue to be treated as the same unit. For a unit that is replaced by a unit at the same source (e.g., repowered), after the date the unit commences operation as set forth in the first paragraph of this definition, such date will remain the replaced unit's date of commencement of operation, and the replacement unit will be treated as a separate unit with a separate date for commencement of operation as set forth in this definition as appropriate.

"Common stack" means a single flue through which emissions from two or more units are exhausted.

"Compliance account" means:

For the purposes of Subparts D and E, a CAIR NO<sub>x</sub> Allowance Tracking System account, established by USEPA for a CAIR NO<sub>x</sub> source or CAIR NO<sub>x</sub> Ozone Season source pursuant to 40 CFR 96, subparts FF and FFFF in which any CAIR NO<sub>x</sub> allowance or CAIR NO<sub>x</sub> Ozone Season allowance allocations for the CAIR NO<sub>x</sub> units or CAIR NO<sub>x</sub> Ozone Season units at the source are initially recorded and in which are held any CAIR NO<sub>x</sub> or CAIR NO<sub>x</sub> Ozone Season allowances available for use for a control period in order to meet the source's CAIR NO<sub>x</sub> or CAIR NO<sub>x</sub> Ozone Season emissions limitations in accordance with Sections 225.410 and 225.510, and 40 CFR 96.154 and 96.354, as incorporated by reference in Section 225.140. CAIR NO<sub>x</sub> allowances may not be used for compliance with the CAIR NO<sub>x</sub> Ozone Season Trading Program and CAIR NO<sub>x</sub> Ozone Season allowances may not be used for compliance with the CAIR NO<sub>x</sub> or compliance with the CAIR NO<sub>x</sub> or compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compliance with the CAIR NO<sub>x</sub> or be used for compl

For the purposes of Subpart C, a "compliance account" means a CAIR SO<sub>2</sub> compliance account, established by the USEPA for a CAIR SO<sub>2</sub> source pursuant to 40 CFR 96, subpart FFF, in which any SO<sub>2</sub> units at the source are initially recorded and in which are held any SO<sub>2</sub> allowances available for use for a control period in order to meet the source's CAIR SO<sub>2</sub> emissions limitations in accordance with Section 225.310 and 40 CFR 96.254, as incorporated by reference in Section 225.140.

"Control period" means:

For the CAIR SO<sub>2</sub> and NO<sub>x</sub> Annual Trading Programs in Subparts C and D, the period beginning January 1 of a calendar year, except as provided in Sections 225.310(d)(3) and 225.410(d)(3), and ending on December 31 of the same year, inclusive; or

For the CAIR NO<sub>x</sub> Ozone Season Trading Program in Subpart E, the period beginning May 1 of a calendar year, except as provided in Section 225.510(d)(3), and ending on September 30 of the same year, inclusive.

"Designated representative" means, for the purposes of Subpart B of this Part, the natural person as defined in 40 CFR 60.4102, and is the same natural person as the person who is the designated representative for the CAIR trading and Acid Rain programs.

"Electric generating unit" or "EGU" means a fossil fuel-fired stationary boiler, combustion turbine or combined cycle system that serves a generator that has a nameplate capacity greater than 25 MWe and produces electricity for sale.

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

"Fossil fuel" means natural gas, petroleum, coal, or any form of solid, liquid, or gaseous fuel derived from such material.

"Fossil fuel-fired" means the combusting of any amount of fossil fuel, alone or in combination with any other fuel in any calendar year.

"Generator" means a device that produces electricity.

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

"Heat input" means, for the purposes of Subparts C, D, and E, a specified period of time, the product (in mmBtu/hr) of the gross calorific value of the fuel (in Btu/lb) divided by 1,000,000 Btu/mmBtu and multiplied by the fuel feed rate into a combustion device (in lb of fuel/time), as measured, recorded and reported to USEPA by the CAIR designated representative and determined by USEPA in accordance with 40 CFR 96, subpart HH, HHH, or HHHH, if applicable, and excluding the heat derived from preheated combustion air, recirculated flue gases, or exhaust from other sources.

"Higher heating value" or "HHV" means the total heat liberated per mass of fuel burned (Btu/lb), when fuel and dry air at standard conditions undergo complete combustion and all resultant products are brought to their standard states at standard conditions.

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

"Integrated gasification combined cycle" or "IGCC" means a coal-fired electric utility steam generating unit that burns a synthetic gas derived from coal in a combined-cycle gas turbine. No coal is directly burned in the unit during operation.

"Long-term cold storage" means the complete shutdown of a unit intended to last for an extended period of time (at least two calendar years) where notice for long-term cold

### storage is provided under 40 CFR 75.61(a)(7).

"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 of such installation 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 of completion as specified by the person conducting the physical change.

### "NIST traceable elemental mercury standards" means either:

(1) Compressed gas cylinders having known concentrations of elemental mercury, which have been prepared according to the "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards"; or

(2) Calibration gases having known concentrations of elemental mercury, produced by a generator that fully meets the performance requirements of the "EPA Traceability Protocol for Qualification and Certification of Elemental Mercury Gas Generators."

"NIST traceable source of oxidized mercury" means a generator that is capable of providing known concentrations of vapor phase mercuric chloride (HgCl<sub>2</sub>), and that fully meets the performance requirements of the "EPA Traceability Protocol for Qualification and Certification of Oxidized Mercury Gas Generators."

"Oil-fired unit" means a unit combusting fuel oil for more than 15.0 percent of the annual heat input in a specified year and not qualifying as coal-fired.

"Output-based emission standard" means, for the purposes of Subpart B of this Part, a maximum allowable rate of emissions of mercury per unit of gross electrical output from an EGU.

"Potential electrical output capacity" means 33 percent of a unit's maximum design heat input, expressed in mmBtu/hr divided by 3.413 mmBtu/MWh, and multiplied by 8,760 hr/yr.

"Project sponsor" means a person or an entity, including but not limited to the owner or operator of an EGU or a not-for-profit group, that provides the majority of funding for an energy efficiency and conservation, renewable energy, or clean technology project as listed in Sections 225.460 and 225.560, unless another person or entity is designated by a written agreement as the project sponsor for the purpose of applying for NO<sub>x</sub> allowances or NO<sub>x</sub> Ozone Season allowances from the CASA.

"Rated-energy efficiency" means the percentage of thermal energy input that is recovered as useable energy in the form of gross electrical output, useful thermal energy, or both that is used for heating, cooling, industrial processes, or other beneficial uses as follows:

For electric generators, rated-energy efficiency is calculated as one kilowatt hour (3,413 Btu) of electricity divided by the unit's design heat rate using the higher heating value of the fuel, and expressed as a percentage.

For combined heat and power projects, rated-energy efficiency is calculated using the following formula:

REE =  $((GO + UTE)/HI) \times 100$ 

Where:

| REE   | == | Rated-energy efficiency, expressed as percentage.           |  |  |
|---|----|---|--|--|
| ·GO   | =  | Gross electrical output of the system expressed in Btu/hr.  |  |  |
| UTE   | =  | Useful thermal output from the system that is used for      |  |  |
| heating, cooling, industrial processes or other beneficial uses, expressed in |    |   |  |  |
| Btu/hr  |    |   |  |  |
| $_{\rm HI}$   | =  | Heat input, based upon the higher heating value of fuel, in |  |  |
| Rtu/hr  |    |   |  |  |

"Repowered" means, for the purposes of 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, for the purposes of Subparts B and F 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) must not be included in the determination, and must 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) must not be included in the determination, and must be replaced by preceding months in which at least one of the EGUs covered by the determination does operate, so that the determination is still based on 12 months in which at least one of the EGUs covered by the determination does operate, so that the determination is still based on 12 months of data.

"Total energy output" means, with respect to a cogeneration unit, the sum of useful power and useful thermal energy produced by the cogeneration unit.

"Useful thermal energy" means, for the purpose of a cogeneration unit, the thermal energy that is made available to an industrial or commercial process, excluding any heat contained in condensate return or makeup water:

Used in a heating application (e.g., space heating or domestic hot water heating); or

Used in a space cooling application (e.g., thermal energy used by an absorption chiller).

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.140 Incorporations by Reference

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

- a) <u>Appendix A, Subpart A, and Performance Specifications 2 and 3 of Appendix B of 40 CFR 60, 60.17, 60.45a, 60.49a(k)(1) and (p), 60.50a(h), and 60.4170 through 60.4176 (2005).</u>
- b) 40 CFR 72.2 (2005).
- <u>c</u>b) <u>40 CFR 75.4, 75.11 through 75.14, 75.16 through 75.19, 75.30, 75.34 through 75.37, 75.40 through 75.48, 75.53(e), 75.57(c)(2)(i) through 75.57(c)(2)(vi), 75.60 through 75.67, 75.71, 75.74(c), Sections 2.1.1.5, 2.1.1.2, 7.7, and 7.8 of Appendix A to 40 CFR 75, Appendix C to 40 CFR 75, Section 3.3.5 of Appendix F to 40 CFR 75 (2006).40 CFR 75 (2006).</u>

<u>d</u>e) 40 CFR 78 (2006).

ed) 40 CFR 96, CAIR SO<sub>2</sub>Trading Program, subparts AAA (excluding 40 CFR 96.204 and 96.206), BBB, FFF, GGG, and HHH (2006).

- fe) 40 CFR 96, CAIR NO<sub>x</sub> Annual Trading Program, subparts AA (excluding 40 CFR 96.104, 96.105(b)(2), and 96.106), BB, FF, GG, and HH (2006).
- gf) 40 CFR 96, CAIR NO<sub>x</sub> Ozone Season Trading Program, subparts AAAA (excluding 40 CFR 96.304, 96.305(b)(2), and 96.306), BBBB, FFFF, GGGG, and HHHH (2006).
- hg) ASTM. The following methods from the American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken PA 19428-2959, (610) 832-9585:
  - ASTM D388-77 (approved February 25, 1977), D388-90 (approved March 30, 1990), D388-91a (approved April 15, 1991), D388-95 (approved January 15, 1995), D388-98a (approved September 10, 1998), or D388-99 (approved September 10, 1999, reapproved in 2004), Classification of Coals by Rank.
  - 2) ASTM D3173-03, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke (Approved April 10, 2003).
  - 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 D4840-99, Standard Guide for Sampling Chain-of-Custody Procedures (Reapproved 2004).
  - 54) ASTM D5865-04, Standard Test Method for Gross Calorific Value of Coal and Coke (Approved April 1, 2004).
  - <u>65</u>) 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).
  - <u>76</u>) 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).
  - 8) ASTM D6911-03, Standard Guide for Packaging and Shipping Environmental Samples for Laboratory Analysis.
  - 9) ASTM D7036-04, Standard Practice for Competence of Air Emission Testing Bodies.

 <u>i</u>h) Federal Energy Management Program, M&V Guidelines: Measurement and Verification for Federal Energy Projects, US Department of Energy, Office of Energy Efficiency and Renewable Energy, Version 2.2, DOE/GO-102000-0960 (September 2000).

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.150 Commence Commercial Operation

Commence commercial operation means, for the purposes of Subparts C, D and E, with regard to a unit:

- a) To have begun to produce steam, gas, or other heated medium used to generate electricity for sale or use, including test generation, except as provided in 40 CFR 96.105, 96.205, or 96.305, as incorporated by reference in Section 225.140.
  - 1) For a unit that is a CAIR SO<sub>2</sub> unit, CAIR NO<sub>x</sub> unit, or a CAIR NO<sub>x</sub> Ozone Season unit pursuant to Sections 225.305, 225.405, and 225.505, respectively, on the date the unit commences commercial operation on the later of November 15, 1990 or the date the unit commences commercial operation as defined in subsection (a) of this Section and that subsequently undergoes a physical change (other than replacement of the unit by a unit at the same source), such date will remain the unit's date of commencement of commercial operation, which will continue to be treated as the same unit.
  - 2) For a unit that is a CAIR SO<sub>2</sub> unit, CAIR NO<sub>x</sub> unit, or a CAIR NO<sub>x</sub> Ozone Season unit pursuant to Sections 225.305, 225.405, and 225.505, respectively, on the later of November 15, 1990 or the date the unit commences commercial operation as defined in subsection (a) of this Section and that is subsequently replaced by a unit at the same source (e.g., repowered), such date will remain the replaced unit's date of commencement of commercial operation, and the replacement unit will be treated as a separate unit with a separate date for commencement of commercial operation as defined in subsection (a) or (b) of this Section as appropriate.
- b) Notwithstanding subsection (a) of this Section and except as provided in 40 CFR 96.105, 96.205, or 96.305 for a unit that is not a CAIR SO<sub>2</sub> unit, CAIR NO<sub>x</sub> unit, or a CAIR NO<sub>x</sub> Ozone Season unit pursuant to Section 225.305, 225.405, or 225.505, respectively, on the later of November 15, 1990 or the date the unit commences commercial operation as defined in subsection (a) of this Section, the unit's date for commencement of

commercial operation will be the date on which the unit becomes a CAIR  $SO_2$  unit, CAIR  $NO_x$  unit, or CAIR  $NO_x$  Ozone Season unit pursuant to Section 225.305, 225.405, or 225.505, respectively.

- 1) For a unit with a date for commencement of commercial operation as defined in subsection (b) of this Section and that subsequently undergoes a physical change (other than replacement of the unit by a unit at the same source), such date will remain the unit's date of commencement of commercial operation, which shall continue to be treated as the same unit.
- 2) For a unit with a date for commencement of commercial operation as defined in subsection (b) of this Section and that is subsequently replaced by a unit at the same source (e.g., repowered), such date will remain the replaced unit's date of commencement of commercial operation, and the replacement unit will be treated as a separate unit with a separate date for commencement of commercial operation as defined in subsection (a) or (b) of this Section as appropriate.

(Source: Added at 31 Ill. Reg. 12864, effective August 31, 2007)

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

Section 225.200 Purpose

The purpose of this Subpart B is to control the emissions of mercury from coal-fired EGU operating in Illinois.

Section 225.202 Measurement Methods

Measurement of mercury must be according to the following:

a) Continuous emission monitoring pursuant to <u>Appendix B to this Part or an</u> <u>alternative emissions monitoring system</u>, <u>alternative reference method for</u> <u>measuring emissions</u>, or other alternative to the emissions monitoring and <u>measurement requirements of Sections 225.240 through 225.290, if such</u> <u>alternative is submitted to the Agency in writing and approved in writing by the</u> <u>Manager of the Bureau of Air's Compliance Section</u>. 40 CFR 75 (2005).

- ASTM D3173-03, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke (Approved April 10, 2003), incorporated by reference in Section 225.140.
- ASTM D3684-01, Standard Test Method for Total Mercury in Coal by the Oxygen Bomb Combustion/Atomic Absorption Method (Approved October 10, 2001), incorporated by reference in Section 225.140.
- d) ASTM D5865-04, Standard Test Method for Gross Calorific Value of Coal and Coke (Approved April 1, 2004), incorporated by reference in Section 225.140.
- 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), incorporated by reference in Section 225.140.
- 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), incorporated by reference in Section 225.140.
- g) Emissions testing pursuant to Appendix A of 40 CFR 60.

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_)

Section 225.205 Applicability

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

- 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 must 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 B at the source must apply for a CAAPP permit that addresses the applicable requirements of this Subpart B.

- b) Monitoring and Testing Requirements.
  - 1) The owner or operator of each source and each EGU at the source must comply with <u>either</u> the monitoring requirements of Sections 225.240 through 225.290 of this Subpart B, the periodic emissions testing requirements of Section 225.239 of this Subpart B, or an alternative emissions monitoring system, alternative reference method for measuring emissions, or other alternative to the emissions monitoring and measurement requirements of Sections 225.240 through 225.290, if such alternative is submitted to the Agency in writing and approved in writing by the Manager of the Bureau of Air's Compliance Section.
  - 2) The compliance of each EGU with the mercury requirements of Sections 225.230 and 225.237 of this Subpart B must be determined by the emissions measurements recorded and reported in accordance with <u>either</u> Sections 225.240 through 225.290 of this Subpart B, Section 225.239 of this Subpart B, or an alternative emissions monitoring system, alternative reference method for measuring emissions, or other alternative to the emissions monitoring and measurement requirements of Sections 225.240 through 225.290, if such alternative is submitted to the Agency in writing and approved in writing by the Manager of the Bureau of Air's Compliance Section.
- c) Mercury Emission Reduction Requirements

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

d) Recordkeeping and Reporting Requirements

Unless otherwise provided, the owner or operator of a source with one or more EGUs at the source must 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, in writing by the Agency, for cause, at any time prior to the end of five years.

- 1) All emissions monitoring information gathered in accordance with Sections 225.240 through 225.290 and all periodic emissions testing information gathered in accordance with Section 225.239.
- 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 B.
- 3) Copies of all documents used to complete a permit application and any other submission under this Subpart B.
- e) Liability.
  - 1) The owner or operator of each source with one or more EGUs must meet the requirements of this Subpart B.
  - 2) Any provision of this Subpart B that applies to a source must also apply to the owner and operator of such source and to the owner or operator of each EGU at the source.
  - 3) Any provision of this Subpart B that applies to an EGU must also apply to the owner or operator of such EGU.
- f) Effect on Other Authorities. No provision of this Subpart B may be construed as exempting or excluding the owner or 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.

(Source: Amended at , effective )

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 B is required to submit a CAAPP permit application that addresses all applicable requirements of this Subpart B, applicable to each EGU at the source.
  - 2) For any EGU that commenced commercial operation:
    - A) 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 on or before December 31, 2008.

- B) 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.
- b) Contents of Permit Applications.

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

- 1) The ORIS (Office of Regulatory Information Systems) or facility code assigned to the source by the U.S. Department of Energy, 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 B, or, in the alternative, the applicant may include its intended approach to the testing requirement of Section 225.239 of this Subpart B.
- 4) The intended approach to the mercury emission reduction requirements of Section 225.230 or 225.237 of this Subpart B, as applicable.
- c) Permit Contents.
  - Each CAAPP permit issued by the Agency for a source with one or more EGUs subject to the requirements of this Subpart B must contain federally enforceable conditions addressing all applicable requirements of this Subpart B, which conditions must 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 B, each such CAAPP permit must also contain the information specified under subsection (b) of this Section.

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.230 Emission Standards for EGUs at Existing Sources

a) Emission Standards.

- Except as provided in Sections 225.230(b) and (d), 225.232 through 225.234, 225.239, and 225.291 through 225.299 of this Subpart B, beginning Beginning July 1, 2009, the owner or operator of a source with one or more EGUs subject to this Subpart B that commenced commercial operation on or before December 31, 2008, must 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 B and calculated as follows, must not exceed the applicable emission standard:

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

Where:

- ER = Actual mercury emissions rate of the EGU for the particular 12month 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 B.
- O<sub>i</sub> = 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 B.
- 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 B and calculated as follows, must meet or exceed the applicable efficiency requirement:

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

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 emissions monitoring provisions of this Subpart B.
- $I_i =$  Amount of mercury in the fuel fired in the EGU, in lbs, in an individual month in the 12-month rolling period, as determined in accordance with Section 225.265 of this Subpart B.
- b) Alternative Emission Standards for Single EGUs.
  - As an alternative to compliance with the emission standards in subsection

     (a) of this Section, the owner or operator of the EGU may comply with the
     emission standards of this Subpart B 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 the purpose of demonstrating compliance with the alternative emission standards of this subsection (b), for each rolling 12-month period, the actual emissions of mercury from the EGU, as monitored in accordance with this Subpart B, must not exceed the allowable emissions of mercury from the EGU, as further provided by the following formulas:

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



 $E_{12}$  = Actual mercury emissions of the EGU for the particular 12-month rolling period.

 $A_{12}$  = Allowable mercury emissions of the EGU for the particular 12month 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 B, 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 <u>Sections 1.14 through 1.18 of Appendix B to this Part</u>, 40 CFR-75, Subpart 4, such that the mercury emissions of each EGU are not determined separately, compliance of the EGUs with the applicable emission standards of this Subpart B must be determined as if the EGUs were a single EGU.
- d) Alternative Emission Standards for Multiple EGUs.
  - As an alternative to compliance with the emission standards of subsection

     (a) of this Section, the owner or operator of a source with multiple EGUs
     may comply with the emission standards of this Subpart B 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 the purposes of the alternative emission standard of subsection (d)(1) of this Section, 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 B, 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:

$$E_s \leq A_s$$

$$E_{s} = \sum_{i=1}^{n} E_{i}$$

$$A_{s} = \sum_{i=1}^{n} A_{i}$$

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 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 B for the entire last month of that period.

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

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 B, the owner or operator of an EGU may comply with the emission standards of this Subpart B by means of an Averaging Demonstration (Demonstration) that demonstrates 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 must be demonstrated using the equations in Section 225.230(a)(2), (a)(3), or (d)(2), as applicable, addressing all EGUs at the sources covered by the Demonstration, rather than by using only the 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; 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.
- B) 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 12month period.
- f) The owner or operator of EGUs using Demonstrations to show compliance with this Subpart B 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 B, the effect of a failure to demonstrate compliance will be that the compliance status of each source must be determined under Section 225.230 of this Subpart B 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 that 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 must be determined under Section 225.230 of this Subpart B as if the sources were not covered by a Demonstration.

# Section 225.233 Multi-Pollutant Standards (MPS)

- a) General.
  - 1) As an alternative to compliance with the emissions standards of Section 225.230(a), the owner of eligible EGUs may elect for those EGUs to demonstrate compliance pursuant to this Section, which establishes control requirements and standards for emissions of  $NO_x$  and  $SO_2$ , as well as for emissions of mercury.
  - 2) For the purpose of this Section, the following requirements apply:

- An eligible EGU is an EGU that is located in Illinois and which commenced commercial operation on or before December 31, 2004; and
- B) Ownership of an eligible EGU is determined based on direct ownership, by the holding of a majority interest in a company that owns the EGU or EGUs, or by the common ownership of the company that owns the EGU, whether through a parent-subsidiary relationship, as a sister corporation, or as an affiliated corporation with the same parent corporation, provided that the owner has the right or authority to submit a CAAPP application on behalf of the EGU.
- 3) The owner of one or more EGUs electing to demonstrate compliance with this Subpart B pursuant to this Section must submit an application for a CAAPP permit modification to the Agency, as provided in Section 225.220, that includes the information specified in subsection (b) of this Section and which clearly states the owner's election to demonstrate compliance pursuant to this Section 225.233.
  - A) If the owner of one or more EGUs elects to demonstrate compliance with this Subpart pursuant to this Section, then all EGUs it owns in Illinois as of July 1, 2006, as defined in subsection (a)(2)(B) of this Section, must be thereafter subject to the standards and control requirements of this Section, except as provided in subsection (a)(3)(B). Such EGUs must be referred to as a Multi-Pollutant Standard (MPS) Group.
  - B) Notwithstanding the foregoing, the owner may exclude from an MPS Group any EGU scheduled for permanent shutdown that the owner so designates in its CAAPP application required to be submitted pursuant to subsection (a)(3) of this Section, with compliance for such units to be achieved by means of Section 225.235.
- 4) When an EGU is subject to the requirements of this Section, the requirements apply to all owners or operators of the EGU, and to the designated representative for the EGU.
- b) Notice of Intent.

The owner of one or more EGUs that intends to comply with this Subpart B by means of this Section must notify the Agency of its intention by December 31, 2007. The following information must accompany the notification:

- 1) The identification of each EGU that will be complying with this Subpart B by means of the multi-pollutant standards contained in this Section, with evidence that the owner has identified all EGUs that it owned in Illinois as of July 1, 2006 and which commenced commercial operation on or before December 31, 2004;
- 2) If an EGU identified in subsection (b)(1) of this Section is also owned or operated by a person different than the owner submitting the notice of intent, a demonstration that the submitter has the right to commit the EGU or authorization from the responsible official for the EGU accepting the application;
- 3) The Base Emission Rates for the EGUs, with copies of supporting data and calculations;
- 4) A summary of the current control devices installed and operating on each EGU and identification of the additional control devices that will likely be needed for the each EGU to comply with emission control requirements of this Section, including identification of each EGU in the MPS group that will be addressed by subsection (c)(1)(B) of this Section, with information showing that the eligibility criteria for this subsection (b) are satisfied; and
- 5) Identification of each EGU that is scheduled for permanent shut down, as provided by Section 225.235, which will not be part of the MPS Group and which will not be demonstrating compliance with this Subpart B pursuant to this Section.
- c) Control Technology Requirements for Emissions of Mercury.
  - 1) Requirements for EGUs in an MPS Group.
    - A) For each EGU in an MPS Group other than an EGU that is addressed by subsection (c)(1)(B) of this Section for the period beginning July 1, 2009 (or December 31, 2009 for an EGU for which an SO<sub>2</sub> scrubber or fabric filter is being installed to be in operation by December 31, 2009), and ending on December 31, 2014 (or such earlier date that the EGU is subject to the mercury emission standard in subsection (d)(1) of this Section), the owner or operator of the EGU must install, to the extent not already installed, and properly operate and maintain one of the following emission control devices:
      - A Halogenated Activated Carbon Injection System, complying with the sorbent injection requirements of subsection (c)(2) of this Section, except as may be otherwise provided by subsection (c)(4) of this Section, and

followed by a Cold-Side Electrostatic Precipitator or Fabric Filter; or

ii) If the boiler fires bituminous coal, a Selective Catalytic Reduction (SCR) System and an SO<sub>2</sub> Scrubber.

B)

- An owner of an EGU in an MPS Group has two options under this subsection (c). For an MPS Group that contains EGUs smaller than 90 gross MW in capacity, the owner may designate any such EGUs to be not subject to subsection (c)(1)(A) of this Section. Or, for an MPS Group that contains EGUs with gross MW capacity of less than 115 MW, the owner may designate any such EGUs to be not subject to subsection (c)(1)(A) of this Section, provided that the aggregate gross MW capacity of the designated EGUs does not exceed 4% of the total gross MW capacity of the MPS Group. For any EGU subject to one of these two options, unless the EGU is subject to the emission standards in subsection (d)(2) of this Section, beginning on January 1, 2013, and continuing until such date that the owner or operator of the EGU commits to comply with the mercury emission standard in subsection (d)(2) of this Section, the owner or operator of the EGU must install and properly operate and maintain a Halogenated Activated Carbon Injection System that complies with the sorbent injection requirements of subsection (c)(2) of this Section, except as may be otherwise provided by subsection (c)(4) of this Section, and followed by either a Cold-Side Electrostatic Precipitator or Fabric Filter. The use of a properly installed, operated, and maintained Halogenated Activated Carbon Injection System that meets the sorbent injection requirements of subsection (c)(2) of this Section is defined as the "principal control technique."
- 2) For each EGU for which injection of halogenated activated carbon is required by subsection (c)(1) of this Section, the owner or operator of the EGU must inject halogenated activated carbon in an optimum manner, which, except as provided in subsection (c)(4) of this Section, is defined as all of the following:
  - A) The use of an injection system designed for effective absorption of mercury, considering the configuration of the EGU and its ductwork;
  - B) The injection of halogenated activated carbon manufactured by Alstom, Norit, or Sorbent Technologies, or Calgon Carbon's <u>FLUEPAC MC Plus</u>, or the injection of any other halogenated activated carbon or sorbent that the owner or operator of the EGU

has demonstrated to have similar or better effectiveness for control of mercury emissions; and

- C) The injection of sorbent at the following minimum rates, as applicable:
  - For an EGU firing subbituminous coal, 5.0 lbs per million actual cubic feet or, for any cyclone-fired EGU that will install a scrubber and baghouse by December 31, 2012, and which already meets an emission rate of 0.020 lb mercury/GWh gross electrical output or at least 75 percent reduction of input mercury, 2.5 lbs per million actual cubic feet;
  - ii) For an EGU firing bituminous coal, 10.0 lbs per million actual cubic feet or for any cyclone-fired EGU that will install a scrubber and baghouse by December 31, 2012, and which already meets an emission rate of 0.020 lb mercury/GWh gross electrical output or at least 75 percent reduction of input mercury, 5.0 lbs per million actual cubic feet;
  - iii) For an EGU firing a blend of subbituminous and bituminous coal, a rate that is the weighted average of the above rates, based on the blend of coal being fired; or
  - iv) A rate or rates set lower by the Agency, in writing, than the rate specified in any of subsections (c)(2)(C)(i), (c)(2)(C)(ii), or (c)(2)(C)(iii) of this Section on a unit-specific basis, provided that the owner or operator of the EGU has demonstrated that such rate or rates are needed so that carbon injection will not increase particulate matter emissions or opacity so as to threaten noncompliance with applicable requirements for particulate matter or opacity.
- D) For the purposes of subsection (c)(2)(C) of this Section, the flue gas flow rate must be determined for the point of sorbent injection; provided that this flow rate may be assumed to be identical to the stack flow rate if the gas temperatures at the point of injection and the stack are normally within  $100^{\circ}$  F, or the flue gas flow rate may otherwise be calculated from the stack flow rate, corrected for the difference in gas temperatures.
- 3) The owner or operator of an EGU that seeks to operate an EGU with an activated carbon injection rate or rates that are set on a unit-specific basis pursuant to subsection (c)(2)(C)(iv) of this Section must submit an

application to the Agency proposing such rate or rates, and must meet the requirements of subsections (c)(3)(A) and (c)(3)(B) of this Section, subject to the limitations of subsections (c)(3)(C) and (c)(3)(D) of this Section:

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- A) The application must be submitted as an application for a new or revised federally enforceable operating permit for the EGU, and it must include a summary of relevant mercury emission data for the EGU, the unit-specific injection rate or rates that are proposed, and detailed information to support the proposed injection rate or rates; and
- B) This application must be submitted no later than the date that activated carbon must first be injected. For example, the owner or operator of an EGU that must inject activated carbon pursuant to subsection (c)(1)(A) of this subsection must apply for unit-specific injection rate or rates by July 1, 2009. Thereafter, the owner or operator of the EGU may supplement its application; and
- C) Any decision of the Agency denying a permit or granting a permit with conditions that set a lower injection rate or rates may be appealed to the Board pursuant to Section 39 of the Act; and
- D) The owner or operator of an EGU may operate at the injection rate or rates proposed in its application until a final decision is made on the application, including a final decision on any appeal to the Board.
- 4) During any evaluation of the effectiveness of a listed sorbent, an alternative sorbent, or other technique to control mercury emissions, the owner or operator of an EGU need not comply with the requirements of subsection (c)(2) of this Section for any system needed to carry out the evaluation, as further provided as follows:
  - A) The owner or operator of the EGU must conduct the evaluation in accordance with a formal evaluation program submitted to the Agency at least 30 days prior to commencement of the evaluation;
  - B) The duration and scope of the evaluation may not exceed the duration and scope reasonably needed to complete the desired evaluation of the alternative control technique, as initially addressed by the owner or operator in a support document submitted with the evaluation program;
  - C) The owner or operator of the EGU must submit a report to the Agency no later than 30 days after the conclusion of the evaluation that describes the evaluation conducted and which provides the results of the evaluation; and

D) If the evaluation of the alternative control technique shows less effective control of mercury emissions from the EGU than was achieved with the principal control technique, the owner or operator of the EGU must resume use of the principal control technique. If the evaluation of the alternative control technique shows comparable effectiveness to the principal control technique, the owner or operator of the EGU may either continue to use the alternative control technique in a manner that is at least as effective as the principal control technique, or it may resume use of the principal control technique. If the evaluation of the alternative control technique shows more effective control of mercury emissions than the control technique, the owner or operator of the EGU must continue to use the alternative control technique in a manner that is more effective than the principal control technique, so long as it continues to be subject to this subsection (c).

In addition to complying with the applicable recordkeeping and monitoring requirements in Sections 225.240 through 225.290, the owner or operator of an EGU that elects to comply with this Subpart B by means of this Section must also comply with the following additional requirements:

5)

- A) For the first 36 months that injection of sorbent is required, it must maintain records of the usage of sorbent, the exhaust gas flow rate from the EGU, and the sorbent feed rate, in pounds per million actual cubic feet of exhaust gas at the injection point, on a weekly average;
- B) After the first 36 months that injection of sorbent is required, it must monitor activated sorbent feed rate to the EGU, flue gas temperature at the point of sorbent injection, and exhaust gas flow rate from the EGU, automatically recording this data and the sorbent carbon feed rate, in pounds per million actual cubic feet of exhaust gas at the injection point, on an hourly average; and
- C) If a blend of bituminous and subbituminous coal is fired in the EGU, it must keep records of the amount of each type of coal burned and the required injection rate for injection of activated carbon, on a weekly basis.
- <u>As an alternative to the CEMS monitoring, recordkeeping, and reporting</u> requirements in Sections 225.240 through 225.290, the owner or operator of an EGU may elect to comply with the emissions testing, monitoring, recordkeeping, and reporting requirements in Section 225.239(c), (d), (e), (f)(1) and (2), (h)(2), (i)(3) and (4), and (j)(1).

- <u>76</u>) In addition to complying with the applicable reporting requirements in Sections 225.240 through 225.290, the owner or operator of an EGU that elects to comply with this Subpart B by means of this Section must also submit quarterly reports for the recordkeeping and monitoring conducted pursuant to subsection (c)(5) of this Section.
- d) Emission Standards for Mercury.
  - For each EGU in an MPS Group that is not addressed by subsection (c)(1)(B) of this Section, beginning January 1, 2015 (or such earlier date when the owner or operator of the EGU notifies the Agency that it will comply with these standards) and continuing thereafter, the owner or operator of the EGU must comply with one of the following standards 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 each EGU in an MPS Group that has been addressed under subsection (c)(1)(B) of this Section, beginning on the date when the owner or operator of the EGU notifies the Agency that it will comply with these standards and continuing thereafter, the owner or operator of the EGU must comply with one of the following standards 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.
  - Compliance with the mercury emission standard or reduction requirement of this subsection (d) must be calculated in accordance with Section 225.230(a) or (d).
  - <u>Until June 30, 2012, as an alternative to demonstrating compliance with</u> the emissions standards in this subsection (d), the owner or operator of an <u>EGU may elect to comply with the emissions testing requirements in</u> <u>Section 225.239(c), (d), (e), (f)(1) and (2), (h)(2), (i)(3) and (4), and (j)(1)</u> of this Subpart.
- e) Emission Standards for  $NO_x$  and  $SO_2$ .
  - 1) NO<sub>x</sub> Emission Standards.

- A) Beginning in calendar year 2012 and continuing in each calendar thereafter, for the EGUs in each MPS Group, the owner and operator of the EGUs must comply with an overall NOx annual emission rate of no more than 0.11 lb/million Btu or an emission rate equivalent to 52 percent of the Base Annual Rate of NO<sub>x</sub> emissions, whichever is more stringent.
- B) Beginning in the 2012 ozone season and continuing in each ozone season thereafter, for the EGUs in each MPS Group, the owner and operator of the EGUs must comply with an overall NO<sub>x</sub> seasonal emission rate of no more than 0.11 lb/million Btu or an emission rate equivalent to 80 percent of the Base Seasonal Rate of NO<sub>x</sub> emissions, whichever is more stringent.
- 2)  $SO_2$  Emission Standards.
  - A) Beginning in calendar year 2013 and continuing in calendar year 2014, for the EGUs in each MPS Group, the owner and operator of the EGUs must comply with an overall SO<sub>2</sub> annual emission rate of 0.33 lbs/million Btu or a rate equivalent to 44 percent of the Base Rate of SO<sub>2</sub> emissions, whichever is more stringent.
  - B) Beginning in calendar year 2015 and continuing in each calendar year thereafter, for the EGUs in each MPS Grouping, the owner and operator of the EGUs must comply with an overall annual emission rate for SO<sub>2</sub> of 0.25 lbs/million Btu or a rate equivalent to 35 percent of the Base Rate of SO<sub>2</sub> emissions, whichever is more stringent.
- 3) Compliance with the NO<sub>x</sub> and SO<sub>2</sub> emission standards must be demonstrated in accordance with Sections 225.310, 225.410, and 225.510. The owner or operator of EGUs must complete the demonstration of compliance before March 1 of the following year for annual standards and before November 1 for seasonal standards, by which date a compliance report must be submitted to the Agency.

Requirements for  $NO_x$  and  $SO_2$  Allowances.

f)

 The owner or operator of EGUs in an MPS Group must not sell or trade to any person or otherwise exchange with or give to any person NO<sub>x</sub> allowances allocated to the EGUs in the MPS Group for vintage years 2012 and beyond that would otherwise be available for sale, trade, or exchange as a result of actions taken to comply with the standards in subsection (e) of this Section. Such allowances that are not retired for compliance must be surrendered to the Agency on an annual basis,

beginning in calendar year 2013. This provision does not apply to the use, sale, exchange, gift, or trade of allowances among the EGUs in an MPS Group.

- 2) The owners or operators of EGUs in an MPS Group must not sell or trade to any person or otherwise exchange with or give to any person SO<sub>2</sub> allowances allocated to the EGUs in the MPS Group for vintage years 2013 and beyond that would otherwise be available for sale or trade as a result of actions taken to comply with the standards in subsection (e) of this Section. Such allowances that are not retired for compliance, or otherwise surrendered pursuant to a consent decree to which the State of Illinois is a party, must be surrendered to the Agency on an annual basis, beginning in calendar year 2014. This provision does not apply to the use, sale, exchange, gift, or trade of allowances among the EGUs in an MPS Group.
- 3) The provisions of this subsection (f) do not restrict or inhibit the sale or trading of allowances that become available from one or more EGUs in a MPS Group as a result of holding allowances that represent over-compliance with the NO<sub>x</sub> or SO<sub>2</sub> standard in subsection (e) of this Section, once such a standard becomes effective, whether such over-compliance results from control equipment, fuel changes, changes in the method of operation, unit shut downs, or other reasons.
- 4) For purposes of this subsection (f), NO<sub>x</sub> and SO<sub>2</sub> allowances mean allowances necessary for compliance with <u>Subpart W of Section 217 (NO<sub>x</sub></u> <u>Trading Program for Electrical Generating Units</u>)Sections 225.310, 225.410, or 225.510, 40 CFR 72, or subparts <u>Subparts A through IA and</u> <u>AAAA of 40 CFR 96, or any future federal NO<sub>x</sub> or SO<sub>2</sub> emissions trading</u> <u>programs that include Illinois sources</u>. This Section does not prohibit the owner or operator of EGUs in an MPS Group from purchasing or otherwise obtaining allowances from other sources as allowed by law for purposes of complying with federal or state requirements, except as specifically set forth in this Section.
- 5) Before March 1, 2010, and continuing each year thereafter, the owner or operator of EGUs in an MPS Group must submit a report to the Agency that demonstrates compliance with the requirements of this subsection (f) for the previous calendar year, and which includes identification of any allowances that have been surrendered to the USEPA or to the Agency and any allowances that were sold, gifted, used, exchanged, or traded because they became available due to over-compliance. All allowances that are required to be surrendered must be surrendered by August 31, unless USEPA has not yet deducted the allowances from the previous year. A final report must be submitted to the Agency by August 31 of each year, verifying that the actions described in the initial report have taken place

or, if such actions have not taken place, an explanation of all changes that have occurred and the reasons for such changes. If USEPA has not deducted the allowances from the previous year by August 31, the final report must be due, and all allowances required to be surrendered must be surrendered, within 30 days after such deduction occurs.

g) Notwithstanding 35 Ill. Adm. Code 201.146(hhh), until an EGU has complied with the applicable emission standards of subsections (d) and (e) of this Section for 12 months, the owner or operator of the EGU must obtain a construction permit for any new or modified air pollution control equipment that it proposes to construct for control of emissions of mercury, NO<sub>x</sub>, or SO<sub>2</sub>.

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.234 Temporary Technology-Based Standard for EGUs at Existing Sources

- a) General.
  - At a source with EGUs that commenced commercial operation on or before December 31, 2008, for an EGU that meets the eligibility criteria in subsection (b) of this Section, the owner or operator of the EGU may temporarily comply with the requirements of this Section through June 30, 2015, as an alternative to compliance with the mercury emission standards in Section 225.230, as provided in subsections (c), (d), and (e) of this Section.
  - 2) An EGU that is complying with the emission control requirements of this Subpart B by operating pursuant to this Section may not be included in a compliance demonstration involving other EGUs during the period that is operating pursuant to this Section.
  - 3) The owner or operator of an EGU that is complying with this Subpart B by means of the temporary alternative emission standards of this Section is not excused from any of the applicable monitoring, recordkeeping, and reporting requirements set forth in Sections 225.240 through 225.290.
  - <u>Until June 30, 2012, as an alternative to the CEMS monitoring,</u> recordkeeping, and reporting requirements in Sections 225.240 through 225.290, the owner or operator of an EGU may elect to comply with the emissions testing, monitoring, recordkeeping, and reporting requirements in Section 225.239(c), (d), (e), (f)(1) and (2), (h)(2), (i)(3) and (4), and (j)(1).
- b) Eligibility.

To be eligible to operate an EGU pursuant to this Section, the following criteria must be met for the EGU:

1) The EGU is equipped and operated with the air pollution control equipment or systems that include injection of halogenated activated carbon and either a cold-side electrostatic precipitator or a fabric filter.

2)

- The owner or operator of the EGU is injecting halogenated activated carbon in an optimum manner for control of mercury emissions, which must include injection of Alstrom, Norit, Sorbent Technologies, Calgon Carbon's FLUEPAC MC Plus, or other halogenated activated carbon that the owner or operator of the EGU has demonstrated to have similar or better effectiveness for control of mercury emissions, at least at the following rates set forth in subsections (b)(2)(A) through (b)(2)(D) of this Section, unless other provisions for injection of halogenated activated carbon are established in a federally enforceable operating permit issued for the EGU, using an injection system designed for effective absorption of mercury, considering the configuration of the EGU and its ductwork. For the purposes of this subsection (b)(2), the flue gas flow rate must be determined for the point of sorbent injection (provided, however, that this flow rate may be assumed to be identical to the stack flow rate if the gas temperatures at the point of injection and the stack are normally within 100° F) or may otherwise be calculated from the stack flow rate, corrected for the difference in gas temperatures.
  - A) For an EGU firing subbituminous coal, 5.0 lbs per million actual cubic feet.
  - B) For an EGU firing bituminous coal, 10.0 lbs per million actual cubic feet.
  - C) For an EGU firing a blend of subbituminous and bituminous coal, a rate that is the weighted average of the above rates, based on the blend of coal being fired.
  - D) A rate or rates set on a unit-specific basis that are lower than the rate specified above to the extent that the owner or operator of the EGU demonstrates that such rate or rates are needed so that carbon injection would not increase particulate matter emissions or opacity so as to threaten compliance with applicable regulatory requirements for particulate matter or opacity.
- 3) The total capacity of the EGUs that operate pursuant to this Section does not exceed the applicable of the following values:
- A) For the owner or operator of more than one existing source with EGUs, 25 percent of the total rated capacity, in MW, of all the EGUs at the existing sources that it owns or operates, other than any EGUs operating pursuant to Section 225.235 of this Subpart B.
- B) For the owner or operator of only a single existing source with EGUs (i.e., City, Water, Light & Power, City of Springfield, ID 167120AAO; Kincaid Generating Station, ID 021814AAB; and Southern Illinois Power Cooperative/Marion Generating Station, ID 199856AAC), 25 percent of the total rated capacity, in MW, of the all the EGUs at the existing sources, other than any EGUs operating pursuant to Section 225.235.
- c) Compliance Requirements.
  - 1) Emission Control Requirements.

The owner or operator of an EGU that is operating pursuant to this Section must continue to maintain and operate the EGU to comply with the criteria for eligibility for operation pursuant to this Section, except during an evaluation of the current sorbent, alternative sorbents or other techniques to control mercury emissions, as provided by subsection (e) of this Section.

2) Monitoring and Recordkeeping Requirements.

In addition to complying with all applicable <u>reporting monitoring and</u> <u>recordkeeping</u> requirements in Sections 225.240 through 225.290 or <u>Section 225.239(c), (d), (e), (f)(1) and (2), (h)(2), and i(3) and (4)</u>, the owner or operator of an EGU operating pursuant to this Section must also:

- A) Through December 31, 2012, it must maintain records of the usage of activated carbon, the exhaust gas flow rate from the EGU, and the activated carbon feed rate, in pounds per million actual cubic feet of exhaust gas at the injection point, on a weekly average.
- B) Beginning January 1, 2013, it must monitor activated carbon feed rate to the EGU, flue gas temperature at the point of sorbent injection, and exhaust gas flow rate from the EGU, automatically recording this data and the activated carbon feed rate, in pounds per million actual cubic feet of exhaust gas at the injection point, on an hourly average.
- C) If a blend of bituminous and subbituminous coal is fired in the EGU, it must maintain records of the amount of each type of coal

burned and the required injection rate for injection of halogenated activated carbon, on a weekly basis.

3) Notification and Reporting Requirements.

In addition to complying with all applicable reporting requirements in Sections 225.240 through 225.290 or Section 225.239(f)(1), (f)(2), and (j)(1), the owner or operator of an EGU operating pursuant to this Section must also submit the following notifications and reports to the Agency:

- A) Written notification prior to the month in which any of the following events will occur:
  - i) The EGU will no longer be eligible to operate under this Section due to a change in operation;
  - ii) The type of coal fired in the EGU will change; the mercury emission standard with which the owner or operator is attempting to comply for the EGU will change; or
  - iii) Operation under this Section will be terminated.
- B) Quarterly reports for the recordkeeping and monitoring or emissions testing conducted pursuant to subsection (c)(2) of this Section.
- C) Annual reports detailing activities conducted for the EGU to further improve control of mercury emissions, including the measures taken during the past year and activities planned for the current year.
- d) Applications to Operate under the Technology-Based Standard
  - 1) Application Deadlines.
    - A) The owner or operator of an EGU that is seeking to operate the EGU pursuant to this Section must submit an application to the Agency no later than three months prior to the date on which compliance with Section 225.230 of this Subpart B would otherwise have to be demonstrated. For example, the owner or operator of an EGU that is applying to operate the EGU pursuant to this Section on June 30, 2010, when compliance with applicable mercury emission standards must be first demonstrated, must apply by March 31, 2010 to operate under this Section.

- B) Unless the Agency finds that the EGU is not eligible to operate pursuant to this Section or that the application for operation pursuant to this Section does not meet the requirements of subsection (d)(2) of this Section, the owner or operator of the EGU is authorized to operate the EGU pursuant to this Section beginning 60 days after receipt of the application by the Agency.
- C) The owner or operator of an EGU operating pursuant to this Section must reapply to operate pursuant to this Section:
  - i) If it operated the EGU pursuant to this Section 225.234 during the period of June 2010 through December 2012 and it seeks to operate the EGU pursuant to this Section 225.234 during the period from January 2013 through June 2015.
  - ii) If it is planning a physical change to or a change in the method of operation of the EGU, control equipment or practices for injection of activated carbon that is expected to reduce the level of control of mercury emissions.
- 2) Contents of Application. An application to operate an EGU pursuant to this Section 225.234 must be submitted as an application for a new or revised federally enforceable operating permit for the EGU, and it must include the following documents and information:
  - A) A formal request to operate pursuant to this Section showing that the EGU is eligible to operate pursuant to this Section and describing the reason for the request, the measures that have been taken for control of mercury emissions, and factors preventing more effective control of mercury emissions from the EGU.
  - B) The applicable mercury emission standard in Section 225.230(a) with which the owner or operator of the EGU is attempting to comply and a summary of relevant mercury emission data for the EGU.
  - C) If a unit-specific rate or rates for carbon injection are proposed pursuant to subsection (b)(2) of this Section, detailed information to support the proposed injection rates.
  - D) An action plan describing the measures that will be taken while operating under this Section to improve control of mercury emissions. This plan must address measures such as evaluation of alternative forms or sources of activated carbon, changes to the injection system, changes to operation of the unit that affect the

effectiveness of mercury absorption and collection, changes to the particulate matter control device to improve performance, and changes to other emission control devices. For each measure contained in the plan, the plan must provide a detailed description of the specific actions that are planned, the reason that the measure is being pursued and the range of improvement in control of mercury that is expected, and the factors that affect the timing for carrying out the measure, together with the current schedule for the measure.

- e) Evaluation of Alternative Control Techniques for Mercury Emissions.
  - During an evaluation of the effectiveness of the current sorbent, alternative sorbent, or other technique to control mercury emissions, the owner or operator of an EGU operating pursuant to this Section need not comply with the eligibility criteria for operation pursuant to this Section as needed to carry out an evaluation of the practicality and effectiveness of such technique, subject to the following limitations:
    - A) The owner or operator of the EGU must conduct the evaluation in accordance with a formal evaluation program that it has submitted to the Agency at least 30 days prior to beginning the evaluation.
    - B) The duration and scope of the formal evaluation program must not exceed the duration and scope reasonably needed to complete the desired evaluation of the alternative control technique, as initially addressed by the owner or owner in a support document that it has submitted with the formal evaluation program pursuant to subsection (e)(1)(A) of this Section.
    - C) Notwithstanding 35 Ill. Adm. Code 201.146(hhh), the owner or operator of the EGU must obtain a construction permit for any new or modified air pollution control equipment to be constructed as part of the evaluation of the alternative control technique.
    - D) The owner or operator of the EGU must submit a report to the Agency, no later than 90 days after the conclusion of the formal evaluation program describing the evaluation that was conducted, and providing the results of the formal evaluation program.
  - 2) If the evaluation of the alternative control technique shows less effective control of mercury emissions from the EGU than achieved with the prior control technique, the owner or operator of the EGU must resume use of the prior control technique. If the evaluation of the alternative control technique shows comparable control effectiveness, the owner or operator of the EGU may either continue to use the alternative control technique in

an optimum manner or resume use of the prior control technique. If the evaluation of the alternative control technique shows more effective control of mercury emissions, the owner or operator of the EGU must continue to use the alternative control technique in an optimum manner, if it continues to operate pursuant to this Section.

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

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- Section 225.235 Units Scheduled for Permanent Shut Down
  - a) The emission standards of Section 225.230(a) are not applicable to an EGU that will be permanently shut down as described in this Section-:
    - 1) The owner or operator of an EGU that relies on this Section must complete the following actions before June 30, 2009:
      - A) Have notified the Agency 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 must include 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 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 permits 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 that relies on this Section must, before June 30, 2010, complete the following actions:
      - A) Have obtained a construction permit or entered into a federally enforceable agreement as described in subsection (a)(1)(B) of this Section; or
      - B) Have obtained revised operating permits 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 unit 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 unit 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 Agency before the specified 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 Agency may accept the demonstration as substantiated and extend the date for shut down of the EGU as follows:
  - A) If the owner or operator of the EGU is not constructing a new EGU or other generating unit 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; or
  - B) If the owner or operator of the EGU is constructing a new EGU or other generating unit 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; provided, however, that after December 31, 2012, the existing EGU must only operate as a backup unit to address periods when the new generating units are not in service.
- b) Notwithstanding Sections 225.230 and 225.232, any EGU that is not required to comply with Section 225.230 pursuant to this Section must not be included when determining whether any other EGUs at the source or other sources are in compliance with Section 225.230.
- 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) is not permanently shut down as required by this Section, the EGU must be considered to be a new EGU subject to the emission standards in Section 225.237(a) 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.

- d) An EGU that has completed the requirements of subsection (a) of this Section is exempt from the monitoring and testing requirements in Sections 225.239 and 225.240.
- e) An EGU that is scheduled for permanent shut down pursuant to Section 225.294(b) is exempt from the monitoring and testing requirements in Sections 225.239 and 225.240.

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.237 Emission Standards for New Sources with EGUs

a) Standards.

- Except as provided in Sections 225.238 and 225.239, the 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, must 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).
- 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 will commence on the date that the initial performance testing commences under 40 CFR 60.8. for the mercury emission standard under 40 CFR 60.45a also commences. The CEMS required by this Subpart B for mercury emissions from the EGU must be certified prior to this date. Thereafter, compliance must be demonstrated on a rolling 12-month basis based on calendar months.

(Source: Amended at , effective \_\_\_\_)

Section 225.238 Temporary Technology-Based Standard for New Sources with EGUs

- a) General.
  - At a source with EGUs that previously had not had any EGUs that commenced commercial operation before January 1, 2009, for an EGU that meets the eligibility criteria in subsection (b) of this Section, as an alternative to compliance with the mercury emission standards in Section

225.237, the owner or operator of the EGU may temporarily comply with the requirements of this Section, through December 31, 2018, as further provided in subsections (c), (d), and (e) of this Section.

- 2) An EGU that is complying with the emission control requirements of this Subpart B by operating pursuant to this Section may not be included in a compliance demonstration involving other EGUs at the source during the period that the temporary technology-based standard is in effect.
- 3) The owner or operator of an EGU that is complying with this Subpart B pursuant to this Section is not excused from applicable monitoring, recordkeeping, and reporting requirements of Sections 225.240 through 225.290.
- <u>4)</u> Until June 30, 2012, as an alternative to the CEMS monitoring, recordkeeping, and reporting requirements in Sections 225.240 through 225.290, the owner or operator of an EGU may elect to comply with the emissions testing, monitoring, recordkeeping, and reporting requirements in Section 225.239(c), (d), (e), (f)(1) and (2), (h)(2), (i)(3) and (4), and (j)(1).
- b) Eligibility. To be eligible to operate an EGU pursuant to this Section, the following criteria must be met for the EGU:
  - The EGU is subject to Best Available Control Technology (BACT) for emissions of sulfur dioxide, nitrogen oxides, and particulate matter, and the EGU is equipped and operated with the air pollution control equipment or systems specified below, as applicable to the category of EGU:
    - A) For coal-fired boilers, injection of sorbent or other mercury control technique (e.g., reagent) approved by the Agency.
    - B) For an EGU firing fuel gas produced by coal gasification, processing of the raw fuel gas prior to combustion for removal of mercury with a system using a sorbent or other mercury control technique approved by the Agency.
  - 2) For an EGU for which injection of a sorbent or other mercury control technique is required pursuant to subsection (b)(1) of this Section, the owner or operator of the EGU is injecting sorbent or other mercury control technique in an optimum manner for control of mercury emissions, which must include injection of Alstrom, Norit, Sorbent Technologies, <u>Calgon Carbon's FLUEPAC MC Plus</u>, or other sorbent or other mercury control technique that the owner or operator of the EGU demonstrates to have similar or better effectiveness for control of mercury emissions, at least at the rate set forth in the appropriate of subsections (b)(2)(A) through

(b)(2)(C) of this Section, unless other provisions for injection of sorbent or other mercury control technique are established in a federally enforceable operating permit issued for the EGU, with an injection system designed for effective absorption of mercury. For the purposes of this subsection (b)(2), the flue gas flow rate must be determined for the point of sorbent injection or other mercury control technique (provided, however, that this flow rate may be assumed to be identical to the stack flow rate if the gas temperatures at the point of injection and the stack are normally within  $100^{\circ}$  F), or the flow rate may otherwise be calculated from the stack flow rate, corrected for the difference in gas temperatures.

- A) For an EGU firing subbituminous coal, 5.0 pounds per million actual cubic feet.
- B) For an EGU firing bituminous coal, 10.0 pounds per million actual cubic feet.
- C) For an EGU firing a blend of subbituminous and bituminous coal, a rate that is the weighted average of the above rates, based on the blend of coal being fired.
- D) A rate or rates set on a unit-specific basis that are lower than the rate specified in subsections (b)(2)(A), (B), and (C) of this Section, to the extent that the owner or operator of the EGU demonstrates that such rate or rates are needed so that sorbent injection or other mercury control technique would not increase particulate matter emissions or opacity so as to threaten compliance with applicable regulatory requirements for particulate matter or opacity or cause a safety issue.
- c) Compliance Requirements-.
  - 1) Emission Control Requirements. The owner or operator of an EGU that is operating pursuant to this Section must continue to maintain and operate the EGU to comply with the criteria for eligibility for operation under this Section, except during an evaluation of the current sorbent, alternative sorbents, or other techniques to control mercury emissions, as provided by subsection (e) of this Section.
  - 2) Monitoring and Recordkeeping Requirements. In addition to complying with all applicable reporting monitoring and recordkeeping requirements in Sections 225.240 through 225.290 or Section 225.239(c), (d), (e), (f)(1) and (2), (h)(2), and i(3) and (4), the owner or operator of a new EGU operating pursuant to this Section must also:

- A) Monitor sorbent feed rate to the EGU, flue gas temperature at the point of sorbent injection or other mercury control technique, and exhaust gas flow rate from the EGU, automatically recording this data and the sorbent feed rate, in pounds per million actual cubic feet of exhaust gas at the injection point, on an hourly average.
- B) If a blend of bituminous and subbituminous coal is fired in the EGU, maintain records of the amount of each type of coal burned and the required injection rate for injection of sorbent, on a weekly basis.
- C) If a mercury control technique other than sorbent injection is approved by the Agency, monitor appropriate parameter for that control technique as specified by the Agency.
- 3) Notification and Reporting Requirements. In addition to complying with all applicable reporting requirements of Sections 225.240 through 225.290 or Section 225.239(f)(1) and (2) and (j)(1), the owner or operator of an EGU operating pursuant to this Section must also submit the following notifications and reports to the Agency:
  - A) Written notification prior to the month in which any of the following events will occur: the EGU will no longer be eligible to operate under this Section due to a change in operation; the type of coal fired in the EGU will change; the mercury emission standard with which the owner or operator is attempting to comply for the EGU will change; or operation under this Section will be terminated.
  - B) Quarterly reports for the recordkeeping and monitoring or emissions testing conducted pursuant to subsection (c)(2) of this Section.
  - C) Annual reports detailing activities conducted for the EGU to further improve control of mercury emissions, including the measures taken during the past year and activities planned for the current year.
- d) Applications to Operate under the Technology-Based Standard.
  - 1) Application Deadlines.
    - A) The owner or operator of an EGU that is seeking to operate the EGU pursuant to- this Section must submit an application to the Agency no later than three months prior to the date that

compliance with Section 225.237 would otherwise have to be demonstrated.

- B) Unless the Agency finds that the EGU is not eligible to operate pursuant to this Section or that the application for operation under this Section does not meet the requirements of subsection (d)(2) of this Section, the owner or operator of the EGU is authorized to operate the EGU pursuant to this Section beginning 60 days after receipt of the application by the Agency.
- C) The owner or operator of an EGU operating pursuant to this Section must reapply to operate pursuant to this Section if it is planning a physical change to or a change in the method of operation of the EGU, control equipment, or practices for injection of sorbent or other mercury control technique that is expected to reduce the level of control of mercury emissions.
- 2) Contents of Application. An application to operate pursuant to this Section must be submitted as an application for a new or revised federally enforceable operating permit for the new EGU, and it must include the following information:
  - A) A formal request to operate pursuant to this Section showing that the EGU is eligible to operate pursuant to this Section and describing the reason for the request, the measures that have been taken for control of mercury emissions, and factors preventing more effective control of mercury emissions from the EGU.
  - B) The applicable mercury emission standard in Section 225.237 with which the owner or operator of the EGU is attempting to comply and a summary of relevant mercury emission data for the EGU.
  - C) If a unit-specific rate or rates for sorbent or other mercury control technique injection are proposed pursuant to subsection (b)(2) of this Section, detailed information to support the proposed injection rates.
  - D) An action plan describing the measures that will be taken while operating pursuant to this Section to improve control of mercury emissions. This plan must address measures such as evaluation of alternative forms or sources of sorbent or other mercury control technique, changes to the injection system, changes to operation of the unit that affect the effectiveness of mercury absorption and collection, and changes to other emission control devices. For each measure contained in the plan, the plan must provide a detailed description of the specific actions that are planned, the

reason that the measure is being pursued and the range of improvement in control of mercury that is expected, and the factors that affect the timing for carrying out the measure, with the current schedule for the measure.

- e) Evaluation of Alternative Control Techniques for Mercury Emissions.
  - During an evaluation of the effectiveness of the current sorbent, alternative sorbent, or other technique to control mercury emissions, the owner or operator of an EGU operating pursuant to this Section does not need to comply with the eligibility criteria for operation pursuant to this Section as needed to carry out an evaluation of the practicality and effectiveness of such technique, further subject to the following limitations:
    - A) The owner or operator of the EGU must conduct the evaluation in accordance with a formal evaluation program that it has submitted to the Agency at least 30 days prior to beginning the evaluation.
    - B) The duration and scope of the formal evaluation program must not exceed the duration and scope reasonably needed to complete the desired evaluation of the alternative control technique, as initially addressed by the owner or operator in a support document that it has submitted with the formal evaluation program pursuant to subsection (e)(1)(A) of this Section.
    - C) Notwithstanding 35 Ill. Adm. Code 201.146(hhh), the owner or operator of the EGU must obtain a construction permit for any new or modified air pollution control equipment to be constructed as part of the evaluation of the alternative control technique.
    - D) The owner or operator of the EGU must submit a report to the Agency no later than 90 days after the conclusion of the formal evaluation program describing the evaluation that was conducted and providing the results of the formal evaluation program.
  - 2) If the evaluation of the alternative control technique shows less effective control of mercury emissions from the EGU than was achieved with the prior control technique, the owner or operator of the EGU must resume use of the prior control technique. If the evaluation of the alternative control technique shows comparable effectiveness, the owner or operator of the EGU may either continue to use the alternative control technique in an optimum manner or resume use of the prior control technique. If the evaluation of the alternative control technique shows more effective control of mercury emissions, the owner or operator of the EGU must

continue to use the alternative control technique in an optimum manner, if it continues to operate pursuant to this Section.

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.239 Periodic Emissions Testing Alternative Requirements

a) General.

- As an alternative to demonstrating compliance with the emissions standards of Sections 225.230(a) or 225.237(a), the owner or operator of an EGU may elect to demonstrate compliance pursuant to the emission standards in subsection (b) of this Section and the use of quarterly emissions testing as an alternative to the use of CEMS;
- 2) The owner or operator of an EGU that elects to demonstrate compliance pursuant to this Section must comply with the testing, recordkeeping, and reporting requirements of this Section in addition to other applicable recordkeeping and reporting requirements in this Subpart;
- 3) The alternative method of compliance provided under this subsection may only be used until June 30, 2012, after which a CEMS certified in accordance with Section 225.250 of this Subpart B must be used.
- 4) If an owner or operator of an EGU demonstrating compliance pursuant to Section 225.230 or 225.237 discontinues use of CEMS before collecting a full 12 months of CEMS data and elects to demonstrate compliance pursuant to this Section, the data collected prior to that point must be averaged to determine compliance for such period. In such case, for purposes of calculating an emission standard or mercury control efficiency using the equations in Section 225.230(a) or (b), the "12" in the equations will be replaced by a variable equal to the number of full and partial months for which the owner or operator collected CEMS data.

b) Emission Limits.

- Existing Units: Beginning July 1, 2009, the owner or operator of a source with one or more EGUs subject to this Subpart B that commenced commercial operation on or before June 30, 2009, must comply with one of the following standards for each EGU, as determined through quarterly emissions testing according to subsections (c), (d), (e), and (f) of this Section:
  - <u>A)</u> An emission standard of 0.0080 lb mercury/GWh gross electrical output; or

- B) A minimum 90-percent reduction of input mercury.
- 2) New Units: Beginning within the first 2,160 hours after the commencement of commercial operations, the owner or operator of a source with one or more EGUs subject to this Subpart B that commenced commercial operation after June 30, 2009, must comply with one of the following standards for each EGU, as determined through quarterly emissions testing in accordance with subsections (c), (d), (e), and (f) of this Section:
  - A) An emission standard of 0.0080 lb mercury/GWh gross electrical output; or
  - B) A minimum 90-percent reduction of input mercury.
- c) Initial Emissions Testing Requirements for New Units. The owner or operator of an EGU that commenced commercial operation after June 30, 2009, and that is complying by means of this Section must conduct an initial performance test in accordance with the requirements of subsections (d) and (e) of this Section within the first 2,160 hours after the commencement of commercial operations.
- d) Emissions Testing Requirements
  - 1) Subsequent to the initial performance test, emissions tests must be performed on a quarterly calendar basis in accordance with the requirements of subsections (d), (e), and (f) of this Section;
  - Notwithstanding the provisions in subparagraph (1) of this subsection, owners or operators of EGUs demonstrating compliance under Section 225.233 or Sections 225.291 through 225.299 must perform emissions testing on a semi-annual calendar basis, where the periods consist of the months of January through June and July through December, in accordance with the requirements of subsections (d), (e), and (f)(1) and (2) of this Section;
  - 3) Emissions tests which demonstrate compliance with this Subpart must be performed at least 45 days apart. However, if an emissions test fails to demonstrate compliance with this Subpart or the emissions test is being performed subsequent to a significant change in the operations of an EGU under subsection (h)(2) of this Section, the owner or operator of an EGU may perform additional emissions test(s) using the same test protocol previously submitted in the same period, with less than 45 days in between emissions tests;

- 4) A minimum of three and a maximum of nine emissions test runs, lasting at least one hour each, shall be conducted and averaged to determine compliance. All test runs performed will be reported.
- 5) If the EGU shares a common stack with one or more other EGUs, the owner or operator of the EGU will conduct emissions testing in the duct to the common stack from each unit, unless the owner or operator of the EGU considers the combined emissions measured at the common stack as the mass emissions of mercury for the EGUs for recordkeeping and compliance purposes.
- 6) If an owner or operator of an EGU demonstrating compliance pursuant to this Section later elects to demonstrate compliance pursuant to the CEMS monitoring provisions in Section 225.240 of this Subpart, the owner or operator must comply with the emissions monitoring deadlines in Section 225.240(b)(4) of this Subpart.
- e) Emissions Testing Procedures
  - The owner or operator must conduct a compliance test in accordance with Method 29, 30A, or 30B of 40 CFR 60, Appendix A, as incorporated by reference in Section 225.140;
  - 2) Mercury emissions or control efficiency must be measured while the affected unit is operating at or above 90% of peak load;
  - For units complying with the control efficiency standard of subsection
    (b)(1)(B) or (b)(2)(B) of this Section, the owner or operator must perform
    coal sampling as follows:
    - A) in accordance with Section 225.265 of this Subpart at least once during each day of testing; and
    - B) in accordance with Section 225.265 of this Subpart, once each month in those months when emissions testing is not performed;
  - For units complying with the output-based emission standard of subsection (b)(1)(A) or (b)(2)(A) of this Section, the owner or operator must monitor gross electrical output for the duration of the testing.
  - 5) The owner or operator of an EGU may use an alternative emissions testing method if such alternative is submitted to the Agency in writing and approved in writing by the Manager of the Bureau of Air's Compliance Section.
- f) Notification Requirements

- The owner or operator of an EGU must submit a testing protocol as described in USEPA's Emission Measurement Center's Guideline Document #42 to the Agency at least 45 days prior to a scheduled emissions test, except as provided in Section 225.239(h)(2) and (h)(3). Upon written request directed to the Manager of the Bureau of Air's Compliance Section, the Agency may, in its sole discretion, waive the 45day requirement. Such waiver shall only be effective if it is provided in writing and signed by the Manager of the Bureau of Air's Compliance Section, or his or her designee;
- 2) Notification of a scheduled emissions test must be submitted to the Agency in writing, directed to the Manager of the Bureau of Air's Compliance Section, at least 30 days prior to the expected date of the emissions test. Upon written request directed to the Manager of the Bureau of Air's Compliance Section, the Agency may, in its sole discretion, waive the 30-day notification requirement. Such waiver shall only be effective if it is provided in writing and signed by the Manager of the Bureau of Air's Compliance Section, or his or her designee. Notification of the actual date and expected time of testing must be submitted in writing, directed to the Manager of the Bureau of Air's Compliance Section, at least five working days prior to the actual date of the test;
- 3) For an EGU that has elected to demonstrate compliance by use of the emission standards of subsection (b) of this Section, if an emissions test performed under the requirements of this Section fails to demonstrate compliance with the limits of subsection (b) of this Section, the owner or operator of an EGU may perform a new emissions test using the same test protocol previously submitted in the same period, by notifying the Manager of the Bureau of Air's Compliance Section or his or her designee of the actual date and expected time of testing at least five working days prior to the actual date of the test. The Agency may, in its sole discretion, waive this five-day notification requirement. Such waiver shall only be effective if it is provided in writing and signed by the Manager of the Bureau of Air's Compliance Section, or his or her designee;
- 4) In addition to the testing protocol required by subsection (f)(1) of this Section, the owner or operator of an EGU that has elected to demonstrate compliance by use of the emission standards of subsection (b) of this Section must submit a Continuous Parameter Monitoring Plan to the Agency at least 45 days prior to a scheduled emissions test. Upon written request directed to the Manager of the Bureau of Air's Compliance Section, the Agency may, in its sole discretion, waive the 45-day requirement. Such waiver shall only be effective if it is provided in writing and signed by the Manager of the Bureau of Air's Compliance Section, or his or her designee. The Continuous Parameter Monitoring Plan must

detail how the EGU will continue to operate within the parameters enumerated in the testing protocol and how those parameters will ensure compliance with the applicable mercury limit. For example, the Continuous Parameter Monitoring Plan must include coal sampling as described in Section 225.239(e)(3) of this Subpart and must ensure that an EGU that performs an emissions test using a blend of coals continues to operate using that same blend of coal. If the Agency disapproves the Continuous Parameter Monitoring Plan, the owner or operator of the EGU has 30 days from the date of receipt of the disapproval to submit more detailed information in accordance with the Agency's request.

## g) Compliance Determination

- 1) Each quarterly emissions test shall determine compliance with this Subpart for that quarter, where the quarterly periods consist of the months of January through March, April through June, July through September, and October through December;
- 2) If emissions testing conducted pursuant to this Section fails to demonstrate compliance, the owner or operator of the EGU will be deemed to have been out of compliance with this Subpart beginning on the day after the most recent emissions test that demonstrated compliance or the last day of certified CEMS data demonstrating compliance on a rolling 12-month basis, and the EGU will remain out of compliance until a subsequent emissions test successfully demonstrates compliance with the limits of this Section.

## h) Operation Requirements

- The owner or operator of an EGU that has elected to demonstrate compliance by use of the emission standards of subsection (b) of this Section must continue to operate the EGU commensurate with the Continuous Parameter Monitoring Plan until another Continuous Parameter Monitoring Plan is developed and submitted to the Agency in conjunction with the next compliance demonstration, in accordance with subsection (f)(4) of this Section.
- 2) If the owner or operator makes a significant change to the operations of an EGU subject to this Section, such as changing from bituminous to subbituminous coal, the owner or operator must submit a testing protocol to the Agency and perform an emissions test within seven operating days of the significant change. In addition, the owner or operator of an EGU that has elected to demonstrate compliance by use of the emission standards of subsection (b) of this Section must submit a Continuous Parameter Monitoring Plan within seven operating days of the significant change.

3) If a blend of bituminous and subbituminous coal is fired in the EGU, the owner or operator of the EGU must ensure that the EGU continues to operate using the same blend that was used during the most recent successful emissions test. If the blend of coal changes, the owner or operator of the EGU must re-test in accordance with subsections (d), (e), (f), and (g) of this Section within 30 days of the change in coal blend, notwithstanding the requirement of subsection (d)(3) of this Section that there must be 45 days between emissions tests.

## i) Recordkeeping

- 1) The owner or operator of an EGU and its designated representative must comply with all applicable recordkeeping and reporting requirements in this Section.
- 2) Continuous Parameter Monitoring. The owner or operator of an EGU must maintain records to substantiate that the EGU is operating in compliance with the parameters listed in the Continuous Parameter Monitoring Plan, detailing the parameters that impact mercury reduction and including the following records related to the emissions of mercury:
  - A) For an EGU for which the owner or operator is complying with this Subpart B pursuant to Section 225.239(b)(1)(B) or 225.239(b)(2)(B), records of the daily mercury content of coal used (lbs/trillion Btu) and the daily and quarterly input mercury (lbs).
  - B) For an EGU for which the owner or operator of an EGU complying with this Subpart B pursuant to Section 225.239(b)(1)(A) or 225.239(b)(2)(A), records of the daily and quarterly gross electrical output (MWh) on an hourly basis.:
- 3) The owner or operator of an EGU using activated carbon injection must also comply with the following requirements:
  - A) Maintain records of the usage of sorbent, the exhaust gas flow rate from the EGU, and the sorbent feed rate, in pounds per million actual cubic feet of exhaust gas at the injection point, on a weekly average;
  - B) If a blend of bituminous and subbituminous coal is fired in the EGU, keep records of the amount of each type of coal burned and the required injection rate for injection of activated carbon, on a weekly basis.

- 4) The owner or operator of an EGU must retain all records required by this Section at the source unless otherwise provided in the CAAPP permit issued for the source and must make a copy of any record available to the Agency promptly upon request.
- 5) The owner or operator of an EGU demonstrating compliance pursuant to this Section must monitor and report the heat input rate at the unit level.
- 6) The owner or operator of an EGU demonstrating compliance pursuant to this Section must perform and report coal sampling in accordance with subsection 225.239(e)(3).
- j) Reporting Requirements
  - An owner or operator of an EGU shall submit to the Agency a Final Source Test Report for each periodic emissions test within 45 days after the test is completed. The Final Source Test Report will be directed to the Manager of the Bureau of Air's Compliance Section, or his or her designee, and include at a minimum:

A) A summary of results;

- B) A description of test method(s), including a description of sampling points, sampling train, analysis equipment, and test schedule, and a detailed description of test conditions, including:
  - i) Process information, including but not limited to mode(s) of operation, process rate, and fuel or raw material consumption;
  - ii) Control equipment information (i.e., equipment condition and operating parameters during testing);
  - iii) A discussion of any preparatory actions taken (i.e., inspections, maintenance, and repair); and
  - iv) Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
- 2) The owner or operator of a source with one or more EGUs demonstrating compliance with Subpart B in accordance with this Section must submit to the Agency a Quarterly Certification of Compliance within 45 days following the end of each calendar quarter. Quarterly certifications of compliance must certify whether compliance existed for each EGU for the calendar quarter covered by the certification. If the EGU failed to comply

during the quarter covered by the certification, the owner or operator must provide the reasons the EGU or EGUs failed to comply and a full description of the noncompliance (i.e., tested emissions rate, coal sample data, etc.). In addition, for each EGU, the owner or operator must provide the following appropriate data to the Agency as set forth in this Section.

- A) A list of all emissions tests performed within the calendar quarter covered by the Certification and submitted to the Agency for each EGU, including the dates on which such tests were performed.
- B) Any deviations or exceptions each month and discussion of the reasons for such deviations or exceptions.
- C) All Quarterly Certifications of Compliance required to be submitted must 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.

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

(Source: Added at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.240 General Monitoring and Reporting Requirements

The owner or operator of an EGU must comply with the monitoring, recordkeeping, and reporting requirements as provided in this Section, Sections 225.250 through 225.290 of this Subpart B, and <u>Sections 1.14 through 1.18 of Appendix B to this Part.</u> Subpart I of 40 CFR-75 (sections 75.80 through 75.84), incorporated by reference in Section 225.140. 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 must conduct emissions monitoring in accordance with <u>Section 1.16(b)(2)</u>

of Appendix B to this Part 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 must:
  - Install all monitoring systems required pursuant to this Section and Sections 225.250 through 225.290 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 <u>Sections 1.15 and 1.16 of Appendix B to</u> <u>this Part.</u> 40 CFR 75.81 and 75.82).
  - 2) Successfully complete all certification tests required pursuant to Section 225.250 and meet all other requirements of this Section, Sections 225.250 through 225.290, and Sections 1.14 through 1.18 of Appendix B to this Part subpart I of 40 CFR Part 75 applicable to the monitoring systems required under subsection (a)(1) of this Section.
  - 3) Record, report, and assure the quality of 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 <u>Section 1.15(b) of Appendix</u> <u>B to this Part 40 CFR 75.81(b)</u>, it must perform emissions testing in accordance with <u>Section 1.15(c) of Appendix B to this Part 40 CFR 75.81(c)</u> to demonstrate that the EGU is eligible to use this excepted emissions monitoring methodology, as well as comply with all other applicable requirements of <u>Section 1.15(b) through (f) of Appendix B to this Part. 40 CFR 75.81(b) through (f).</u> Also, the owner or operator must submit a copy of any information required to be submitted to the USEPA pursuant to these provisions to the Agency. The initial emissions testing to demonstrate eligibility of an EGU for the low mass emissions excepted methodology must be conducted by the applicable of the following dates:
    - A) If the EGU has commenced commercial operation before July 1, 2008, at least by <u>July January</u> 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 pursuant to 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. The owner or operator must 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 applicable of the following dates. The owner or operator must record, report, and quality-assure the data from the emissions monitoring systems required under subsection (a)(1) of this Section on and after the applicable of the following dates:
  - 1) For the owner or operator of an EGU that commences commercial operation before July 1, 2008, by <u>July January</u> 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 pursuant to subsection (b)(1) or (b)(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 emission controls, flue gas desulfurization system, selective catalytic reduction system, fabric filter, or compact hybrid particulate collector system.
  - For an owner or operator of an EGU that originally elected to demonstrate compliance pursuant to the emissions testing requirements in Section 225.239, by the first day of the calendar quarter following the last emissions test demonstrating compliance with Section 225.239.
- c) Reporting Data.
  - 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 pursuant to subsection (a)(1) of this Section must begin periodic emissions testing in accordance with Section <u>225.239.</u>, for each such monitoring system, determine, record, and report the maximum potential (or, as appropriate, the minimum potential) values for mercury concentration, the stack gas flow rate, the 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 pursuant to subsection (a)(1) of this Section must begin periodic emissions testing in accordance with Section 225.239., for each such monitoring system, determine, record, and report substitute data using the applicable missing data procedures as set forth in40 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 pursuant to subsection (b)(3) of this Section.
- d) Prohibitions.
  - No owner or operator of an EGU may use any alternative emissions monitoring system, alternative reference method for measuring emissions, or other alternative to the emissions monitoring and measurement requirements of this Section and Sections 225.250 through 225.290, unless such alternative is <u>submitted to the Agency in writing and approved in</u> writing by the Manager of the Bureau of Air's Compliance Section, or his or her designee. 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 may operate its 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, and Sections 1.14 through 1.18 of Appendix B to this Part, unless demonstrating compliance pursuant to Section 225.239, as applicable. subpart I of 40 CFR 75.
  - 3) No owner or operator of an EGU may disrupt the CEMS, 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, and Sections 1.14 through 1.18 of Appendix B to this Part. subpart I of 40 CFR 75.
  - 4) No owner or operator of an EGU may retire or permanently discontinue use of the CEMS or any component thereof, or any other approved monitoring system pursuant to this Subpart B, 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 B, and <u>Sections 1.14</u> <u>through 1.18 of Appendix B to this Part, subpart I of 40 CFR 75</u>, 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).
- <u>C)</u> The owner or operator is demonstrating compliance pursuant to the applicable subsections of Section 225.239.

e) Long-term Cold Storage.

The owner or operator of an EGU that is in long-term cold storage is subject to the provisions of 40 CFR 75.4 and <u>40 CFR 75.64, incorporated by reference in</u> <u>Section 225.140</u>, relating to monitoring, recordkeeping, and reporting for units in long-term cold storage.

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

- Section 225.250 Initial Certification and Recertification Procedures for Emissions Monitoring
  - a) The owner or operator of an EGU must comply with the following initial certification and recertification procedures for a CEMS (i.e., a CEMS or an excepted monitoring system (sorbent trap monitoring system) pursuant to Section 1.3 of Appendix B to this Part 40 CFR 75.15, incorporated by reference in Section 225.140) 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 pursuant to Section 1.15(b) of Appendix B to this Part 40 CFR 75.81(b), incorporated by reference in Section 225.140, must comply with the procedures set forth in subsection (c) of this Section.
    - Requirements for Initial Certification. The owner or operator of an EGU must ensure that, for each CEMS required by Section 225.240(a)(1) (including the automated data acquisition and handling system), the owner or operator successfully completes all of the initial certification testing required pursuant to Section 1.4 of Appendix B to this Part 40 CFR 75.80(d), incorporated by reference in Section 225.140, by the applicable

deadline in Section 225.240(b). In addition, whenever the owner or operator of an EGU installs a monitoring system to meet the requirements of this Subpart B in a location where no such monitoring system was previously installed, the owner or operator must successfully complete the initial certification requirements of <u>Section 1.4 of Appendix B to this</u> <u>Part40 CFR 75.80(d)</u>.

2) Requirements for Recertification. Whenever the owner or operator of an EGU makes a replacement, modification, or change in any certified CEMS, or an excepted monitoring system (sorbent trap monitoring system) pursuant to Section 1.3 of Appendix B to this Part 40 CFR 75.15, and 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 qualitycontrol requirements of Section 1.5 of Appendix B to this Part 40 CFR 75.21 or Exhibit B to Appendix B to this PartAppendix B to 40 CFR 75, each incorporated by reference in Section 225.140, the owner or operator of an EGU must recertify the monitoring system in accordance with Section 1.4(b) of Appendix B to this Part. 40 CFR 75.20(b), incorporated by reference in Section 225.140. 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 must recertify each CEMS, and each excepted monitoring system (sorbent trap monitoring system) pursuant to Section 1.3 to Appendix B to this Part, 40 CFR 75.15, whose accuracy is potentially affected by the change, all in accordance with Section 1.4(b) to Appendix B to this Part. 40 CFR 75.20(b). Examples of changes to a CEMS that require recertification include, but are not limited to, replacement of the analyzer, complete replacement of an existing CEMS, 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 (a)(3)(D) of this Section apply to both initial certification and recertification of a CEMS required by Section 225.240(a)(1). For recertifications, the words "certification" and "initial certification" are to be read as the word "recertification", the word "certified" is to be read as the word "recertified", and the procedures set forth in Section 1.4(b)(5) of Appendix B to this Part 40 CFR 75.20(b)(5) are to be followed in lieu of the procedures set forth in subsection (a)(3)(E) of this Section.
  - A) Notification of Certification. The owner or operator must submit written notice of the dates of certification testing to the Agency, directed to the Manager of the Bureau of Air's Compliance SectionUSEPA Region 5, and the Administrator of the USEPA

written notice of the dates of certification testing, in accordance with Section 225.270.

- B) Certification Application. The owner or operator must submit to the Agency a certification application for each monitoring system. A complete certification application must include the information specified in 40 CFR 75.63, incorporated by reference in Section 225.140.
- C)

D)

Provisional Certification Date. The provisional certification date for a monitoring system must be determined in accordance with <u>Section 1.4(a)(3) of Appendix B to this Part. 40 CFR 75.20(a)(3)</u>, incorporated by reference in Section 225.140. A provisionally certified monitoring system may be used pursuant to this Subpart B for a period not to exceed 120 days after receipt by the Agency of the complete certification application for the monitoring system pursuant to subsection (a)(3)(B) of this Section. Data measured and recorded by the provisionally certified monitoring system, in accordance with the requirements of <u>Appendix B to this Part 40</u> <u>CFR 75</u>, 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.

Certification Application Approval Process. The Agency must 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 a written notice of approval or disapproval within the 120-day period, each monitoring system that meets the applicable performance requirements <u>of Appendix B to this Part</u> 40 CFR 75 and which is included in the certification application will be deemed certified for use pursuant to this Subpart B.

 Approval Notice. If the certification application is complete and shows that each monitoring system meets the applicable performance requirements of <u>Appendix B to this</u> <u>Part</u>, 40 CFR 75, then the Agency must 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 must 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, the Agency may issue a notice of disapproval pursuant to subsection (a)(3)(D)(iii) of this Section. The 120-day review period will 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 Appendix B to this Part, 40 CFR 75, or if the certification application is incomplete and the requirement for disapproval pursuant to subsection (a)(3)(D)(ii) of this Section is met, the Agency must issue a written notice of disapproval of the certification application. Upon issuance of such notice of disapproval, the provisional certification is invalidated, and the data measured and recorded by each uncertified monitoring system will not be considered valid quality-assured data beginning with the date and hour of provisional certification (as defined pursuant to Section 1.4(a)(3) of Appendix B to this Part). 40 CFR 75.20(a)(3)). The owner or operator must follow the procedures for loss of certification set forth 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).
- E) Procedures for Loss of Certification. If the Agency issues a notice of disapproval of a certification application pursuant to subsection (a)(3)(D)(iii) of this Section or a notice of disapproval of certification status pursuant to subsection (a)(3)(D)(iv) of this Section, the owner or operator must fulfill the following requirements:
  - i) The owner or operator must substitute the following values for each disapproved monitoring system and for each hour of EGU operation during the period of invalid data specified pursuant to 40 CFR 75.20(a)(4)(iii) or 75.21(e), continuing until the applicable date and hour specified pursuant to 40 CFR 75.20(a)(5)(i), each incorporated by reference in Section 225.140. 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-75, incorporated by reference in Section 225.140. 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 2.1.5, 2.1.3.1, and 2.1.3.2 of Appendix A to 40 CFR 75, incorporated by reference in Section 225.140. For a disapproved excepted monitoring system (sorbent trap-monitoring system) pursuant to 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 75, incorporated by reference in section 225.140.

- <u>iii</u>) The owner or operator must submit a notification of certification retest dates and a new certification application in accordance with subsections (a)(3)(A) and (B) of this Section.
- iiiii) The owner or operator must 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.
  - If an emissions monitoring system has been previously certified in accordance with <u>Appendix B to this Part 40 CFR 75</u> and the applicable quality assurance and quality control requirements of <u>Section 1.5 and</u> <u>Exhibit B to Appendix B to this Part 40 CFR 75.21 and Appendix B to 40</u> <u>CFR 75</u> are fully met, the monitoring system will be exempt from the initial certification requirements of this Section.
  - 2) The recertification provisions of this Section apply to an emissions monitoring system required by Section 225.240(a)(1) exempt from initial certification requirements pursuant to subsection (a)(1) of this Section.
- c) Initial certification and recertification procedures for EGUs using the mercury low mass emissions excepted methodology pursuant to <u>Section 1.15(b) of Appendix B</u> to this Part. 40 CFR 75.81(b). The owner or operator that has elected to use the

mercury-low-mass-emissions-excepted methodology for a qualified EGU pursuant to <u>Section 1.15(b) to Appendix B to this Part</u> 40 CFR 75.81(b) must meet the applicable certification and recertification requirements in <u>Section 1.15(c) through (f) to Appendix B to this Part.</u> 40 CFR 75.81(c) through (f), incorporated by reference in Section 225.140.

d) Certification Applications. The owner or operator of an EGU must submit an application to the Agency within 45 days after completing all initial certification or recertification tests required pursuant to this Section, including the information required pursuant to 40 CFR 75.63, incorporated by reference in Section 225.140.

(Source: Amended at , effective )

Section 225.260 Out of Control Periods and Data Availability for Emission Monitors

a) Out of control periods must be determined in accordance with Section 1.7 of Appendix B.

- ba) Monitor data availability must be determined on a calendar quarter basis in accordance with Section 1.8 of Appendix B Whenever any emissions monitoring system fails to meet the quality-assurance and quality-control requirements or data validation requirements of 40 CFR 75, incorporated by reference in Section 225.140, data must be substituted using the applicable missing data procedures in Subparts D and I of 40 CFR 75, each incorporated by reference in Section 225.140. following initial certification of the required CO<sub>2</sub>, O<sub>2</sub>, flow monitor, or mercury concentration or moisture monitoring system(s) at a particular unit or stack location. Compliance with the percent reduction standard in Section 225.230(a)(1)(B) or 225.237(a)(1)(B) or the emissions concentration standard in Section 225.230(a)(1)(A) or 225.237(a)(1)(A) can only be demonstrated if the monitor data availability is equal to or greater than 75 percent; that is, quality assured data must be recorded by a certified primary monitor, a certified redundant or non-redundant backup monitor, or reference method for that unit at least 75 percent of the time the unit is in operation.
- <u>c</u>b) Audit 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 pursuant to Section 225.250 or the applicable provisions of <u>Appendix B to this Part</u>, 40 CFR 75, both at the time of the initial certification or recertification application submission and at the time of the audit, the Agency must issue a notice of disapproval of the certification status of such monitoring system. For the purposes of this subsection (<u>c</u>b), an audit must 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 must 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 must follow the applicable initial certification or recertification procedures in Section 225.250 for each disapproved monitoring system.

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

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 must also monitor and report the heat input rate at the EGU level using the procedures set forth in <u>Appendix B to this</u> <u>Part.</u> 40 CFR 75, incorporated by reference in Section 225.140.

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.263 Monitoring of Gross Electrical Output

The owner or operator of an EGU complying with this Subpart B by means of Section 225.230(a)(1) or using electrical output (O<sub>i</sub>) and complying by means of Section 225.230(b) or (d) or Section 225.232 must monitor gross electrical output of the associated generator(s) in MWh on an hourly basis.

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.265 Coal Analysis for Input Mercury Levels

- a) The owner or operator of an EGU complying with this Subpart B by means of Section 225.230(a)(<u>12)(B)</u>, or using input mercury levels (I<sub>i</sub>) and complying by means of Section 225.230(b) or (d) or Section 225.232, electing to comply with the emissions testing, monitoring, and recordkeeping requirements under Section 225.239, or demonstrating compliance under Section 225.233 or Sections 225.291 through 225.299 must fulfill the following requirements:
  - Perform daily sampling of the coal combusted in the EGU for mercury content. The owner or operator of such EGU must 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. The sample must be taken in a manner that provides a representative mercury content for the coal burned on that day. EGUs complying by means of Section 225.233 or Sections 225.291 through 225.299 of this Subpart must perform such coal sampling at least once per month; EGUs complying by means of the emissions testing, monitoring, and recordkeeping requirements under Section 225.239 must perform such coal sampling

according to the schedule provided in Section 225.239(e)(3) of this Subpart; all other EGUs subject to this requirement must perform such coal sampling on a daily basis.

- 2) Analyze the grab coal sample for the following:
  - A) Determine the heat content using ASTM D5865-04 or an equivalent method approved in writing by the Agency.
  - B) Determine the moisture content using ASTM D3173-03 or an equivalent method approved in writing by the Agency.
  - C) Measure the mercury content using ASTM D6414-01, ASTM D3684-01, or an equivalent method 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 must use the data analyzed pursuant to 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 must 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.

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.270 Notifications

The owner or operator of a source with one or more EGUs must submit written notice to the Agency according to the provisions in 40 CFR 75.61, incorporated by reference in Section 225.140 (as a segment of 40 CFR 75), for each EGU or group of EGUs monitored at a common stack and each non-EGU monitored pursuant to Section 1.16(b)(2)(B) of Appendix B to this Part. 40 CFR 75.82(b)(2)(ii), incorporated by reference in Section 225.140.

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

## Section 225.290 Recordkeeping and Reporting

- a) General Provisions.
  - The owner or operator of an EGU and its designated representative must comply with all applicable recordkeeping and reporting requirements in this Section and with all applicable recordkeeping and reporting requirements of <u>Section 1.18 to Appendix B to this Part.</u> 40 CFR 75.84, incorporated by reference in Section 225.140.
  - 2) The owner or operator of an EGU must 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 B by means of Section 225.230(a)(<u>1</u>2)(<u>B</u>) 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 must be kept in the file pursuant to <u>Section 1.18(a) of Appendix B to this Part.</u> 40 CFR 75.84(a).
    - B) For an EGU for which the owner or operator of an EGU complying with this Subpart B by means of Section 225.230(a)(1)(A) 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 must be kept in the file required pursuant to Section 1.18(a) of Appendix B to this Part-40 CFR 75.84(a).
  - 3) The owner or operator of an EGU must maintain records of the following data 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 B, 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 B must 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 must maintain the following records related to quality assurance activities conducted for emissions monitoring systems:
  - A) The results of quarterly assessments conducted pursuant to <u>Section</u> section 2.2 of <u>Exhibit B to Appendix B to this Part Appendix B of</u> 40 CFR 75, incorporated by reference in Section 225.140; and
  - B) Daily/weekly system integrity checks pursuant to <u>Section section</u>
    2.6 of <u>Exhibit B to Appendix B to this Part Appendix B of 40 CFR</u>
    75, incorporated by reference in Section 225.140.
- 6) The owner or operator of an EGU must maintain an electronic copy of all electronic submittals to the USEPA pursuant to <u>Section 1.18(f) to</u> <u>Appendix B to this Part.</u> 40 CFR 75.84(f), incorporated by reference in <u>Section 225.140</u>.
- 7) The owner or operator of an EGU must retain all records required by this Section at the source unless otherwise provided in the CAAPP permit issued for the source and must 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 must submit quarterly reports to the Agency as follows:
  - 1) These reports must 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 <u>Appendix B to this Part.</u> 40 CFR 75, incorporated by reference in Section 225.140.
    - 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 must 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 <u>Appendix</u> <u>B to this Part</u> 40-CFR 75, i.e., the dates and results of the Linearity Tests and any RATAs 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.

- <u>E)</u> Recertification testing that has been performed for any CEMS and the status of the results.
- 2) The owner or operator must 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 must 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 must state:
  - 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 B, and <u>Appendix B to this Part 40</u> 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 is missing that: are substituted in accordance with 40 CFR 75.34(a)(1): A) — That:
    - <u>Ai</u>) 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 quality assurance/quality control program pursuant to <u>Exhibit B to Appendix B to this Part</u> Appendix B to 40 CFR 75; or
    - <u>Bii</u>) 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 <u>Appendix B to this Part 40 CFR-75</u> document that the flue gas desulfurization system was operating properly, or quality-assured NO<sub>X</sub> emission data recorded in

accordance with <u>Appendix B to this Part</u> 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.
  - The owner or operator of a source with one or more EGUs subject to this Subpart B must submit to the Agency an Annual Certification of Compliance with this Subpart B no later than May 1 of each year and must address compliance for the previous calendar year. Such certification must be submitted to the Agency, Air Compliance and Enforcement Section, and the Air Regional Field Office.
  - 2) Annual Certifications of Compliance must indicate whether compliance existed for each EGU for each month in the year covered by the Certification and it must certify to that effect. In addition, for each EGU, the owner or operator must provide the following appropriate data as set forth in subsections (d)(2)(A) through (d)(2)(E) of this Section, together with the data set forth in subsection (d)(2)(F) of this Section:
    - A) If complying with this Subpart B 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;
      - 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
      - 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 B 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 B by means of Section 225.230(b):
  - i) Actual emissions and allowable emissions for each 12month rolling period ending in the year covered by the Certification; and
  - 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 B 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 B by means of Section 225.232:
  - Actual emissions and allowable emissions for all EGUs at the source in an Averaging Demonstration for each 12month rolling period ending in the year covered by the Certification; and
  - 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 must 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 must 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, and May 1, 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. For each EGU, the owner or operator must promptly notify the Agency of deviations from requirements of this Subpart B. At a minimum, these notifications must include a description of such deviations within 30 days 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 RATA Reports. The owner or operator of an EGU must 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 pursuant to <u>Section 1.16(b)(2)(B) of Appendix B to this</u> <u>Part 40 CFR 75.82(b)(2)(ii), incorporated by reference in Section 225.140</u>, within 45 days after completing a quality assurance RATA.

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.295 Treatment of Mercury Allowances

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

- a) No such allowances may 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 must hold all allowances allocated by the USEPA to the State. At the end of each calendar year, the Agency must instruct the USEPA to retire permanently all such allowances.

(Source: Repealed at , effective )

#### Section 225.291 Combined Pollutant Standard: Purpose

The purpose of Sections 225.291 through 225.299 (hereinafter referred to as the Combined Pollutant Standard ("CPS")) is to allow an alternate means of compliance with the emissions standards for mercury in Section 225.230(a) for specified EGUs through permanent shut-down, installation of ACI, and the application of pollution control technology for  $NO_x$ , PM, and  $SO_2$  emissions that also reduce mercury emissions as a co-benefit and to establish permanent emissions standards for those specified EGUs. Unless otherwise provided for in the CPS, owners and operators of those specified EGUs are not excused from compliance with other applicable requirements of Subparts B, C, D, and E.

(Source: Added at \_\_\_\_, effective \_\_\_\_\_)

### Section 225.292 Applicability of the Combined Pollutant Standard

- a) As an alternative to compliance with the emissions standards of Section
   225.230(a), the owner or operator of specified EGUs in the CPS located at Fisk, Crawford, Joliet, Powerton, Waukegan, and Will County power plants may elect for all of those EGUs as a group to demonstrate compliance pursuant to the CPS, which establishes control requirements and emissions standards for NO<sub>x</sub>, PM, SO<sub>2</sub>, and mercury. For this purpose, ownership of a specified EGU is determined based on direct ownership, by holding a majority interest in a company that owns the EGU or EGUs, or by the common ownership of the company that owns the EGU, whether through a parent-subsidiary relationship, as a sister corporation, or as an affiliated corporation with the same parent corporation, provided that the owner or operator has the right or authority to submit a CAAPP application on behalf of the EGU.
- b) A specified EGU is a coal-fired EGU listed in Appendix A, irrespective of any subsequent changes in ownership of the EGU or power plant, the operator, unit designation, or name of unit.
- c) The owner or operator of each of the specified EGUs electing to demonstrate compliance with Section 225.230(a) pursuant to the CPS must submit an application for a CAAPP permit modification to the Agency, as provided for in Section 225.220, that includes the information specified in Section 225.293 that

clearly states the owner's or operator's election to demonstrate compliance with Section 225.230(a) pursuant to the CPS.

- d) If an owner or operator of one or more specified EGUs elects to demonstrate
   compliance with Section 225.230(a) pursuant to the CPS, then all specified EGUs
   owned or operated in Illinois by the owner or operator as of December 31, 2006,
   as defined in subsection (a) of this Section, are thereafter subject to the standards
   and control requirements of the CPS. Such EGUs are referred to as a Combined
   Pollutant Standard (CPS) group.
- e) If an EGU is subject to the requirements of this Section, then the requirements apply to all owners and operators of the EGU, and to the CAIR designated representative for the EGU.

(Source: Added at \_\_\_\_\_, effective \_\_\_\_\_)

## Section 225.293 Combined Pollutant Standard: Notice of Intent

The owner or operator of one or more specified EGUs that intends to comply with Section 225.230(a) by means of the CPS must notify the Agency of its intention on or before December 31, 2007. The following information must accompany the notification:

- a) The identification of each EGU that will be complying with Section 225.230(a) pursuant to the CPS, with evidence that the owner or operator has identified all specified EGUs that it owned or operated in Illinois as of December 31, 2006, and which commenced commercial operation on or before December 31, 2004;
- b) If an EGU identified in subsection (a) of this Section is also owned or operated by a person different than the owner or operator submitting the notice of intent, a demonstration that the submitter has the right to commit the EGU or authorization from the responsible official for the EGU submitting the application; and
- c) A summary of the current control devices installed and operating on each EGU and identification of the additional control devices that will likely be needed for each EGU to comply with emission control requirements of the CPS.

(Source: Added at , effective \_\_\_\_)

## Section 225.294 Combined Pollutant Standard: Control Technology Requirements and Emissions Standards for Mercury

- a) Control Technology Requirements for Mercury.
  - 1) For each EGU in a CPS group other than an EGU that is addressed by subsection (b) of this Section, the owner or operator of the EGU must install, if not already installed, and properly operate and maintain, by the

dates set forth in subsection (a)(2) of this Section, ACI equipment complying with subsections (g), (h), (i), (j), and (k) of this Section, as applicable.

- 2) By the following dates, for the EGUs listed in subsections (a)(2)(A) and (B), which include hot and cold side ESPs, the owner or operator must install, if not already installed, and begin operating ACI equipment or the Agency must be given written notice that the EGU will be shut down on or before the following dates:
  - A) Fisk 19, Crawford 7, Crawford 8, Waukegan 7, and Waukegan 8 on or before July 1, 2008; and
  - B) Powerton 5, Powerton 6, Will County 3, Will County 4, Joliet 6, Joliet 7, and Joliet 8 on or before July 1, 2009.
- b) Notwithstanding subsection (a) of this Section, the following EGUs are not required to install ACI equipment because they will be permanently shut down, as addressed by Section 225.297, by the date specified:
  - 1) EGUs that are required to permanently shut down:
    - A) On or before December 31, 2007, Waukegan 6; and
    - B) On or before December 31, 2010, Will County 1 and Will County 2.
  - 2) Any other specified EGU that is permanently shut down by December 31, 2010.
- c) Beginning on January 1, 2015, and continuing thereafter, and measured on a rolling 12-month basis (the initial period is January 1, 2015, through December 31, 2015, and, then, for every 12-month period thereafter), each specified EGU, except Will County 3, shall achieve one of the following emissions standards:
  - 1) An emissions standard of 0.0080 lbs mercury/GWh gross electrical output; or
  - 2) A minimum 90 percent reduction of input mercury.
- <u>d)</u> Beginning on January 1, 2016, and continuing thereafter, Will County 3 shall achieve the mercury emissions standards of subsection (c) of this Section measured on a rolling 12-month basis (the initial period is January 1, 2016, through December 31, 2016, and, then, for every 12-month period thereafter).
- e) Compliance with Emission Standards

- At any time prior to the dates required for compliance in subsections (c)
   and (d) of this Section, the owner or operator of a specified EGU, upon
   notice to the Agency, may elect to comply with the emissions standards of
   subsection (c) of this Section measured on either:
  - A) a rolling 12-month basis, or;
  - B) semi-annual calendar basis pursuant to the emissions testing requirements in Section 225.239(c), (d), (e), (f)(1) and (2), (h)(2), and (i)(3) and (4) of this Subpart until June 30, 2012.
- <u>Once an EGU is subject to the mercury emissions standards of subsection</u>
   (c) of this Section, it shall not be subject to the requirements of subsections (g), (h), (i), (j) and (k) of this Section.
- f) Compliance with the mercury emissions standards or reduction requirement of this Section must be calculated in accordance with Section 225.230(a) or (b).
- g) For each EGU for which injection of halogenated activated carbon is required by subsection (a)(1) of this Section, the owner or operator of the EGU must inject halogenated activated carbon in an optimum manner, which, except as provided in subsection (h) of this Section, is defined as all of the following:
  - 1) The use of an injection system for effective absorption of mercury, considering the configuration of the EGU and its ductwork;
  - 2) The injection of halogenated activated carbon manufactured by Alstom, Norit, or Sorbent Technologies, or Calgon Carbon's FLUEPAC MC Plus, or the injection of any other halogenated activated carbon or sorbent that the owner or operator of the EGU has demonstrated to have similar or better effectiveness for control of mercury emissions; and
  - 3) The injection of sorbent at the following minimum rates, as applicable:
    - A) For an EGU firing subbituminous coal, 5.0 lbs per million actual cubic feet or, for any cyclone-fired EGU that will install a scrubber and baghouse by December 31, 2012, and which already meets an emission rate of 0.020 lb mercury/GWh gross electrical output or at least 75 percent reduction of input mercury, 2.5 lbs per million actual cubic feet;
    - B) For an EGU firing bituminous coal, 10.0 lbs per million actual cubic feet or, for any cyclone-fired EGU that will install a scrubber and baghouse by December 31, 2012, and which already meets an emission rate of 0.020 lb mercury/GWh gross electrical output or

at least 75 percent reduction of input mercury, 5.0 lbs per million actual cubic feet;

- <u>C)</u> For an EGU firing a blend of subbituminous and bituminous coal, a rate that is the weighted average of the rates specified in subsections (g)(3)(A) and (B), based on the blend of coal being fired; or
- D) A rate or rates set lower by the Agency, in writing, than the rate specified in any of subsection (g)(3)(A), (B), or (C) of this Section on a unit-specific basis, provided that the owner or operator of the EGU has demonstrated that such rate or rates are needed so that carbon injection will not increase particulate matter emissions or opacity so as to threaten noncompliance with applicable requirements for particulate matter or opacity.
- 4) For purposes of subsection (g)(3) of this Section, the flue gas flow rate must be determined for the point sorbent injection; provided that this flow rate may be assumed to be identical to the stack flow rate if the gas temperatures at the point of injection and the stack are normally within 100° F, or the flue gas flow rate may otherwise be calculated from the stack flow rate, corrected for the difference in gas temperatures.
- h) The owner or operator of an EGU that seeks to operate an EGU with an activated carbon injection rate or rates that are set on a unit-specific basis pursuant to subsection (g)(3)(D) of this Section must submit an application to the Agency proposing such rate or rates, and must meet the requirements of subsections (h)(1) and (h)(2) of this Section, subject to the limitations of subsections (h)(3) and (h)(4) of this Section:
  - 1) The application must be submitted as an application for a new or revised federally enforceable operation permit for the EGU, and it must include a summary of relevant mercury emissions data for the EGU, the unitspecific injection rate or rates that are proposed, and detailed information to support the proposed injection rate or rates; and
  - 2) This application must be submitted no later than the date that activated carbon must first be injected. For example, the owner or operator of an EGU that must inject activated carbon pursuant to subsection (a)(1) of this Section must apply for unit-specific injection rate or rates by July 1, 2008. Thereafter, the owner or operator may supplement its application; and
  - 3) Any decision of the Agency denying a permit or granting a permit with conditions that set a lower injection rate or rates may be appealed to the Board pursuant to Section 39 of the Act; and

- 4) The owner or operator of an EGU may operate at the injection rate or rates proposed in its application until a final decision is made on the application including a final decision on any appeal to the Board.
- <u>During any evaluation of the effectiveness of a listed sorbent, alternative sorbent,</u> or other technique to control mercury emissions, the owner or operator of an EGU need not comply with the requirements of subsection (g) of this Section for any system needed to carry out the evaluation, as further provided as follows:</u>
  - 1) The owner or operator of the EGU must conduct the evaluation in accordance with a formal evaluation program submitted to the Agency at least 30 days prior to commencement of the evaluation;
  - 2) The duration and scope of the evaluation may not exceed the duration and scope reasonably needed to complete the desired evaluation of the alternative control techniques, as initially addressed by the owner or operator in a support document submitted with the evaluation program; and
  - 3) The owner or operator of the EGU must submit a report to the Agency no later than 30 days after the conclusion of the evaluation that describes the evaluation conducted and which provides the results of the evaluation; and
  - 4) If the evaluation of alternative control techniques shows less effective control of mercury emissions from the EGU than was achieved with the principal control techniques, the owner or operator of the EGU must resume use of the principal control techniques. If the evaluation of the alternative control technique shows comparable effectiveness to the principal control technique, the owner or operator of the EGU may either continue to use the alternative control technique or it may resume use of the principal control technique or it may resume use of the principal control technique. If the evaluation of the alternative control technique in a manner that is at least as effective as the principal control technique or it may resume use of the principal control technique. If the evaluation of the alternative control technique shows more effective control of mercury emissions than the control technique, the owner or operator of the EGU must continue to use the alternative control of mercury emissions than the control technique, the owner or operator of the EGU must continue to use the alternative control technique in a manner that is more effective than the principal control technique in a manner that is more effective than the principal control technique, so long as it continues to be subject to this Section.
- j) In addition to complying with the applicable recordkeeping and monitoring requirements in Sections 225.240 through 225.290, the owner or operator of an EGU that elects to comply with Section 225.230(a) by means of the CPS must also comply with the following additional requirements:
  - 1) For the first 36 months that injection of sorbent is required, it must maintain records of the usage of sorbent, the exhaust gas flow rate from

the EGU, and the sorbent feed rate, in pounds per million actual cubic feet of exhaust gas at the injection point, on a weekly average;

- 2) After the first 36 months that injection of sorbent is required, it must monitor activated sorbent feed rate to the EGU, flue gas temperature at the point of sorbent injection, and exhaust gas flow rate from the EGU, automatically recording this data and the sorbent carbon feed rate, in pounds per million actual cubic feet of exhaust gas at the injection point, on an hourly average; and
- 3) If a blend of bituminous and subbituminous coal is fired in the EGU, it must keep records of the amount of each type of coal burned and the required injection rate for injection of activated carbon on a weekly basis.
- k) In addition to complying with the applicable reporting requirements in Sections 225.240 through 225.290, the owner or operator of an EGU that elects to comply with Section 225.230(a) by means of the CPS must also submit quarterly reports for the recordkeeping and monitoring conducted pursuant to subsection (j) of this Section.
- As an alternative to the CEMS monitoring, recordkeeping, and reporting requirements in Sections 225.240 through 225.290, the owner or operator of an EGU may elect to comply with the emissions testing, monitoring, recordkeeping, and reporting requirements in Section 225.239(c), (d), (e), (f)(1) and (2), (h)(2), (i)(3) and (4), and (j)(1).

(Source: Added at \_\_\_\_\_, effective \_\_\_\_\_)

## Section 225.295 Combined Pollutant Standard: Emissions Standards for NO<sub>x</sub> and SO<sub>2</sub>

- a) Emissions Standards for NO<sub>x</sub> and Reporting Requirements.
  - Beginning with calendar year 2012 and continuing in each calendar year thereafter, the CPS group, which includes all specified EGUs that have not been permanently shut down by December 31 before the applicable calendar year, must comply with a CPS group average annual NO<sub>x</sub> emissions rate of no more than 0.11 lbs/mmBtu.
  - 2) Beginning with ozone season control period 2012 and continuing in each ozone season control period (May 1 through September 30) thereafter, the CPS group, which includes all specified EGUs that have not been permanently shut down by December 31 before the applicable ozone season, must comply with a CPS group average ozone season NO<sub>x</sub> emissions rate of no more than 0.11 lbs/mmBtu.

- 3) The owner or operator of the specified EGUs in the CPS group must file, not later than one year after startup of any selective SNCR on such EGU, a report with the Agency describing the NO<sub>x</sub> emissions reductions that the SNCR has been able to achieve.
- b) Emissions Standards for SO<sub>2</sub>. Beginning in calendar year 2013 and continuing in each calendar year thereafter, the CPS group must comply with the applicable CPS group average annual SO<sub>2</sub> emissions rate listed as follows:

| year | lbs/mmBtu |
|------|-----------|
| 2013 | 0.44      |
| 2014 | 0.41      |
| 2015 | 0.28      |
| 2016 | 0.195     |
| 2017 | 0.15      |
| 2018 | 0.13      |
| 2019 | 0.11      |

- c) Compliance with the NO<sub>x</sub> and SO<sub>2</sub> emissions standards must be demonstrated in accordance with Sections 225.310, 225.410, and 225.510. The owner or operator of the specified EGUs must complete the demonstration of compliance pursuant to Section 225.298(c) before March 1 of the following year for annual standards and before November 30 of the particular year for ozone season control periods (May 1 through September 30) standards, by which date a compliance report must be submitted to the Agency.
- d) The CPS group average annual SO<sub>2</sub> emission rate, annual NO<sub>x</sub> emission rate and ozone season NO<sub>x</sub> emission rates shall be determined as follows:

$$\underline{\text{ER}_{avg}} = \underbrace{\sum (\text{SO}_{2i} \text{ or } \text{NO}_{xi} \text{ tons})}_{i=1} \underbrace{\sum (\text{HI}_i)}_{i=1}$$

#### Where:

| ERavg                                 | _ | average annual or ozone season emission    |
|---------------------------------------|---|--|
|                                       |   | rate in lbs/mmBbtu of all EGUs in the CPS  |
|                                       |   | group.                                     |
| $HI_i$                                | = | heat input for the annual or ozone control |
|                                       |   | period of each EGU, in mmBtu.              |
| $SO_{2i}$                             |   | actual annual SO2 tons of each EGU in the  |
|                                       |   | CPS group.                                 |
| NO <sub>xi</sub>                      |   | actual annual or ozone season NOx tons of  |
| · · · · · · · · · · · · · · · · · · · |   | each EGU in the CPS group.                 |
| n                                     |   | number of EGUs that are in the CPS group   |
| i                                     | = | each EGU in the CPS group.                 |

(Source: Added at \_\_\_\_, effective \_\_\_\_)

## Section 225.296 Combined Pollutant Standard: Control Technology Requirements for NO<sub>x</sub>, SO<sub>2</sub>, and PM Emissions

- a) Control Technology Requirements for NO<sub>x</sub> and SO<sub>2</sub>.
  - 1) On or before December 31, 2013, the owner or operator must either permanently shut down or install and have operational FGD equipment on Waukegan 7;
  - 2) On or before December 31, 2014, the owner or operator must either permanently shut down or install and have operational FGD equipment on Waukegan 8;
  - 3) On or before December 31, 2015, the owner or operator must either permanently shut down or install and have operational FGD equipment on Fisk 19;
  - 4) If Crawford 7 will be operated after December 31, 2018, and not permanently shut down by this date, the owner or operator must:
    - A) On or before December 31, 2015, install and have operational SNCR or equipment capable of delivering essentially equivalent NO<sub>x</sub> reductions on Crawford 7; and
    - B) On or before December 31, 2018, install and have operational FGD equipment on Crawford 7;
  - 5) If Crawford 8 will be operated after December 31, 2017 and not permanently shut down by this date, the owner or operator must:
    - <u>A)</u> On or before December 31, 2015, install and have operational
       <u>SNCR or equipment capable of delivering essentially equivalent</u>
       NO<sub>x</sub> emissions reductions on Crawford 8; and
    - B) On or before December 31, 2017, install and have operational FGD equipment on Crawford 8.
- b) Other Control Technology Requirements for SO<sub>2</sub>. Owners or operators of specified EGUs must either permanently shut down or install FGD equipment on each specified EGU (except Joliet 5), on or before December 31, 2018, unless an earlier date is specified in subsection (a) of this Section.

- c) Control Technology Requirements for PM. The owner or operator of the two specified EGUs listed in this subsection that are equipped with a hot-side ESP must replace the hot-side ESP with a cold-side ESP, install an appropriately designed fabric filter, or permanently shut down the EGU by the dates specified. Hot-side ESP means an ESP on a coal-fired boiler that is installed before the boiler's air-preheater where the operating temperature is typically at least 550° F, as distinguished from a cold-side ESP that is installed after the air pre-heater where the operating temperature is typically no more than 350° F.
  - 1) Waukegan 7 on or before December 31, 2013; and
  - 2) Will County 3 on or before December 31, 2015.
- <u>Beginning on December 31, 2008, and annually thereafter up to and including</u>
   <u>December 31, 2015, the owner or operator of the Fisk power plant must submit in</u>
   writing to the Agency a report on any technology or equipment designed to affect
   air quality that has been considered or explored for the Fisk power plant in the
   preceding 12 months. This report will not obligate the owner or operator to install
   any equipment described in the report.
- e) Notwithstanding 35 Ill. Adm. Code 201.146(hhh), until an EGU has complied with the applicable requirements of subsections 225.296(a), (b), and (c), the owner or operator of the EGU must obtain a construction permit for any new or modified air pollution control equipment that it proposes to construct for control of emissions of mercury, NO<sub>x</sub>, PM, or SO<sub>2</sub>.

(Source: Added at \_\_\_\_\_, effective \_\_\_\_\_)

#### Section 225.297 Combined Pollutant Standard: Permanent Shut Downs

- a) The owner or operator of the following EGUs must permanently shut down the EGU by the dates specified:
  - 1) Waukegan 6 on or before December 31, 2007; and
  - 2) Will County 1 and Will County 2 on or before December 31, 2010.
- b) No later than 8 months before the date that a specified EGU will be permanently shut down, the owner or operator must submit a report to the Agency that includes a description of the actions that have already been taken to allow the shutdown of the EGU and a description of the future actions that must be accomplished to complete the shutdown of the EGU, with the anticipated schedule for those actions and the anticipated date of permanent shutdown of the unit.
- c) No later than six months before a specified EGU will be permanently shut down, the owner or operator shall apply for revisions to the operating permits for the

EGU to include provisions that terminate the authorization to operate the unit on that date.

- d) If after applying for or obtaining a construction permit to install required control equipment, the owner or operator decides to permanently shut-down a Specified EGU rather than install the required control technology, the owner or operator must immediately notify the Agency in writing and thereafter submit the information required by subsections (b) and (c) of this Section.
- e) Failure to permanently shut down a specified EGU by the required date shall be considered separate violations of the applicable emissions standards and control technology requirements of the CPS for NO<sub>x</sub>, PM, SO<sub>2</sub>, and mercury.

(Source: Added at \_\_\_\_, effective \_\_\_\_)

## Section 225.298 Combined Pollutant Standard: Requirements for NO<sub>x</sub> and SO<sub>2</sub> Allowances

- a) The following requirements apply to the owner, the operator, and the designated representative with respect to SO<sub>2</sub> and NO<sub>x</sub> allowances:
  - The owner, operator, and designated representative of specified EGUs in a <u>CPS group is permitted to sell, trade, or transfer SO<sub>2</sub> and NO<sub>x</sub> emissions allowances of any vintage owned, allocated to, or earned by the specified EGUs (the "CPS allowances") to its affiliated Homer City, Pennsylvania, generating station for as long as the Homer City Station needs the CPS allowances for compliance.
    </u>
  - 2) When and if the Homer City Station no longer requires all of the CPS allowances, the owner, operator, or designated representative of specified EGUs in a CPS group may sell any and all remaining CPS allowances, without restriction, to any person or entity located anywhere, except that the owner or operator may not directly sell, trade, or transfer CPS allowances to a unit located in Ohio, Indiana, Illinois, Wisconsin, Michigan, Kentucky, Missouri, Iowa, Minnesota, or Texas.
  - 3) In no event shall this subsection (a) require or be interpreted to require any restriction whatsoever on the sale, trade, or exchange of the CPS allowances by persons or entities who have acquired the CPS allowances from the owner, operator, or designated representative of specified EGUs in a CPS group.
- b) The owner, operator, and designated representative of EGUs in a specified CPS group is prohibited from purchasing or using SO<sub>2</sub> and NO<sub>x</sub> allowances for the purposes of meeting the SO<sub>2</sub> and NO<sub>x</sub> emissions standards set forth in Section 225.295.

c) Before March 1, 2010, and continuing each year thereafter, the designated representative of the EGUs in a CPS group must submit a report to the Agency that demonstrates compliance with the requirements of this Section for the previous calendar year and ozone season control period (May 1 through September 30), and includes identification of any NO<sub>x</sub> or SO<sub>2</sub> allowances that have been used for compliance with any NO<sub>x</sub> or SO<sub>2</sub> trading programs, and any NO<sub>x</sub> or SO<sub>2</sub> allowances that were sold, gifted, used, exchanged, or traded. A final report must be submitted to the Agency by August 31 of each year, providing either verification that the actions described in the initial report have taken place, or, if such actions have not taken place, an explanation of the changes that have occurred and the reasons for such changes.

(Source: Added at \_\_\_\_, effective \_\_\_\_)

#### Section 225.299 Combined Pollutant Standard: Clean Air Act Requirements

The SO<sub>2</sub> emissions rates set forth in the CPS shall be deemed to be best available retrofit technology ("BART") under the Visibility Protection provisions of the CAA (42 USC 7491), reasonably available control technology ("RACT") and reasonably available control measures ("RACM") for achieving fine particulate matter ("PM<sub>2.5</sub>") requirements under NAAQS in effect on August 31, 2007, as required by the CAA (42 USC 7502). The Agency may use the SO<sub>2</sub> and NO<sub>x</sub> emissions reductions required under the CPS in developing attainment demonstrations and demonstrating reasonable further progress for PM<sub>2.5</sub> and 8 hour ozone standards, as required under the CAA. Furthermore, in developing rules, regulations, or State Implementation Plans designed to comply with PM<sub>2.5</sub> and 8 hour ozone NAAQS, the Agency, taking into account all emission reduction efforts and other appropriate factors, will use best efforts to seek SO<sub>2</sub> and NO<sub>x</sub> emissions rates from other EGUs that are equal to or less than the rates applicable to the CPS group and will seek SO<sub>2</sub> and NO<sub>x</sub> reductions from other sources before seeking additional emissions reductions from any EGU in the CPS group.

(Source: Added at \_\_\_\_\_, effective \_\_\_\_\_)

#### SUBPART F: COMBINED POLLUTANT STANDARDS

Section 225.600 Purpose

The purpose of this Subpart F is to allow an alternate means of compliance with the emissions standards for mercury in Section 225.230(a) for specified EGUs through permanent shut down, installation of ACI, and the application of pollution control technology for NO<sub>x</sub>, PM, and SO<sub>2</sub> emissions that also reduce mercury emissions as a co-benefit and to establish permanent emissions standards for those specified EGUs. Unless otherwise provided for in this Subpart F, owners and operators of those specified EGUs are not excused from compliance with other applicable requirements of Subparts B, C, D, and E.

(Source: Repealed at \_\_\_\_, effective )

Section 225.605 Applicability

- a) As an alternative to compliance with the emissions standards of Section 225.230(a), the owner or operator of specified EGUs in this Subpart F located at Fisk, Crawford, Joliet, Powerton, Waukegan, and Will County power plants may elect for all of those EGUs as a group to demonstrate compliance pursuant to this Subpart F, which establishes control requirements and emissions standards for NO<sub>\*</sub>, PM, SO<sub>2</sub>, and mercury. For this purpose, ownership of a specified EGU is determined based on direct ownership, by holding a majority interest in a company that owns the EGU or EGUs, or by the common ownership of the company that owns the EGU, whether through a parent-subsidiary relationship, as a sister corporation, or as an affiliated corporation with the same parent corporation, provided that the owner or operator has the right or authority to submit a CAAPP application on behalf of the EGU.
- b) A specified EGU is a coal-fired EGU listed in Appendix A, irrespective of any subsequent changes in ownership of the EGU or power plant, the operator, unit designation, or name of unit.
- c) The owner or operator of each of the specified EGUs electing to demonstrate compliance with Section 225.230(a) pursuant to this Subpart must submit an application for a CAAPP permit modification to the Agency, as provided for in Section 225.220, that includes the information specified in Section 225.610 that clearly states the owner's or operator's election to demonstrate compliance with Section 225.230(a) pursuant to this Subpart F.
- d) If an owner or operator of one or more specified EGUs elects to demonstrate compliance with Section 225.230(a) pursuant to this Subpart F, then all specified EGUs owned or operated in Illinois by the owner or operator as of December 31, 2006, as defined in subsection (a) of this Section, are thereafter subject to the standards and control requirements of this Subpart F. Such EGUs are referred to as a Combined Pollutant Standard (CPS) group.
- e) If an EGU is subject to the requirements of this Section, then the requirements apply to all owners and operators of the EGU, and to the CAIR designated representative for the EGU.

(Source: Repealed at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.610 Notice of Intent

The owner or operator of one or more specified EGUs that intends to comply with Section 225.230(a) by means of this Subpart F must notify the Agency of its intention on or before December 31, 2007. The following information must accompany the notification:

- a) The identification of each EGU that will be complying with Section 225.230(a) pursuant to this Subpart F, with evidence that the owner or operator has identified all specified EGUs that it owned or operated in Illinois as of December 31, 2006, and which commenced commercial operation on or before December 31, 2004;
- b) If an EGU identified in subsection (a) of this Section is also owned or operated by a person different than the owner or operator submitting the notice of intent, a demonstration that the submitter has the right to commit the EGU or authorization from the responsible official for the EGU submitting the application; and
- c) A summary of the current control devices installed and operating on each EGU and identification of the additional control devices that will likely be needed for each EGU to comply with emission control requirements of this Subpart F.

(Source: Repealed at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.615 Control Technology Requirements and Emissions Standards for Mercury

a) — Control Technology Requirements for Mercury.

 For each EGU in a CPS group other than an EGU that is addressed by subsection (b) of this Section, the owner or operator of the EGU must install, if not already installed, and properly operate and maintain, by the dates set forth in subsection (a)(2) of this Section, ACI equipment complying with subsections (g), (h), (i), (j), and (k) of this Section, as applicable.

2) By the following dates, for the EGUs listed in subsections (a)(2)(A) and (B), which include hot and cold side ESPs, the owner or operator must install, if not already installed, and begin operating ACI equipment or the Agency must be given written notice that the EGU will be shut down on or before the following dates:

- A) Fisk 19, Crawford 7, Crawford 8, Waukegan 7, and Waukegan 8 on or before July 1, 2008; and
- B) Powerton 5, Powerton 6, Will County 3, Will County 4, Joliet 6, Joliet 7, and Joliet 8 on or before July 1, 2009.

- b) Notwithstanding subsection (a) of this Section, the following EGUs are not required to install ACI equipment because they will be permanently shut down, as addressed by Section 225.630, by the date specified:
  - 1) EGUs that are required to permanently shut down:
    - A) On or before December 31, 2007, Waukegan 6; and
    - B) On or before December 31, 2010, Will County 1 and Will County 2.
  - 2) Any other specified EGU that is permanently shut down by December 31, 2010.
- Beginning on January 1, 2015 and continuing thereafter, and measured on a rolling 12 month basis (the initial period is January 1, 2015, through December 31, 2015, and, then, for every 12 month period thereafter), each specified EGU, except Will County 3, shall achieve one of the following emissions standards:
  - An emissions standard of 0.0080 lbs mercury/GWh gross electrical output;
     or
  - 2) <u>A minimum 90 percent reduction of input mercury.</u>
- d) Beginning on January 1, 2016, and continuing thereafter, Will County 3 shall achieve the mercury emissions standards of subsection (c) of this Section measured on a rolling 12-month basis (the initial period is January 1, 2016 through December 31, 2016, and, then, for every 12-month period thereafter).
- e) At any time prior to the dates required for compliance in subsections (c) and (d) of this Section, the owner or operator of a specified EGU, upon notice to the Agency, may elect to comply with the emissions standards of subsection (c) of this Section measured on a rolling 12 month basis for one or more EGUs. Once an EGU is subject to the mercury emissions standards of subsection (c) of this Section, it shall not be subject to the requirements of subsections (g), (h), (i), (j) and (k) of this Section.
- f) Compliance with the mercury emissions standards or reduction requirement of this Section must be calculated in accordance with Section 225.230(a) or (b).
- g) For each EGU for which injection of halogenated activated carbon is required by subsection (a)(1) of this Section, the owner or operator of the EGU must inject halogenated activated carbon in an optimum manner, which, except as provided in subsection (h) of this Section, is defined as all of the following:

- 1) The use of an injection system for effective absorption of mercury, considering the configuration of the EGU and its ductwork;
- 2) The injection of halogenated activated carbon manufactured by Alstom, Norit, or Sorbent Technologies, or the injection of any other halogenated activated carbon or sorbent that the owner or operator of the EGU has demonstrated to have similar or better effectiveness for control of mercury emissions; and
- 3) The injection of sorbent at the following minimum rates, as applicable:
  - A) For an EGU firing subbituminous coal, 5.0 lbs per million actual cubic feet or, for any cyclone-fired EGU that will install a scrubber and baghouse by December 31, 2012, and which already meets an emission rate of 0.020 lb mercury/GWh gross electrical output or at least 75 percent reduction of input mercury, 2.5 lbs per million actual cubic feet;
  - B) For an EGU firing bituminous coal, 10.0 lbs per million actual cubic feet or, for any cyclone-fired EGU that will install a scrubber and baghouse by December 31, 2012, and which already meets an emission rate of 0.020 lb mercury/GWh gross electrical output or at least 75 percent reduction of input mercury, 5.0 lbs per million actual cubic feet;
  - C) For an EGU firing a blend of subbituminous and bituminous coal, a rate that is the weighted average of the rates specified in subsections (g)(3)(A) and (B), based on the blend of coal being fired; or
  - D) A rate or rates set lower by the Agency, in writing, than the rate specified in any of subsection (g)(3)(A), (B), or (C) of this Section on a unit-specific basis, provided that the owner or operator of the EGU has demonstrated that such rate or rates are needed so that carbon injection will not increase particulate matter emissions or opacity so as to threaten noncompliance with applicable requirements for particulate matter or opacity.
- 4) For purposes of subsection (g)(3) of this Section, the flue gas flow rate must be determined for the point sorbent injection; provided that this flow rate may be assumed to be identical to the stack flow rate if the gas temperatures at the point of injection and the stack are normally within 100° F, or the flue gas flow rate may otherwise be calculated from the stack flow rate, corrected for the difference in gas temperatures.

- h) The owner or operator of an EGU that seeks to operate an EGU with an activated carbon injection rate or rates that are set on a unit-specific basis pursuant to subsection (g)(3)(D) of this Section must submit an application to the Agency proposing such rate or rates, and must meet the requirements of subsections (h)(1) and (h)(2) of this Section, subject to the limitations of subsections (h)(3) and (h)(4) of this Section:
  - 1) The application must be submitted as an application for a new or revised federally enforceable operation permit for the EGU, and it must include a summary of relevant mercury emissions data for the EGU, the unitspecific injection rate or rates that are proposed, and detailed information to support the proposed injection rate or rates; and
  - 2) This application must be submitted no later than the date that activated carbon must first be injected. For example, the owner or operator of an EGU that must inject activated carbon pursuant to subsection (a)(1) of this Section must apply for unit-specific injection rate or rates by July 1, 2008. Thereafter, the owner or operator may supplement its application; and
  - 3) Any decision of the Agency denying a permit or granting a permit with conditions that set a lower injection rate or rates may be appealed to the Board pursuant to Section 39 of the Act; and
  - 4) The owner or operator of an EGU may operate at the injection rate or rates proposed in its application until a final decision is made on the application including a final decision on any appeal to the Board.
- i) During any evaluation of the effectiveness of a listed sorbent, alternative sorbent, or other technique to control mercury emissions, the owner or operator of an EGU need not comply with the requirements of subsection (g) of this Section for any system needed to carry out the evaluation, as further provided as follows:
  - 1) The owner or operator of the EGU must conduct the evaluation in accordance with a formal evaluation program submitted to the Agency at least 30 days prior to commencement of the evaluation;
  - 2) The duration and scope of the evaluation may not exceed the duration and scope reasonably needed to complete the desired evaluation of the alternative control techniques, as initially addressed by the owner or operator in a support document submitted with the evaluation program; and
  - 3) The owner or operator of the EGU must submit a report to the Agency no later than 30 days after the conclusion of the evaluation that describes the evaluation conducted and which provides the results of the evaluation; and

- 4) If the evaluation of alternative control techniques shows less effective control of mercury emissions from the EGU than was achieved with the principal control techniques, the owner or operator of the EGU must resume use of the principal control techniques. If the evaluation of the alternative control technique shows comparable effectiveness to the principal control technique, the owner or operator of the EGU may either continue to use the alternative control technique or it may resume use of the principal control technique. If the evaluation of the alternative control technique or it may resume use of the principal control technique. If the evaluation of the alternative control technique shows more effective control of mercury emissions than the control technique, the owner or operator of the EGU must continue to use the alternative control of mercury emissions than the control technique, the owner or operator of the EGU must continue to use the alternative control of mercury emissions than the control technique, the owner or operator of the EGU must continue to use the alternative control technique in a manner that is more effective than the principal control technique in a manner that is more effective than the principal control technique, so long as it continues to be subject to this Section.
- In addition to complying with the applicable recordkeeping and monitoring requirements in Sections 225.240 through 225.290, the owner or operator of an EGU that elects to comply with Section 225.230(a) by means of this Subpart F must also comply with the following additional requirements:
  - 1) For the first 36 months that injection of sorbent is required, it must maintain records of the usage of sorbent, the exhaust gas flow rate from the EGU, and the sorbent feed rate, in pounds per million actual cubic feet of exhaust gas at the injection point, on a weekly average;
  - 2) After the first 36 months that injection of sorbent is required, it must monitor activated sorbent feed rate to the EGU, flue gas temperature at the point of sorbent injection, and exhaust gas flow rate from the EGU, automatically recording this data and the sorbent carbon feed rate, in pounds per million actual cubic feet of exhaust gas at the injection point, on an hourly average; and
  - 3) If a blend of bituminous and subbituminous coal is fired in the EGU, it must keep records of the amount of each type of coal burned and the required injection rate for injection of activated carbon on a weekly basis.
- k) In addition to complying with the applicable reporting requirements in Sections 225.240 through 225.290, the owner or operator of an EGU that elects to comply with Section 225.230(a) by means of this Subpart F must also submit quarterly reports for the recordkeeping and monitoring conducted pursuant to subsection (j) of this Section.

(Source: Repealed at \_\_\_\_, effective \_\_\_\_)

Section 225.620 Emissions Standards for NO<sub>\*</sub> and SO<sub>2</sub>

a) - Emissions Standards for NO<sub>\*</sub> and Reporting Requirements.

- Beginning with calendar year 2012 and continuing in each calendar year thereafter, the CPS group, which includes all specified EGUs that have not been permanently shut down by December 31 before the applicable calendar year, must comply with a CPS group average annual NO<sub>\*</sub> emissions rate of no more than 0.11 lbs/mmBtu.
- 2) Beginning with ozone season control period 2012 and continuing in each ozone season control period (May 1 through September 30) thereafter, the CPS group, which includes all specified EGUs that have not been permanently shut down by December 31 before the applicable ozone season, must comply with a CPS group average ozone season NO<sub>x</sub> emissions rate of no more than 0.11 lbs/mmBtu.
- 3) The owner or operator of the specified EGUs in the CPS group must file, not later than one year after startup of any selective SNCR on such EGU, a report with the Agency describing the NO<sub>\*</sub> emissions reductions that the SNCR has been able to achieve.
- Emissions Standards for SO<sub>2</sub>. Beginning in calendar year 2013 and continuing in each calendar year thereafter, the CPS group must comply with the applicable CPS group average annual SO<sub>2</sub> emissions rate listed as follows:

| year      | lbs/mmBtu |  |  |
|-----------|-----------|--|--|
| 2013      | 0.44      |  |  |
| 2015      | 0.41      |  |  |
| 2015      |           |  |  |
| 2016      | <u> </u>  |  |  |
| 2017 2018 | 0.15      |  |  |
| 2010      | 0.11      |  |  |

- c) Compliance with the NO<sub>x</sub> and SO<sub>2</sub> emissions standards must be demonstrated in accordance with Sections 225.310, 225.410, and 225.510. The owner or operator of the specified EGUs must complete the demonstration of compliance pursuant to Section 225.635(c) before March 1 of the following year for annual standards and before November 30 of the particular year for ozone season control periods (May 1 through September 30) standards, by which date a compliance report must be submitted to the Agency.
- d) —— The CPS group average annual SO<sub>2</sub> emission rate, annual NO<sub>\*</sub> emission rate and ozone season NO<sub>\*</sub> emission rates shall be determined as follows:



Where:

| ER <sub>avg</sub> |   | - average annual or ozone season emission<br>rate in lbs/mmBbtu of all EGUs in the CPS |
|-------------------|---|--|
| HI.               | _ | group.   |
|                   |   | period of each EGU, in mmBtu.  |
|                   |   | - actual annual SO <sub>2</sub> tons of each EGU in the                                |
|                   |   | - actual annual or ozone season NO <sub>*</sub> tons of                                |
|                   |   | each EGU in the CPS group.   |
| <u> </u>          |   | -number of EGUs that are in the CPS group<br>each EGU in the CPS group.                |
| • .               |   |  |

(Source: Repealed at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.625 Control Technology Requirements for NO<sub>x</sub>, SO<sub>2</sub>, and PM Emissions

- a) --- Control Technology Requirements for NO<sub>\*</sub> and SO<sub>2</sub>.
  - On or before December 31, 2013, the owner or operator must either permanently shut down or install and have operational FGD equipment on Waukegan 7;
  - 2) On or before December 31, 2014, the owner or operator must either permanently shut down or install and have operational FGD equipment on Waukegan 8;
  - On or before December 31, 2015, the owner or operator must either permanently shut down or install and have operational FGD equipment on Fisk 19;
  - 4) If Crawford 7 will be operated after December 31, 2018, and not permanently shut down by this date, the owner or operator must:
    - A) On or before December 31, 2015, install and have operational SNCR or equipment capable of delivering essentially equivalent NO<sub>\*</sub> reductions on Crawford 7; and
    - B) On or before December 31, 2018, install and have operational FGD equipment on Crawford 7;

- 5) If Crawford 8 will be operated after December 31, 2017 and not permanently shut down by this date, the owner or operator must:
  - A) On or before December 31, 2015, install and have operational SNCR or equipment capable of delivering essentially equivalent NO<sub>\*</sub> emissions reductions on Crawford 8; and
  - B) On or before December 31, 2017, install and have operational FGD equipment on Crawford 8.
- b) Other Control Technology Requirements for SO<sub>2</sub>. Owners or operators of specified EGUs must either permanently shut down or install FGD equipment on each specified EGU (except Joliet 5), on or before December 31, 2018, unless an earlier date is specified in subsection (a) of this Section.
- c) Control Technology Requirements for PM. The owner or operator of the two specified EGUs listed in this subsection that are equipped with a hot side ESP must replace the hot side ESP with a cold side ESP, install an appropriately designed fabric filter, or permanently shut down the EGU by the dates specified. Hot-side ESP means an ESP on a coal-fired boiler that is installed before the boiler's air-preheater where the operating temperature is typically at least 550° F, as distinguished from a cold-side ESP that is installed after the air pre-heater where the operating temperature is typically no more than 350° F.
  - 1) Waukegan 7 on or before December 31, 2013; and
  - 2) Will County 3 on or before December 31, 2015.
- d) Beginning on December 31, 2008, and annually thereafter up to and including December 31, 2015, the owner or operator of the Fisk power plant must submit in writing to the Agency a report on any technology or equipment designed to affect air quality that has been considered or explored for the Fisk power plant in the preceding 12 months. This report will not obligate the owner or operator to install any equipment described in the report.
- e) Notwithstanding 35 Ill. Adm. Code 201.146(hhh), until an EGU has complied with the applicable requirements of subsections 225.625(a), (b), and (c), the owner or operator of the EGU must obtain a construction permit for any new or modified air pollution control equipment that it proposes to construct for control of emissions of mercury, NO<sub>\*</sub>, PM, or SO<sub>2</sub>.

(Source: Repealed at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.630 Permanent Shut Downs

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- a) The owner or operator of the following EGUs must permanently shut down the EGU by the dates specified:
  - 1) Waukegan 6 on or before December 31, 2007; and
  - 2) Will County 1 and Will County 2 on or before December 31, 2010.
- b) No later than 8 months before the date that a specified EGU will be permanently shut down, the owner or operator must submit a report to the Agency that includes a description of the actions that have already been taken to allow the shutdown of the EGU and a description of the future actions that must be accomplished to complete the shutdown of the EGU, with the anticipated schedule for those actions and the anticipated date of permanent shutdown of the unit.
- c) No later than six months before a specified EGU will be permanently shut down, the owner or operator shall apply for revisions to the operating permits for the EGU to include provisions that terminate the authorization to operate the unit on that date.
- d) If after applying for or obtaining a construction permit to install required control equipment, the owner or operator decides to permanently shut down a Specified EGU rather than install the required control technology, the owner or operator must immediately notify the Agency in writing and thereafter submit the information required by subsections (b) and (c) of this Section.
- e) Failure to permanently shut down a specified EGU by the required date shall be considered separate violations of the applicable emissions standards and control technology requirements of this Subpart F for NO<sub>\*</sub>, PM, SO<sub>2</sub>, and mercury.

(Source: Repealed at \_\_\_\_\_, effective \_\_\_\_)

Section 225.635 Requirements for CAIR SO<sub>2</sub>, CAIR NO<sub>\*</sub>, and CAIR NO<sub>\*</sub> Ozone Season Allowances

- a) The following requirements apply to the owner, the operator and the designated representative with respect to CAIR SO<sub>2</sub>, CAIR NO<sub>\*</sub>, and CAIR NO<sub>\*</sub> Ozone Season allowances:
  - 1) The owner, operator, and CAIR designated representative of specified EGUs in a CPS group is permitted to sell, trade, or transfer SO<sub>2</sub> and NO<sub>x</sub> emissions allowances of any vintage owned, allocated to, or earned by the specified EGUs (the "CPS allowances") to its affiliated Homer City, Pennsylvania generating station for as long as the Homer City Station needs the CPS allowances for compliance.

- 2) When and if the Homer City Station no longer requires all of the CPS allowances, the owner, operator, or CAIR designated representative of specified EGUs in CPS group may sell any and all remaining CPS allowances, without restriction, to any person or entity located anywhere, except that the owner or operator may not directly sell, trade, or transfer CPS allowances to a CAIR NO<sub>x</sub> or CAIR SO<sub>2</sub> unit located in Ohio, Indiana, Illinois, Wisconsin, Michigan, Kentucky, Missouri, Iowa, Minnesota, or Texas.
- 3) In no event shall this subsection (a) require or be interpreted to require any restriction whatsoever on the sale, trade, or exchange of the CPS allowances by persons or entities who have acquired the CPS allowances from the owner, operator, or CAIR designated representative of specified EGUs in a CPS group.
- b) The owner, operator, and CAIR designated representative of EGUs in a specified CPS group is prohibited from purchasing or using CAIR SO<sub>2</sub>, CAIR NO<sub>\*</sub>, and CAIR NO<sub>\*</sub> Ozone Season allowances for the purposes of meeting the SO<sub>2</sub> and NO<sub>\*</sub> emissions standards set forth in Section 225.620.
- c) Before March 1, 2010, and continuing each year thereafter, the CAIR designated representative of the EGUs in a CPS group must submit a report to the Agency that demonstrates compliance with the requirements of this Section for the previous calendar year and ozone season control period (May 1 through September 30), and includes identification of any CAIR allowances that have been used for compliance with the CAIR Trading Programs as set forth in Subparts C, D, and E, and any CAIR allowances that were sold, gifted, used, exchanged, or traded. A final report must be submitted to the Agency by August 31 of each year, providing either verification that the actions described in the initial report have taken place, or, if such actions have not taken place, an explanation of the changes that have occurred and the reasons for such changes.

(Source: Repealed at \_\_\_\_\_, effective \_\_\_\_\_)

Section 225.640 Clean Air Act Requirements

The SO<sub>2</sub>-emissions rates set forth in this Subpart F shall be deemed to be best available retrofit technology ("BART") under the Visibility Protection provisions of the CAA (42 USC 7491), reasonably available control technology ("RACT") and reasonably available control measures ("RACM") for achieving fine particulate matter ("PM<sub>2.5</sub>") requirements under NAAQS in effect on August 31, 2007, as required by the CAA (42 USC 7502). The Agency may use the SO<sub>2</sub> and NO<sub>x</sub>-emissions reductions required under this Subpart F in developing attainment demonstrations and demonstrating reasonable further progress for PM<sub>2.5</sub> and 8 hour ozone standards, as required under the CAA. Furthermore, in developing rules, regulations, or State Implementation Plans

designed to comply with PM<sub>2.5</sub> and 8 hour ozone NAAQS, the Agency, taking into account all emission reduction efforts and other appropriate factors, will use best efforts to seek SO<sub>2</sub> and NO<sub>\*</sub> emissions rates from other EGUs that are equal to or less than the rates applicable to the CPS group and will seek SO<sub>2</sub> and NO<sub>\*</sub> reductions from other sources before seeking additional emissions reductions from any EGU in the CPS group.

(Source: Repealed at \_\_\_\_\_, effective \_\_\_\_\_)

# 225.APPENDIX A Specified EGUs for Purposes of <u>the CPS</u> Subpart F (Midwest Generation's Coal-Fired Boilers as of July 1, 2006)

| Plant       | Permit<br>Number | Boiler                    | Permit designation   | <u>CPS</u> Subpart F<br>Designation                              |
|-------------|------------------|---------------------------|--|--|
| Crawford    | 031600AIN        | 7 .                       | Unit 7 Boiler BLR1<br>Unit 8 Boiler BLR2   | Crawford 7<br>Crawford 8   |
| Fisk        | 031600AMI        | 19                        | Unit 19 Boiler BLR19   | Fisk 19  |
| Joliet      | 197809AAO        | 71<br>72<br>81<br>82<br>5 | Unit 7 Boiler BLR71<br>Unit 7 Boiler BLR72<br>Unit 8 Boiler BLR81<br>Unit 8 Boiler BLR82<br>Unit 6 Boiler BLR5 | Joliet 7<br>Joliet 7<br>Joliet 8<br>Joliet 8<br>Joliet 6         |
| Powerton    | 179801AAA        | 51<br>52<br>61<br>62      | Unit 5 Boiler BLR 51<br>Unit 5 Boiler BLR 52<br>Unit 6 Boiler BLR 61<br>Unit 6 Boiler BLR 62                   | Powerton 5<br>Powerton 5<br>Powerton 6<br>Powerton 6             |
| Waukegan    | 097190AAC        | 17<br>7<br>8              | Unit 6 Boiler BLR17<br>Unit 7 Boiler BLR7<br>Unit 8 Boiler BLR8  | Waukegan 6<br>Waukegan 7<br>Waukegan 8                           |
| Will County | 197810AAK        | 1<br>2<br>3<br>           | Unit 1 Boiler BLR1<br>Unit 2 Boiler BLR2<br>Unit 3 Boiler BLR3<br>Unit 4 Boiler BLR4                           | Will County 1<br>Will County 2<br>Will County 3<br>Will County 4 |

(Source: Amended at \_\_\_\_\_, effective \_\_\_\_\_)

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