

**45CSR18**

**TITLE 45  
LEGISLATIVE RULE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
AIR QUALITY**

**SERIES 18  
CONTROL OF AIR POLLUTION FROM COMBUSTION OF SOLID WASTE**

**§45-18-1. General.**

1.1. Scope. – This rule adopts standards of performance, and establishes emission guidelines and compliance times pursuant to §§ 111(d) and 129 of the federal Clean Air Act for the control of certain designated pollutants from the following categories of solid waste combustors, combustion units, incinerators and incineration units in West Virginia:

1.1.a. Large municipal waste combustors subject to the standards of performance promulgated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR Part 60, Subpart Eb;

1.1.b. Small municipal waste combustion units subject to the standards of performance promulgated by the U.S. EPA under 40 CFR Part 60, Subpart AAAA;

1.1.c. Hospital/ medical/ infectious waste incinerators subject to the standards of performance promulgated by the U.S. EPA under 40 CFR Part 60, Subpart Ec, or the emission guidelines and compliance times promulgated by the U.S. EPA under 40 CFR Part 60, Subpart Ce and set forth in section 7 below;

1.1.d. Commercial and industrial solid waste incineration units subject to the standards of performance promulgated by the U.S. EPA under 40 CFR Part 60, Subpart CCCC, or the emission guidelines and compliance times promulgated by the U.S. EPA under 40 CFR Part 60, Subpart DDDD and set forth in section 9 below;

1.1.e. Other solid waste incineration units subject to the standards of performance promulgated by the U.S. EPA under 40 CFR Part 60, Subpart EEEE, and

1.1.f. Sewage sludge incineration units subject to the standards of performance promulgated by the U.S. EPA under 40 CFR Part 60, Subpart LLLL.

1.2. Authority. -- W. Va. Code § 22-5-4.

1.3. Filing Date. -- ~~June 16, 2016.~~

1.4. Effective Date. -- ~~July 1, 2016.~~

1.5. This rule codifies general procedures and criteria to implement a program of specific standards of performance, emission guidelines and compliance times for solid waste combustors, combustion units, incinerators and incineration units set forth in the Code of Federal Regulations and as listed below in Tables 18-1A, 18-1B, 18-2A, 18-2B, 18-1C, 18-2C, 18-3C, 18-4C, 18-5C, 18-6C, 18-7C, 18-8C and 18-9C.

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1.6. Neither compliance with the provisions of this rule nor the absence of specific language to cover particular situations constitutes approval or implies consent or ~~condonement~~ condonation of any emission that is released in any locality in such a manner or amount as to cause or contribute to statutory air pollution. Neither does it exempt nor excuse any person from complying with other applicable laws, ordinances, regulations or orders of governmental entities having jurisdiction over the combustion of solid waste.

1.7. Incorporation by Reference. -- Federal Counterpart Regulation. The Secretary has determined that a federal counterpart ~~rule~~ regulation exists. In accordance with the Secretary's recommendation, and with limited exception, this rule incorporates by reference 40 CFR Part 60, Subparts Eb, Ec, AAAA, CCCC, EEEE and LLLL effective ~~June 1, 2015~~ June 1, 2017.

~~1.8. Former Rules. This legislative rule amends 45CSR18 "Control of Air Pollution from Combustion of Solid Waste" which was filed April 4, 2014, and became effective June 1, 2014.~~

### **§45-18-2. Definitions.**

2.1. "Administrator" means the Administrator of the United States Environmental Protection Agency (U.S. EPA) or his or her designated representative.

2.2. "CFR" means the Code of Federal Regulations published by the Office of the Federal Register, National Archives and Records Service, General Services Administration.

2.3. "Clean Air Act" or "CAA" means the federal Clean Air Act, as amended, 42 U.S.C. § 7401, et seq.

2.4. "Commercial and industrial solid waste incineration unit" or "CISWI unit" means any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding six months, any solid waste as that term is defined in 40 CFR Part 241. If the operating unit burns materials other than traditional fuels as defined in 40 CFR § 241.2 that have been discarded, and ~~you do~~ the owner or operator does not keep and produce records as required by subdivision 9.11.u, the operating unit is a CISWI unit. While not all CISWI units will include all of the following components, a CISWI unit includes, but is not limited to, the solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The CISWI unit does not include air pollution control equipment or the stack. The CISWI unit boundary starts at the solid waste hopper (if applicable) and extends through two areas: the combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and the combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. The CISWI unit includes all ash handling systems connected to the bottom ash handling system.

2.5. "Hospital/ medical/ infectious waste incinerator" or "HMIWI unit" means any device that combusts any amount of hospital waste or medical/ infectious waste.

2.6. "Municipal waste combustor unit" or "municipal waste combustor" means any setting or equipment that combusts solid, liquid or gasified municipal solid waste including, but not limited to, field-erected incinerators (with or without heat recovery), modular incinerators (starved-air or excess-air), boilers (i.e., steam generating units), furnaces (whether suspension-fired, grate-fired, mass-fired, air

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curtain incinerators, or fluidized bed-fired), and pyrolysis/ combustion units.

2.6.a. Municipal waste combustors do not include:

~~2.6.a.1. pyrolysis/ combustion units located at a plastics/ rubber recycling unit as specified in 40 CFR § 60.50b(m);~~

~~2.6.a.2. Municipal waste combustors do not include~~ cement kilns firing municipal solid waste as specified in 40 CFR § 60.50b(p);

~~2.6.a.3. Municipal waste combustors do not include~~ internal combustion engines, gas turbines, or other combustion devices that combust landfill gases collected by landfill gas collection systems.

2.6.b. ~~The boundaries of a municipal waste combustor are defined as follows.~~ The municipal waste combustor unit includes, but is not limited to, the municipal solid waste fuel feed system, grate system, flue gas system, bottom ash system, and the combustor water system. The municipal waste combustor boundary starts at the municipal solid waste pit or hopper and extends through:

2.6.b.1. The combustor flue gas system, which ends immediately following the heat recovery equipment or, if there is no heat recovery equipment, immediately following the combustion chamber;

2.6.b.2. The combustor bottom ash system, which ends at the truck loading station or similar ash handling equipment that transfer the ash to final disposal, including all ash handling systems that are connected to the bottom ash handling system; and

2.6.b.3. The combustor water system, which starts at the feed water pump and ends at the piping exiting the steam drum or superheater.

2.7. “Other solid waste incineration unit” or “OSWI unit” means either a very small municipal waste combustion unit or an institutional waste incineration unit. Unit types listed in 40 CFR § 60.2887 are not OSWI units. While not all OSWI units will include all of the following components, an OSWI unit includes, but is not limited to, the municipal or institutional solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The OSWI unit does not include air pollution control equipment or the stack. The OSWI unit boundary starts at the municipal or institutional waste hopper (if applicable) and extends through two areas:

2.7.a. The combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and

2.7.b. The combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. The OSWI unit includes all ash handling systems connected to the bottom ash handling system.

2.8. “Person” means any and all persons, natural or artificial, including the state of West Virginia or any other state, the United States of America, any municipal, statutory, public or private corporation organized or existing under the laws of this or any other state or country, and any firm, partnership or association of whatever nature.

2.9. “Secretary” means the Secretary of the Department of Environmental Protection or such other

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person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8.

2.10. “Standard Metropolitan Statistical Area” means any areas listed in OMB Bulletin No. 93-17 entitled “Revised Statistical Definitions for Metropolitan Areas” dated June 30, 1993.

~~2.11. “You”, as used in sections 8 and 9 or 40 CFR Part 60 Subparts CCCC and DDDD, means the owner or operator of a CISWI unit.~~

2.12. Other words and phrases used in this rule, unless otherwise indicated, shall have the meaning ascribed to them in 40 CFR Part 60 Subparts A, B, Ce, Eb, Ec, AAAA, CCCC, DDDD, EEEE and LLLL as applicable. Words and phrases not defined therein shall have the meaning given to them in the federal Clean Air Act.

### **§45-18-3. Adoption of Standards.**

3.1. The Secretary hereby adopts and incorporates by reference the definitions of 40 CFR Part 60, Subparts A and B, the standards of performance and definitions set forth in 40 CFR Part 60, Subparts Eb, Ec, AAAA, CCCC, EEEE and LLLL, including any applicable reference methods, performance specifications and other test methods which are appended to ~~these~~ those standards and contained in ~~these~~ those subparts, effective ~~June 1, 2015~~ June 1, 2017.

### **§45-18-4. Requirements for New Large Municipal Waste Combustors.**

4.1. Requirements for New LMWC Units. -- The owner or operator of a new LMWC unit under subsection 4.2 shall comply with all applicable standards of performance, requirements, and provisions of 40 CFR Part 60 Subpart Eb, including any reference methods, performance specifications, and other test methods associated with Subpart Eb. No person shall construct or operate, or cause to be constructed or operated, a new LMWC unit that results in a violation of 40 CFR Part 60, Subpart Eb or this rule.

4.2. Applicability. -- The owner or operator of a LMWC unit that meets the following criteria ~~shall be~~ is subject to the requirements for new LMWC units set forth in this section 4. A new LMWC unit is a LMWC unit that either:

4.2.a. Commenced construction after September 20, 1994; or

4.2.b. Commenced modification or reconstruction after June 19, 1996.

### **§45-18-5. Requirements for New Small Municipal Waste Combustion Units.**

5.1. Requirements for New SMWC Units. -- The owner or operator of a new SMWC unit under this ~~subsection 5.2~~ shall comply with all applicable standards of performance, requirements, and provisions of 40 CFR Part 60 Subpart AAAA, including any reference methods, performance specifications, and other test methods associated with Subpart AAAA. No person shall construct or operate, or cause to be constructed or operated, a new SMWC unit that results in a violation of 40 CFR Part 60, Subpart AAAA or this rule.

5.2. Applicability. -- The owner or operator of a SMWC unit that meets the following criteria ~~shall be~~ is subject to the requirements for new SMWC units set forth in this section ~~5~~. A new SMWC unit is a

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SMWC unit that either:

- 5.2.a. Commenced construction after August 30, 1999; or
- 5.2.b. Commenced modification or reconstruction after June 6, 2001.

### **§45-18-6. Requirements for New Hospital/ Medical/ Infectious Waste Incinerators.**

6.1. Requirements for New HMIWI Units. -- The owner or operator of a new HMIWI unit under this subsection 6.2 shall comply with all applicable standards of performance, requirements, and provisions of 40 CFR Part 60, Subpart Ec, including any reference methods, performance specifications, and other test methods associated with Subpart Ec. No person shall construct, reconstruct, modify or operate, or cause to be constructed, reconstructed, modified or operated a new HMIWI unit that results in a violation of 40 CFR Part 60, Subpart Ec or this rule.

6.2. Applicability. -- The owner or operator of a HMIWI unit that meets the following criteria ~~shall be~~ is subject to the requirements for new HMIWI units set forth in this section 6. A new HMIWI unit is a HMIWI unit that either:

- 6.2.a. Commenced construction after December 1, 2008; or
- 6.2.b. Commenced modification after April 6, 2010.

6.3. Physical or Operational Changes. Physical or operational changes made to an HMIWI unit to comply with the emission guidelines in section 7 below and 40 CFR Part 60, Subpart Ce do not qualify as a reconstruction or modification under this section 6 and 40 CFR Part 60, Subpart Ec.

### **§45-18-7. Requirements for Existing Hospital/ Medical/ Infectious Waste Incinerators.**

7.1. Requirements for Existing HMIWI Units. -- The owner or operator of an existing HMIWI unit under this subsection 7.2 shall comply with the applicable emission guidelines, compliance times, requirements, and provisions of 40 CFR Part 60, Subpart Ce set forth in this section 7 and below in Tables 18-1A, 18-1B, 18-2A and 18-2B, including any reference methods, performance specifications, and other test methods associated with Subpart Ce. No person shall reconstruct, modify or operate, or cause to be reconstructed, modified or operated, an existing HMIWI unit that results in a violation of 40 CFR Part 60 Subpart Ce, or this rule.

7.2. Applicability. -- HMIWI units that are designated facilities under subdivision 7.2.a ~~shall be~~ are subject to the requirements for existing HMIWI units set forth ~~in section 7~~ herein.

7.2.a. Designated Facilities. -- Except as provided in subdivisions 7.2.b through 7.2.h, the designated facility to which the emissions guidelines apply is each individual HMIWI unit in West Virginia:

7.2.a.1. For which construction was commenced on or before June 20, 1996, or for which modification was commenced on or before March 16, 1998; or

7.2.a.2. For which construction was commenced after June 20, 1996 but no later than December 1, 2008, or for which modification is commenced after March 16, 1998 but no later than April

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6, 2010.

7.2.b. A combustor is not subject to this section during periods when only pathological waste, low-level radioactive waste, and/or chemotherapeutic waste is burned, provided the owner or operator of the combustor:

7.2.b.1. Notifies the ~~Administrator~~ Secretary of an exemption claim; and

7.2.b.2. Keeps records on a calendar quarter basis of the periods of time when only pathological waste, low-level radioactive waste, and/or chemotherapeutic waste is burned.

7.2.c. Any co-fired combustor is not subject to this section if the owner or operator of the co-fired combustor:

7.2.c.1. Notifies the ~~Administrator~~ Secretary of an exemption claim;

7.2.c.2. Provides an estimate of the relative weight of hospital waste, medical/infectious waste, and other fuels and/or wastes to be combusted; and

7.2.c.3. Keeps records on a calendar quarter basis of the weight of hospital waste and medical/infectious waste combusted and the weight of all other fuels and wastes combusted at the co-fired combustor.

7.2.d. ~~Any combustor required to have a permit under Section 3005 of the Solid Waste Disposal Act is not subject to this section.~~ Units not subject to this section:

7.2.d.1. Any combustor required to have a permit under Section 3005 of the Solid Waste Disposal Act;

~~7.2.e. 7.2.d.2.~~ Any combustor which meets the applicability requirements under 40 CFR Part 60, Subparts Cb, Ea, or Eb (standards or guidelines for certain municipal waste combustors) ~~is not subject to this section;~~

~~7.2.f. 7.2.d.3.~~ Any pyrolysis unit ~~is not subject to this section;~~ and

~~7.2.g. 7.2.d.4.~~ Cement kilns firing hospital waste and/or medical/ infectious waste ~~are not subject to this section.~~

~~7.2.h. 7.2.e.~~ Physical or operational changes made to an existing HMIWI unit solely for the purpose of complying with emission guidelines under this section are not considered a modification and do not result in an existing HMIWI unit becoming subject to the provisions of 40 CFR Part 60, Subpart Ec.

~~7.2.i. 7.2.f.~~ On or before September 15, 2000, the owner or operator of an existing HMIWI unit shall operate pursuant to a Title V permit in accordance with the requirements of 45CSR30.

~~7.2.j. 7.2.g.~~ The requirements of 40 CFR §§62.12150-12152, as amended and approved on August 3, 2009, and the related provisions of 40 CFR Part 60, Subpart Ce as promulgated on September 15, 1997, shall apply to the designated facilities under paragraph 7.2.a.1 until one year after the effective date of

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~~U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units. Upon one year after the effective date of U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units, designated facilities under paragraph 7.2.a.1 are no longer subject to the requirements of 40 CFR Part 60, Subpart C as promulgated on September 15, 1997, but are subject to the requirements of 40 CFR Part 62, Subpart XX, as amended in accordance with the October 6, 2009 provisions of 40 CFR Part 60, Subpart C. Designated facilities under paragraph 7.2.a.1 are subject to the requirements of 40 CFR Part 62, Subpart XX.~~

### 7.3. Emissions Guidelines.

7.3.a. The owner or operator of an existing HMIWI unit shall comply with the following emissions limits as applicable:

7.3.a.1. For a designated facility set forth in paragraph 7.2.a.1 subject to the emissions guidelines ~~as promulgated on September 15, 1997~~, the requirements listed below in Table 18-1A, except as provided in subdivision 7.3.b;

7.3.a.2. For a designated facility set forth in paragraph 7.2.a.1 subject to the emissions guidelines ~~as amended on October 6, 2009~~, the requirements listed in Table 18-1B, except as provided in subdivision 7.3.b;

7.3.a.3. For a designated facility set forth in paragraph 7.2.a.2, the more stringent of the requirements listed in Table 18-1B and Table 1A of 40 CFR Part 60, Subpart C, ~~as amended October 6, 2009~~.

7.3.b. The owner or operator of any small HMIWI unit constructed on or before June 20, 1996, which is located more than 50 miles from the boundary of the nearest Standard Metropolitan Statistical Area and which burns less than 2,000 pounds per week of hospital waste and medical/infectious waste shall comply with emissions limits in paragraphs 7.3.b.1 and 7.3.b.2, as applicable. The ~~2,000 lb/week~~ pounds per week limitation does not apply during performance tests.

7.3.b.1. For a designated facility under paragraph 7.2.a.1 subject to the emissions guidelines ~~as promulgated on September 15, 1997~~, the requirements listed in Table 18-2A; and

7.3.b.2. For a designated facility under paragraph 7.2.a.1 subject to the emissions ~~guidelines as amended on October 6, 2009~~, the requirements listed in Table 18-2B.

7.3.c. The owner or operator of any existing HMIWI unit shall comply with the following stack opacity requirements, as applicable:

7.3.c.1. For a designated facility under paragraph 7.2.a.1 subject to the emissions ~~guidelines as promulgated on September 15, 1997~~, the requirements in 40 CFR §60.52c(b)(1); and

7.3.c.2. For a designated facility under paragraph 7.2.a.1 subject to the emissions guidelines ~~as amended on October 6, 2009~~ and a designated facility under paragraph 7.2.a.2, the requirements in 40 CFR §60.52c(b)(2).

7.4. Operator Training and Qualification Guidelines. -- The owner or operator of an existing HMIWI unit shall comply with the operator training and qualification requirements specified in 40 CFR §60.53c:

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7.4.a. For a designated facility under paragraph 7.2.a.1, by July 28, 2001, and

7.4.b. For a designated facility under paragraph 7.2.a.2, at the time of initial facility start-up.

7.5. Waste Management Guidelines. -- The owner or operator of an existing HMIWI unit under paragraphs 7.2.a.1 and 7.2.a.2 shall comply with the waste management plan specified in 40 CFR §60.55c within one year after the date of U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units under 40 CFR Part 60, Subpart Ce requirements, ~~as revised October 6, 2009.~~

### 7.6. Inspection Guidelines.

7.6.a. The owner or operator of each small HMIWI unit subject to the emissions limits under subdivision 7.3.b and each HMIWI unit subject to the emissions limits under paragraphs 7.3.a.2 and 7.3.a.3 shall perform an initial equipment inspection within one year after the date of U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units under 40 CFR Part 62, Subpart XX, and the related provisions of 40 CFR Part 60, Subpart Ce, ~~as revised October 6, 2009.~~ The initial equipment inspection shall include the following:

7.6.a.1. Inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation; and cleaning of pilot flame sensor, as necessary;

7.6.a.2. Ensuring proper adjustment of primary and secondary chamber combustion air, and adjust as necessary;

7.6.a.3. Inspection of hinges and door latches and lubrication as necessary;

7.6.a.4. Inspection of dampers, fans, and blowers for proper operation;

7.6.a.5. Inspection of HMIWI unit door and door gaskets for proper sealing;

7.6.a.6. Inspection of motors for proper operation;

7.6.a.7. Inspection of primary chamber refractory lining; cleaning and repairing or replacing lining as necessary;

7.6.a.8. Inspection of incinerator shell for corrosion and hot spots;

7.6.a.9. Inspection of secondary and tertiary chamber and stack, cleaning as necessary;

7.6.a.10. Inspection of mechanical loader, including limit switches, for proper operation, if applicable;

7.6.a.11. Visual inspection of waste bed (grates), and repairing or sealing, as appropriate;

7.6.a.12. For the burn cycle that follows the inspection, documentation that the incinerator is operating properly and making any necessary adjustments;

7.6.a.13. Inspection of air pollution control device(s) for proper operation, if applicable;



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7.6.a.14. Inspection of waste heat boiler systems to ensure proper operation, if applicable;

7.6.a.15. Inspection of bypass stack components;

7.6.a.16. Ensuring proper calibration of thermocouples, sorbent feed systems and any other monitoring equipment; and

7.6.a.17. Generally observing that the equipment is maintained in good operating condition.

7.6.b. Within ten operating days following an equipment inspection, all necessary repairs shall be completed unless the owner or operator obtains written approval from the Secretary establishing a date whereby all necessary repairs of the designated facility shall be completed.

7.6.c. The owner or operator of each small HMIWI unit subject to the emissions limits under subdivision 7.3.b and each HMIWI unit subject to the emissions limits under paragraphs 7.3.a.2 and 7.3.a.3 shall perform an equipment inspection annually (no more than 12 months following the previous annual equipment inspection), as outlined in subdivision 7.6.a.

7.6.d. The owner or operator of each small HMIWI unit subject to the emissions limits under paragraph 7.3.b.2 and each HMIWI unit subject to the emissions limits under paragraphs 7.3.a.2 and 7.3.a.3 shall perform an initial air pollution control device inspection, as applicable, within one year following approval of the 111(d)/129 State Plan revision for HMIWI units under 40 CFR Part 62, Subpart XX, and the related provisions of 40 CFR Part 60, Subpart C, ~~as revised October 6, 2009~~. The initial air pollution control device inspection shall include the following:

7.6.d.1. Inspect air pollution control device(s) for proper operation, if applicable;

7.6.d.2. Ensure proper calibration of thermocouples, sorbent feed systems, and any other monitoring equipment; and

7.6.d.3. Generally observe that the equipment is maintained in good operating condition.

7.6.e. Within ten operating days following an air pollution control device inspection under subdivision 7.6.d, the owner or operator shall complete all necessary repairs ~~shall be completed~~ unless the owner or operator obtains written approval from the Secretary establishing a date whereby the owner or operator shall complete all necessary repairs of the designated facility ~~shall be completed~~.

7.6.f. The owner or operator of each small HMIWI unit subject to the emissions limits under paragraph 7.3.b.2 and each HMIWI unit subject to the emissions limits under paragraphs 7.3.a.2 and 7.3.a.3 shall perform an air pollution control device inspection, as applicable, annually (no more than 12 months following the previous annual air pollution control device inspection), as outlined in subdivision 7.6.d.

### 7.7. Compliance, Performance Testing, and Monitoring Guidelines.

7.7.a. Except as provided in subdivision 7.7.b, the owner or operator of a HMIWI unit shall comply with the requirements for compliance and performance testing listed in 40 CFR § 60.56c, with the following exclusions:

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7.7.a.1. For a designated facility under paragraph 7.2.a.1 subject to the emissions limits in paragraph 7.3.a.1, the test methods listed in 40 CFR §§ 60.56c(b)(7) and (8), the fugitive emissions testing requirements under 40 CFR §§ 60.56c(b)(14) and (c)(3), the CO CEMS requirements under 40 CFR § 60.56c(c)(4), and the compliance requirements for monitoring listed in 40 CFR §§ 60.56c(c)(5)(ii) through (v), (c)(6), (c)(7), (e)(6) through (10), (f)(7) through (10), (g)(6) through (10), and (h).

7.7.a.2. For a designated facility under paragraphs 7.2.a.1 and 7.2.a.2 subject to the emissions limits in paragraphs 7.3.a.2 and 7.3.a.3, the annual fugitive emissions testing requirements under 40 CFR § 60.56c(c)(3), the CO CEMS requirements under 40 CFR §60.56c(c)(4), and the compliance requirements for monitoring listed in 40 CFR §§ 60.56c(c)(5)(ii) through (v), (c)(6), (c)(7), (e)(6) through (10), (f)(7) through (10), and (g)(6) through (10). Sources subject to the emissions limits under paragraphs 7.3.a.2 and 7.3.a.3 may, however, elect to use CO CEMS as specified under 40 CFR § 60.56c(c)(4) or bag leak detection systems as specified under 40 CFR § 60.57c(h).

7.7.b. Except as provided in paragraphs 7.7.b.1 and 7.7.b.2, the owner or operator of a small HMIWI unit subject to the emissions limits under subdivision 7.3.b shall comply with the performance testing requirements listed in 40 CFR § 60.56c. The 2,000 lb/week pounds per week limitation under subdivision 7.3.b does not apply during performance tests.

7.7.b.1. For a designated facility under paragraph 7.2.a.1 subject to the emissions limits under paragraph 7.3.b.1, the test methods listed in 40 CFR §§ 60.56c(b)(7), (8), (12), (13) (Pb and Cd), and (14), the annual PM, CO, and HCl emissions testing requirements under 40 CFR § 60.56c(c)(2), the annual fugitive emissions testing requirements under 40 CFR § 60.56c(c)(3), the CO CEMS requirements under 40 CFR § 60.56c(c)(4), ~~and the~~ The compliance requirements for monitoring listed in 40 CFR §§ 60.56c(c)(5) through (7), and (d) through (k) do not apply.

7.7.b.2. For a designated facility under paragraph 7.2.a.2 subject to the emissions limits under paragraph 7.3.b.2, the annual fugitive emissions testing requirements under 40 CFR § 60.56c(c)(3), the CO CEMS requirements under 40 CFR § 60.56c(c)(4), and the compliance requirements for monitoring listed in 40 CFR §§ 60.56c(c)(5)(ii) through (v), (c)(6), (c)(7), (e)(6) through (10), (f)(7) through (10), and (g)(6) through (10) do not apply. Sources subject to the emissions limits under paragraph 7.3.b.2 may, however, elect to use CO CEMS as specified under 40 CFR § 60.56c(c)(4) or bag leak detection systems as specified under 40 CFR § 60.57c(h).

7.7.c. The owner or operator of a small HMIWI unit subject to the emissions limits under subdivision 7.3.b that is not equipped with an air pollution control device shall comply with the following compliance and performance testing requirements:

7.7.c.1. Establishment of maximum charge rate and minimum secondary chamber temperature as site-specific operating parameters during the initial performance test to determine compliance with applicable emission limits;

7.7.c.2. Following the date on which the initial performance test is completed or is required to be completed under 40 CFR § 60.8, whichever date comes first, the small HMIWI unit shall not operate above the maximum charge rate or below the minimum secondary chamber temperature measured as three-hour rolling averages (calculated each hour as the average of the previous three operating hours) at all times. Operating parameter limits do not apply during performance tests. Operation above the maximum charge rate or below the minimum secondary chamber temperature shall constitute a violation

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of the established operating parameter(s).

7.7.c.3. Operation above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the PM, CO and dioxin/ furan emission limits, except as provided in paragraph 7.7.c.4; and

7.7.c.4. The owner or operator of a small HMIWI unit may conduct a repeat performance test within 30 days of violation of applicable operating parameter(s) to demonstrate that the small HMIWI unit is not in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to this paragraph shall be conducted under process and control device operating conditions duplicating as nearly as possible those that indicated a violation under paragraph 7.7.c.3;

7.7.d. The owner or operator of a HMIWI unit subject to the emissions limits under subdivisions 7.3.a and 7.3.b shall comply with the requirements for monitoring listed in 40 CFR § 60.57c, except as provided for under subdivision 7.7.e.

7.7.e. The owner or operator of a small HMIWI unit subject to the emissions limits under subdivision 7.3.b that is not equipped with an air pollution control device shall comply with the following monitoring requirements:

7.7.e.1. Installation, calibration (to manufacturer's specifications), maintenance and operation of a device for measuring and recording the temperature of the secondary chamber on a continuous basis, the output of which shall be recorded, at a minimum once every minute throughout operation;

7.7.e.2. Installation, calibration (to manufacturer's specifications), maintenance and operation of a device that automatically measures and records the date, time, and weight of each charge fed into the HMIWI unit;

7.7.e.3. The owner or operator of a HMIWI unit shall obtain monitoring data at all times during HMIWI unit operation except during periods of monitoring equipment malfunction, calibration or repair. At a minimum, the owner or operator shall obtain valid monitoring data ~~shall be obtained~~ for 75% of the operating hours per day and for 90% of the operating hours per calendar quarter that the HMIWI unit is combusting hospital waste or medical/ infectious waste.

7.7.f. The owner or operator of a designated facility under paragraphs 7.2.a.1 or 7.2.a.2 subject to emissions limits under paragraphs 7.3.a.2, 7.3.a.3 or 7.3.b.2 may use the results of previous emissions tests to demonstrate compliance with the emissions limits, provided that the conditions in paragraphs 7.7.f.1 through 7.7.f.3 are met:

7.7.f.1. The designated facility's previous emissions tests ~~shall have been~~ were conducted using the applicable procedures and test methods listed in 40 CFR § 60.56c(b). Previous emissions test results obtained using EPA-accepted voluntary consensus standards are also acceptable.

7.7.f.2. The HMIWI unit at the designated facility ~~shall is~~ currently ~~be~~ operated in a manner (e.g., with charge rate, secondary chamber temperature, etc.) that would be expected to result in the same or lower emissions than observed during the previous emissions test(s), ~~and the~~ The HMIWI unit may not have been modified such that emissions would be expected to exceed (notwithstanding normal test-to-test variability) the results from previous emissions test(s).

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7.7.f.3. The previous emissions test(s) ~~shall have been~~ were conducted in 1996 or later.

### 7.8. Reporting and Recordkeeping Guidelines.

7.8.a. Except as provided in paragraphs 7.8.a.1 and 7.8.a.2, the owner or operator of an existing HMIWI unit shall comply with the reporting and recordkeeping requirements listed in 40 CFR §§ 60.58c(b) through (g).

7.8.a.1. For a designated facility under paragraph 7.2.a.1 subject to emissions limits under paragraphs 7.3.a.1 or 7.3.b.1, excluding 40 CFR §§ 60.58c(b)(2)(ii) (fugitive emissions), (b)(2)(viii) (NO<sub>x</sub> reagent), (b)(2)(xvii) (air pollution control device inspections), (b)(2)(xviii) (bag leak detection system alarms), (b)(2)(xix) (CO CEMS data), and (b)(7) (siting documentation).

7.8.a.2. For a designated facility under paragraphs 7.2.a.1 or 7.2.a.2 subject to emissions limits under paragraphs 7.3.a.2, 7.3.a.3 or 7.3.b.2, excluding 40 CFR §§ 60.58c(b)(2)(xviii) (bag leak detection system alarms), (b)(2)(xix) (CO CEMS data), and (b)(7) (siting documentation).

7.8.b. The owner or operator of each HMIWI unit subject to the emissions limits under subsection 7.3 shall:

7.8.b.1. As specified in subsection 7.6, maintain records of the annual equipment inspections that are required for each HMIWI unit subject to the emissions limits under paragraphs 7.3.a.2, 7.3.a.3 and subdivision 7.3.b; the annual air pollution control device inspections that are required for each HMIWI unit subject to the emissions limits under paragraphs 7.3.a.2, 7.3.a.3 and 7.3.b.2; any required maintenance; and any repairs not completed within ten days of an inspection or repair date approved by the Secretary; and

7.8.b.2. Submit an annual report containing information recorded under paragraph 7.8.b.1 no later than 60 days following the year in which data were collected. The owner or operator shall send subsequent reports ~~shall be sent~~ no later than 12 calendar months following the previous report (once the unit is subject to permitting requirements under 45CSR30, the owner or operator shall submit these reports semiannually). The owner or operator shall sign and certify the report ~~shall be signed and certified~~ in accordance with subdivision 7.8.c.

7.8.c. Where reports are required to be submitted to the Secretary under the terms of a permit issued pursuant to 45CSR13, 45CSR14, 45CSR19 or 45CSR30, the owner or operator shall sign and certify the reports ~~shall be signed and certified~~ in accordance with the requirements of the applicable permitting rule. Where reports are required to be submitted to the Secretary under this rule, and no permit is in effect under 45CSR13, 45CSR14, 45CSR19 or 45CSR30, the facilities manager shall sign the report, ~~shall be signed by the facilities manager and which~~ shall contain a certification stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

### 7.9. Compliance Times.

7.9.a. Except as provided in subdivisions 7.9.b, 7.9.c and 7.9.d, on or after July 28, 2001, the owner or operator of any existing HMIWI unit subject to the requirements of 40 CFR Part 62, Subpart XX, and the related provisions of 40 CFR Part 60, Subpart Ce ~~as promulgated on September 15, 1997,~~ shall be in compliance with all applicable provisions of this section.

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7.9.b. No later than November 28, 2000, the owner or operator of an existing HMIWI unit required to install air pollution control equipment shall submit a compliance plan and schedule subject to the approval of the Secretary that meets the following criteria:

7.9.b.1. No later than July 28, 2001, if a facility that plans to install air pollution control equipment other than a dry scrubber followed by a fabric filter, a wet scrubber or dry scrubber followed by a fabric filter and a wet scrubber, the facility shall submit a petition for site specific operating parameters under 40 CFR § 60.56c(i) to the Administrator and the Secretary;

7.9.b.2. The facility shall obtain, no later than July 28, 2001, services of an architectural and engineering firm regarding air pollution device(s) ~~shall be obtained~~;

7.9.b.3. The facility shall order, no later than January 28, 2002, design drawings of an air pollution device(s) ~~shall be ordered~~;

7.9.b.4. The facility shall order, no later than January 28, 2002, air pollution device(s) ~~shall be ordered~~;

7.9.b.5. The facility shall initiate, no later than July 28, 2002, site preparation for installation of the air pollution device(s) ~~shall be initiated~~;

7.9.b.6. The facility shall conduct, no later than April 28, 2002, initial startup of the air pollution device(s) ~~shall be conducted~~;

7.9.b.7. The facility shall conduct, no later than April 28, 2002, initial compliance test(s) of the air pollution device(s) ~~shall be conducted~~; and

7.9.b.8. No later than September 16, 2002, the owner or operator of an existing HMIWI unit shall not allow or cause to be allowed a HMIWI unit to be operated except in compliance with all applicable provisions of this section.

7.9.c. An owner or operator of an existing HMIWI unit who submits in writing to the Secretary a request for an extension to comply beyond the compliance dates under subdivision 7.9.b, shall submit to the Secretary no later than April 28, 2001, the following information:

7.9.c.1. An analysis to support the need for an extension, including an explanation of why a time period up to three years after July 28, 2000 is not sufficient time to comply with subdivision 7.9.b;

7.9.c.2. A demonstration of the feasibility to transport the waste offsite to a commercial medical waste treatment and disposal facility on a temporary or permanent basis; and

7.9.c.3. Measurable and enforceable incremental steps of progress to be taken towards compliance with the emission limits contained in Table 18-1A, or Table 18-2A for Small Rural Units, as applicable.

7.9.d. ~~The owner or operator of an existing HMIWI unit will be notified~~ The Secretary will notify the owner or operator of an existing HMIWI, in writing, ~~by the Secretary~~ of his or her decision ~~as to whether an extension shall be granted or denied~~ either to grant or deny the request for extension. The

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owner or operator shall comply with one of the following:

7.9.d.1. If the request for extension is denied, the owner or operator shall submit a compliance plan in accordance with subdivision 7.9.b no later than 30 days after denial of the request for extension, or July 28, 2001, whichever is later; or

7.9.d.2. If the request for extension is granted, the owner or operator shall submit a compliance plan and schedule commensurate with the granted extension no later than 30 days after the date the request for extension ~~has been~~ was granted.

7.9.d.3. If an extension is granted by the Secretary, the owner or operator shall comply in an expeditious manner with the §111(d)/129 plan requirements of Part 62, Subpart XX, §§ 62.12150 through 62.12152 on or before the date three years after U.S. EPA approval of the West Virginia §111(d)/129 plan (but not later than September 16, 2002), for the emissions guidelines ~~as promulgated on September 15, 1997,~~ and on or before the date three years after U.S. EPA approval of an amended West Virginia §111(d)/129 plan (but not later than October 6, 2014), for the emissions guidelines ~~as amended on October 6, 2009.~~

7.9.e. Except as provided in subdivisions 7.9.f, 7.9.g and 7.9.h, one year after the effective date of U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units, the owner or operator of any existing HMIWI unit subject to the requirements of 40 CFR Part 62, Subpart XX, and the related provisions of 40 CFR Part 60, Subpart Ce ~~as promulgated on October 6, 2009,~~ shall be in compliance with all applicable provisions of this section.

7.9.f. No later than 120 days after the effective date of U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units, the owner or operator of an existing HMIWI unit required to install air pollution control equipment shall submit an expeditious compliance plan and schedule subject to the approval of the Secretary that meets the following criteria:

7.9.f.1. No later than 12 months after the effective date of U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units, a facility that plans to install air pollution control equipment other than a dry scrubber followed by a fabric filter, a wet scrubber or dry scrubber followed by a fabric filter and a wet scrubber shall submit a petition for site specific operating parameters under 40 CFR § 60.56c(i) to the Administrator and the Secretary;

7.9.f.2. The facility shall obtain, no later than 12 months after the effective date of U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units, services of an architectural and engineering firm regarding air pollution device(s) ~~shall be obtained;~~

7.9.f.3. The facility shall order, no later than 18 months after the effective date of U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units, design drawings of an air pollution device(s) ~~shall be ordered;~~

7.9.f.4. The facility shall order, no later than 18 months after the effective date of U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units, air pollution device(s) ~~shall be ordered;~~

7.9.f.5. The facility shall initiate, no later than 18 months after the effective date of U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units, site preparation for installation of the air pollution device(s) ~~shall be initiated;~~

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7.9.f.6. The facility shall conduct, no later than 30 months after the effective date of U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units, initial startup of the air pollution device(s) ~~shall be conducted~~;

7.9.f.7. The facility shall conduct, no later than 30 months after the effective date of U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units, initial compliance test(s) of the air pollution device(s) ~~shall be conducted~~; and

7.9.f.8. No later than October 6, 2014, the owner or operator of an existing HMIWI unit shall not allow or cause to be allowed a HMIWI unit to be operated except in compliance with all applicable provisions of this section.

7.9.g. An owner or operator of an existing HMIWI unit who submits in writing to the Secretary a request for an extension to comply beyond the compliance dates under subdivision 7.9.f. shall submit to the Secretary no later than nine months after the effective date of U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units, the following information:

7.9.g.1. An analysis to support the need for an extension, including an explanation of why a time period up to three years after the effective date of U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units is sufficient time to comply with this section, while one year after the effective date of U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units is not sufficient;

7.9.g.2. A demonstration of the feasibility to transport the waste offsite to a commercial medical waste treatment and disposal facility on a temporary or permanent basis; and

7.9.g.3. Measurable and enforceable incremental steps of progress to be taken towards compliance with the emission limits contained in Table 18-1B, or Table 18-2B for Small Rural Units, as applicable.

7.9.h. ~~The owner or operator of an existing HMIWI unit will be notified~~ The Secretary will notify the owner or operator of an existing HMIWI, in writing, ~~by the Secretary~~ of his or her decision ~~as to whether an extension shall be granted or denied~~ either to grant or deny the request for extension. The owner or operator shall comply with one of the following:

7.9.h.1. If the request for extension is denied, the owner or operator shall submit a compliance plan in accordance with subdivision 7.9.f no later than 30 days after denial of the request for extension or one year after the effective date of U.S. EPA's approval of the 111(d)/129 State Plan revision for HMIWI units, whichever is later; or

7.9.h.2. If the request for extension is granted, the owner or operator shall submit a compliance plan and schedule commensurate with the granted extension no later than 30 days after the date the request for extension has been granted; and

7.9.h.3. On or before October 6, 2014, the owner or operator shall comply with the emissions guidelines for existing HMIWI units under 40 CFR Part 62, Subpart XX, and the related provisions of 40 CFR Part 60, Subpart C, ~~as amended on October 6, 2009~~, and not allow or cause to be allowed a HMIWI unit to be operated except in compliance with all applicable provisions of this section.

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### §45-18-8. Requirements for New Commercial and Industrial Solid Waste Incinerators.

8.1. Requirements for New CISWI Units. -- The owner or operator of a commercial and industrial solid waste incineration unit (CISWI unit) under subsection 8.2 shall comply with all applicable standards of performance, requirements, and provisions of 40 CFR Part 60 Subpart CCCC, including any reference methods, performance specifications, and other test methods associated with Subpart CCCC. No person shall construct, reconstruct, modify or operate, or cause to be constructed, reconstructed, modified or operated a new CISWI unit that results in a violation of 40 CFR Part 60 Subpart CCCC or this rule.

8.2. Applicability. -- The owner or operator of a CISWI unit that meets any of the following criteria ~~shall be~~ is subject to the requirements for new CISWI units set forth in section 8:

8.2.a. A CISWI unit that commenced construction after ~~May 20, 2011~~ June 4, 2010; or

8.2.b. A CISWI unit that commenced reconstruction or modification after ~~September 21, 2011~~ August 7, 2013; or

8.2.c. An Incinerator and air curtain incinerator, that commenced construction after November 30, 1999, but no later than June 4, 2010, or that commenced reconstruction or modification on or after June 1, 2001, but no later than August 7, 2013, are considered new incineration units and remain subject to the applicable requirements of this section until such time the unit becomes subject to section 9 of this rule; and

8.2.d. The incineration unit does not meet the exemption criteria under 40 CFR §60.2020

8.3. Physical or Operational Changes. -- Physical or operational changes to an incineration unit primarily to comply with the emission guidelines in section 9 of this rule and 40 CFR Part 60, Subpart DDDD do not qualify as a reconstruction or modification under section 8.

### §45-18-9. Requirements for Existing Commercial and Industrial Solid Waste Incinerators.

9.1. Requirements for Existing CISWI Units. -- The owner or operator of an existing CISWI unit shall comply with the applicable emission guidelines, compliance times, requirements, and provisions of 40 CFR Part 60 Subpart DDDD set forth in section 9 and Tables 18-1C, 18-2C, 18-3C, 18-4C, 18-5C, 18-6C, 18-7C, 18-8C and 18-9C, including any reference methods, performance specifications, and other test methods associated with Subpart DDDD. No person shall reconstruct, modify or operate, or cause to be reconstructed, modified or operated, an existing CISWI unit that results in a violation of the requirements for existing CISWI units set forth in section 9.

9.2. Applicability.

9.2.a. Incineration units that meet all three criteria described in paragraphs 9.2.a.1 through 9.2.a.3 are subject to the requirements for existing CISWI units under section 9.

9.2.a.1. CISWI units and air curtain incinerators in West Virginia that commenced construction on or before June 4, 2010, or commenced modification or reconstruction after June 4, 2010 but no later than August 7, 2013;

9.2.a.2. Incineration units that meet the definition of a CISWI unit as defined in subsection 2.4



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of this rule and

9.2.a.3. Incineration units not exempt under subdivision 9.2.d. below.

9.2.b. Physical or Operational Changes.

9.2.b.1. If the owner or operator of a CISWI unit or air curtain incinerator makes changes that meet the definition of modification or reconstruction ~~on or after June 1, 2001~~ August 7, 2013, the CISWI unit becomes subject to 40 CFR Part 60, Subpart CCCC under section 8 of this rule, and the requirements for existing CISWI units under section 9 no longer ~~applies~~ apply to that unit.

9.2.b.2. If the owner or operator of a CISWI unit makes physical or operational changes to an existing CISWI unit primarily to comply with the requirements of section 9, the requirements for new CISWI units under section 8 of this rule and 40 CFR Part 60, Subpart CCCC do not apply to that unit. Such changes do not qualify as modifications or reconstructions under section 8 of this rule and 40 CFR Part 60, Subpart CCCC.

9.2.c. Reserved.

9.2.d. Exemption. -- The types of units described in paragraphs 9.2.d.1, 9.2.d.3 through 9.2.d.9, and 9.2.d.13 through 9.2.d.15 are exempt from the requirements of section 9, but some units are required to provide notifications. Air curtain incinerators are exempt from the requirements of subsection 13.3 and section 9 except for the provisions set forth in ~~subsection 9.13~~ subdivisions 9.13.1 and 9.13.n.

9.2.d.1. Pathological Waste Incineration Units. -- Incineration units burning 90% or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste ~~as defined in 40 CFR §60.2265~~ are not subject to section 9 if ~~you~~ the unit meets the ~~two~~ requirements specified in subparagraphs 9.2.d.1.A and 9.2.d.1.B. below:

9.2.d.1.A. Notify the Secretary that the unit meets these criteria; and

9.2.d.1.B. Keep records on a calendar quarter basis of the weight of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste burned and the weight of all other fuels and wastes burned in the unit.

9.2.d.2. Reserved.

9.2.d.3. Municipal Waste Combustion Units. -- Incineration units that are subject to Subpart Ea of 40 CFR Part 60 (Standards of Performance for Municipal Waste Combustors); Subpart Eb of 40 CFR Part 60 (Standards of Performance for Large Municipal Waste Combustors); Subpart Cb of 40 CFR Part 60 (Emission Guidelines and Compliance Time for Large Municipal Combustors); Subpart AAAA of 40 CFR Part 60 (Standards of Performance for Small Municipal Waste Combustion Units); or Subpart BBBB of 40 CFR Part 60 (Emission Guidelines for Small Municipal Waste Combustion Units).

9.2.d.4. Medical Waste Incineration Units. -- Incineration units regulated under Subpart Ec of 40 CFR Part 60 (Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996) or Subpart Ca of 40 CFR Part 60 (Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators).

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9.2.d.5. Small Power Production Facilities. -- Units that meet the ~~three~~ requirements specified in subparagraphs ~~9.2.d.5.A through 9.2.d.5.C.~~ 9.2.d.5.D below:

9.2.d.5.A. The unit qualifies as a small power-production facility under ~~Section 3(17)(C)~~ section 3(17)(C) of the Federal Power Act (16 U.S.C. § 796(17)(C));

9.2.d.5.B. The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity;

9.2.d.5.C. ~~You~~ The unit submits documentation to the Administrator and Secretary that the qualifying small power production facility is combusting homogenous waste; and

9.2.d.5.D. The unit maintains the records specified in subdivision 9.11.v. below.

9.2.d.6. Cogeneration Facilities. -- Units that meet the ~~three~~ requirements specified in subparagraphs ~~9.2.d.6.A through 9.2.d.6.C.~~ 9.2.d.6.D. below:

9.2.d.6.A. The unit qualifies as a cogeneration facility under ~~Section 3(18)(B)~~ section 3(18)(B) of the Federal Power Act (16 U.S.C. § 796(18)(B));

9.2.d.6.B. The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity and steam or other forms of energy used for industrial, commercial, heating or cooling purposes;

9.2.d.6.C. ~~You~~ The unit submits documentation to the Administrator and Secretary that the qualifying cogeneration facility is combusting homogenous waste; and

9.2.d.6.D. The unit maintains the records specified in subdivision 9.11.w. below.

9.2.d.7. Hazardous Waste Combustion Units. -- Units for which ~~you are the owner or operator~~ is required to get a permit under Section 3005 section 3005 of the Solid Waste Disposal Act.

9.2.d.8. Materials Recovery Units. -- Units that combust waste for the primary purpose of recovering metals, such as primary and secondary smelters.

9.2.d.9. Air Curtain Incinerators. -- Air curtain incinerators that burn only the materials listed in subparagraphs 9.2.d.9.A through 9.2.d.9.C are only required to meet the requirements for air curtain incinerators set forth in ~~subsection~~ subsections 9.13 and 13.3. below

9.2.d.9.A. 100% wood waste.

9.2.d.9.B. 100% clean lumber.

9.2.d.9.C. 100% mixture of only wood waste, clean lumber, and/or yard waste.

9.2.d.10. Reserved.

9.2.d.11. Reserved.

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9.2.d.12. Reserved.

9.2.d.13. Sewage Treatment Plants. -- Incineration units regulated under Subpart O of 40 CFR Part 60 (Standards of Performance for Sewage Treatment Plants) and 45CSR16.

9.2.d.14. Sewage Sludge Incineration Units. -- Incineration units combusting sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter that are subject to Subpart LLLL of 40 CFR Part 60 (Standards of Performance for Sewage Sludge Incineration Units) or Subpart MMMM of 40 CFR Part 60 (Emission Guidelines for Sewage Sludge Incineration Units).

9.2.d.15. Other Solid Waste Incineration Units. -- Incineration units that are subject to Subpart EEEE of 40 CFR Part 60 (Standards of Performance for Other Solid Waste Incineration Units) or Subpart FFFF of 40 CFR Part 60 (Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units).

### 9.3. Compliance Times and Increments of Progress.

9.3.a. For CISWI units in the incinerator subcategory and air curtain incinerators that commenced construction on or before November 30, 1999, such CISWI units shall achieve final compliance as expeditiously as practicable after approval of the West Virginia §111(d)/129 plan but not later than December 1, 2005.

9.3.b. For CISWI units in the incinerator subcategory and air curtain incinerators that commenced construction after November 30, 1999, but on or before June 4, 2010 or that commenced reconstruction or modification on or after June 1, 2001 but no later than August 7, 2013, and for CISWI units in the small remote incinerator, energy recovery unit, and waste-burning kiln subcategories that commenced construction before June 4, 2010, such CISWI units shall achieve final compliance as expeditiously as practicable after approval of the West Virginia §111(d)/129 plan but not later than February 7, 2018.

9.3.c. Owners and operators of existing CISWI units that have compliance schedules more than one year following the effective date of West Virginia's CAA §111(d)/129 plan approval ~~shall be~~ are subject to the increments of progress set forth in subdivision 9.3.e.

9.3.d. Reserved.

9.3.e. Increments of Progress. -- The owner or operator of an existing CISWI unit that cannot achieve compliance within one year after the effective date of West Virginia §111(d)/129 plan approval shall comply with the increments of progress set forth in Table 18-1C.

9.3.f. Notification of achievement of increments of progress shall include the following three items:

9.3.f.1. Notification that the increment of progress has been achieved;

9.3.f.2. Any items required to be submitted with each increment of progress; and

9.3.f.3. Signature of the owner or operator of the CISWI unit.

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9.3.g. Notifications for achieving increments of progress shall be postmarked no later than ten business days after the compliance date for the increment.

9.3.h. If ~~you~~ the unit fails to meet an increment of progress, ~~you~~ the owner or operator shall submit a notification to the Secretary postmarked within ten business days after the date for that increment of progress in subdivision 9.3.e. ~~You~~ The owner or operator shall inform the Secretary that ~~you~~ the unit did not meet the increment and ~~you~~ shall continue to submit reports each subsequent calendar month until the unit meets the increment of progress ~~is met~~.

9.3.i. For ~~your~~ control plan increment of progress, ~~you~~ the owner or operator shall satisfy the following ~~two~~ requirements:

9.3.i.1. Submit the final control plan that includes the five items described ~~in subparagraphs 9.3.i.1.A through 9.3.i.1.E.~~ below:

9.3.i.1.A. A description of the devices for air pollution control and process changes that ~~you~~ the owner or operator will use to comply with the emission limitations and other requirements of section 9;

9.3.i.1.B. The type(s) of waste to be burned;

9.3.i.1.C. The maximum design waste burning capacity;

9.3.i.1.D. The anticipated maximum charge rate; and

9.3.i.1.E. If applicable, the petition for site-specific operating limits under subdivision 9.6.l;  
and

9.3.i.2. Maintain an onsite copy of the final control plan.

9.3.j. For the final compliance increment of progress, ~~you~~ the owner or operator shall complete all process changes and retrofit construction of control devices as specified in the final control plan so that, if the affected CISWI unit is brought online, all necessary process changes and air pollution control devices would operate as designed.

9.3.k. If ~~you close your~~ the owner or operator closes the CISWI unit, but will restart it prior to the final compliance date set forth in subdivision 9.3.b, ~~you~~ the owner or operator shall meet the increments of progress set forth in subdivision 9.3.e.

9.3.l. If ~~you close your're~~ the owner or operator closes the CISWI unit, but will restart it after ~~you're~~ the final compliance date set forth in subdivision 9.3.b, ~~you~~ the owner or operator shall complete emission control retrofits and meet the emission limitations and operating limits on the date ~~you're~~ the unit restarts operation.

9.3.m. If ~~you plan~~ the owner or operator plans to permanently close ~~your~~ the CISWI unit rather than comply with section 9, the owner or operator shall submit a closure notification, including the date of closure, to the Secretary by the date ~~you're~~ the final control plan is due.

9.4. Waste Management Plan. -- A waste management plan is a written plan that identifies both the

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feasibility and the methods used to reduce or separate certain components of solid waste from the waste stream in order to reduce or eliminate toxic emissions from incinerated waste.

9.4.a. ~~You~~ The owner or operator shall submit a waste management plan to the Secretary no later than the date specified in Table 18-1C for submittal of the final control plan.

9.4.b. A waste management plan shall include consideration of the reduction or separation of waste-stream elements such as paper, cardboard, plastics, glass, batteries or metals or the use of recyclable materials. The plan shall identify any additional waste management measures, and the source shall implement those measures considered practical and feasible based on the effectiveness of waste management measures already in place, the costs of additional measures, the emissions reductions expected to be achieved, and any other environmental or energy impacts they might have.

### 9.5. Operator Training and Qualification.

9.5.a. No CISWI unit shall be operated unless a fully trained and qualified CISWI unit operator is accessible, either at the facility or ~~can be at the facility~~ within one hour of travel time from the facility. The trained and qualified CISWI unit operator may operate the CISWI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified CISWI unit operators are temporarily not accessible, ~~you~~ the unit shall follow the procedures in subdivision 9.5.k. below.

9.5.b. Operator training and qualification shall be obtained by completing an incinerator operator training course that includes, at a minimum, the ~~three~~ elements described ~~in paragraphs 9.5.b.1 through 9.5.b.3.~~ below:

9.5.b.1. Training on the ~~eleven~~ following subjects ~~listed in subparagraphs 9.5.b.1.A through 9.5.b.1.K.~~;

9.5.b.1.A. Environmental concerns, including types of emissions;

9.5.b.1.B. Basic combustion principles, including products of combustion;

9.5.b.1.C. Operation of the specific type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures;

9.5.b.1.D. Combustion controls and monitoring;

9.5.b.1.E. Operation of air pollution control equipment and factors affecting performance (if applicable);

9.5.b.1.F. Inspection and maintenance of the incinerator and air pollution control devices;

9.5.b.1.G. Actions to prevent and correct malfunctions or to prevent conditions that may lead to malfunctions;

9.5.b.1.H. Bottom and fly ash characteristics and handling procedures;

9.5.b.1.I. Applicable Federal, State, and local regulations, including Occupational Safety

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and Health Administration workplace standards;

9.5.b.1.J. Pollution prevention; and

9.5.b.1.K. Waste management practices.

9.5.b.2. An examination designed and administered by the instructor of the incinerator operator training course; and

9.5.b.3. Written material covering the training course topics that can serve as reference material following completion of the course.

9.5.c. The operator training course shall be completed by the later of the following three dates:

9.5.c.1. The final compliance date set forth in subdivision 9.3.b.;

9.5.c.2. Six months after CISWI unit startup; or

9.5.c.3. Six months after an employee assumes responsibility for operating the CISWI unit or assumes responsibility for supervising the operation of the CISWI unit.

9.5.d. ~~You~~ The owner or operator shall obtain operator qualification by completing a training course that satisfies the criteria under subdivision 9.5.b.

9.5.e. Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under paragraph 9.5.b.2.

9.5.f. To maintain qualification, ~~you~~ the owner or operator shall complete an annual review or refresher course covering, at a minimum, the ~~five~~ topics described below:

9.5.f.1. Update of regulations;

9.5.f.2. Incinerator operation, including startup and shutdown procedures, waste charging, and ash handling;

9.5.f.3. Inspection and maintenance;

9.5.f.4. Prevention and correction of malfunctions or conditions that may lead to malfunction; and

9.5.f.5. Discussion of operating problems encountered by attendees.

9.5.g. ~~You~~ The owner or operator shall renew a lapsed operator qualification by one of the ~~two~~ methods specified below:

9.5.g.1. For a lapse of less than three years, ~~you~~ the owner or operator shall complete a standard annual refresher course described in subdivision 9.5.f.; or

9.5.g.2. For a lapse of three years or more, ~~you~~ the owner or operator shall repeat the initial

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qualification requirements set forth in subdivision 9.5.d.

9.5.h. Documentation shall be available at the facility and readily accessible for all CISWI unit operators that addresses the ~~ten~~ topics described in paragraphs 9.5.h.1 through 9.5.h.10. ~~below.~~ ~~You~~ The owner or operator shall maintain this information and the training records required by subdivision 9.5.j in a manner that they can be readily accessed and are suitable for inspection upon request.

9.5.h.1. Summary of the applicable standards under section 9;

9.5.h.2. Procedures for receiving, handling, and charging waste;

9.5.h.3. Incinerator startup, shutdown, and malfunction procedures;

9.5.h.4. Procedures for maintaining proper combustion air supply levels;

9.5.h.5. Procedures for operating the incinerator and associated air pollution control systems within the standards established under section 9;

9.5.h.6. Monitoring procedures for demonstrating compliance with the incinerator operating limits;

9.5.h.7. Reporting and recordkeeping procedures;

9.5.h.8. The waste management plan required under subsection 9.4.;

9.5.h.9. Procedures for handling ash; and

9.5.h.10. A list of the wastes burned during the performance test.

9.5.i. ~~You~~ The owner or operator shall establish a program for reviewing the information listed in subdivision 9.5.h with each incinerator operator.

9.5.i.1. The initial review of the information listed in subdivision 9.5.h shall be conducted by the later of the three dates specified ~~in subparagraphs 9.5.i.1.A through 9.5.i.1.C.~~ below:

9.5.i.1.A. The final compliance date set forth in subdivision 9.3.b.;

9.5.i.1.B. Six months after CISWI unit startup; or

9.5.i.1.C. Six months after being assigned to operate the CISWI unit.

9.5.i.2. The owner or operator shall conduct subsequent annual reviews of the information listed in subdivision 9.5.h no later than 12 months following the previous review.

9.5.j. ~~You~~ The owner or operator shall also maintain the information specified ~~in paragraphs 9.5.j.1 through 9.5.j.3.~~ below:

9.5.j.1. Records showing the names of CISWI unit operators who have completed review of the information in subdivision 9.5.h as required by subdivision 9.5.i, including the date of the initial review

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and all subsequent annual reviews;

9.5.j.2. Records showing the names of the CISWI operators who have completed the operator training requirements under subsection 9.5, met the criteria for qualification under subdivision 9.5.d, and maintained or renewed their qualification under subdivision 9.5.f or subdivision 9.5.g. Records shall include documentation of training, the dates of the initial refresher training, ~~and~~ the dates of their qualifications, and all subsequent renewals of such qualifications; and

9.5.j.3. For each qualified operator, the phone and/or ~~pager number~~ cell phone number at which they can be reached during operating hours.

9.5.k. If all qualified operators are temporarily not accessible (i.e., not at the facility and not able to be at the facility within one hour), you the owner or operator shall ~~meet one of the two following criteria~~ either, depending on the length of time that a qualified operator is not accessible:

9.5.k.1. When all qualified operators are not accessible for more than eight hours, but less than two weeks, the CISWI unit may be operated by other plant personnel familiar with the operation of the CISWI unit who have completed a review of the information specified in subdivision 9.5.h within the past 12 months; however, you the owner or operator shall record the period when all qualified operators were not accessible and include this deviation in the annual report as specified under subdivision 9.12.e.; or

9.5.k.2. When all qualified operators are not accessible for two weeks or more, you the owner or operator shall take ~~the two~~ both actions that are described below:

9.5.k.2.A. Notify the Secretary in writing within ten days of this deviation ~~in writing within ten days~~. In the notice, state what caused this deviation, what you are the owner or operator is doing to ensure that a qualified operator is accessible, and when you the owner or operator anticipates that a qualified operator will be accessible; and

9.5.k.2.B. Submit a status report to the Administrator and Secretary every four weeks outlining what you are the owner or operator is doing to ensure that a qualified operator is accessible, stating when you the owner or operator anticipates that a qualified operator will be accessible and requesting approval from the Administrator and Secretary to continue operation of the CISWI unit. You the owner or operator shall submit the first status report four weeks after you notify the Administrator notification to the Administrator and the Secretary of the deviation under subparagraph 9.5.k.2.A. If the Administrator and Secretary notifies you the owner or operator that you the request to continue operation of the CISWI unit is disapproved, the CISWI unit may continue operation for 90 days, then shall cease operation. Operation of the unit may resume if you meet the owner or operator meets the following ~~two~~ requirements:

9.5.k.2.B.1. A qualified operator is accessible as required under subdivision 9.5.a.; and

9.5.k.2.B.2. ~~You notify~~ The owner or operator notifies the Administrator and Secretary that a qualified operator is accessible and that you operations are resuming ~~operation~~.

### 9.6. Emission Limitations and Operating Limits.

9.6.a. ~~You~~ The owner or operator shall meet the emission limitations for each CISWI unit, including bypass stack or vent, specified in Table 18-2C or Tables 18-6C through 18-9C, by the final



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compliance date set forth subdivision 9.3.b. The emission limitations apply at all times the unit is operating including and not limited to startup, shutdown or malfunction.

9.6.b. Units that do not use wet scrubbers shall maintain opacity to less than or equal to the percent opacity (three one-hour blocks consisting of ten six-minute average opacity values) specified in Table 18-2C, as applicable.

9.6.c. If ~~you use~~ the owner or operator uses a wet scrubber(s) to comply with the emission limitations, ~~you~~ the owner or operator shall establish operating limits for up to four operating parameters (as specified in Table 18-3C) as described in paragraphs 9.6.c.1 through 9.6.c.4 during the initial performance test:

9.6.c.1. Maximum charge rate, calculated using one of the two ~~different~~ procedures in ~~subparagraph 9.6.c.1.A or 9.6.c.1.B~~ below, as appropriate:

9.6.c.1.A. For continuous and intermittent units, maximum charge rate is 110% of the average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations; or

9.6.c.1.B. For batch units, maximum charge rate is 110% of the daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

9.6.c.2. Minimum pressure drop across the wet particulate matter scrubber, which is calculated as the lowest one-hour average pressure drop across the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations; or minimum amperage to the wet scrubber, which is calculated as the lowest one-hour average amperage to the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations;

9.6.c.3. Minimum scrubber liquid flow rate, which is calculated as the lowest one-hour average liquid flow rate at the inlet to the wet acid gas or particulate matter scrubber measured during the most recent performance test demonstrating compliance with all applicable emission limitations; and/or

9.6.c.4. Minimum scrubber liquor pH, which is calculated as the lowest one-hour average liquor pH at the inlet to the wet acid gas scrubber measured during the most recent performance test demonstrating compliance with the hydrogen chloride (HCl) emission limitation.

9.6.d. ~~You~~ The owner or operator shall meet the operating limits established during the initial performance test on the date the initial performance test is required or completed (whichever is earlier). ~~You~~ The owner or operator shall conduct an initial performance evaluation of each continuous monitoring system and continuous parameter monitoring system within 60 days of installation of the monitoring system.

9.6.e. If ~~you use~~ the owner or operator uses a fabric filter to comply with the emission limitations, ~~you~~ the owner or operator shall operate each fabric filter system such that the bag leak detection system alarm does not sound more than five percent of the operating time during a six-month period. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted

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as a minimum of one hour. If ~~you take~~ the owner or operator takes longer than one hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken ~~by you~~ to initiate corrective action.

9.6.f. If ~~you use~~ the owner or operator uses an electrostatic precipitator to comply with the emission limitations, ~~you~~ the owner or operator shall measure the (secondary) voltage and amperage of the electrostatic precipitator collection plates during the particulate matter performance test. Calculate the average electric power value (secondary voltage × secondary current = secondary electric power) for each test run. The operating limit for the electrostatic precipitator is calculated as the lowest one-hour average secondary electric power measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.

9.6.g. If ~~you use~~ the owner or operator uses activated carbon sorbent injection to comply with the emission limitations, ~~you~~ the owner or operator shall measure the sorbent flow rate during the performance testing. The operating limit for the carbon sorbent injection is calculated as the lowest one-hour average sorbent flow rate measured during the most recent performance test demonstrating compliance with the mercury emission limitations. For energy recovery units, when ~~you~~ the unit operates at lower loads, multiply ~~your~~ the sorbent injection rate by the load fraction, as defined in 40 CFR § 60.2265, to determine the required injection rate (e.g., for 50% load, multiply the injection rate operating limit by 0.5).

9.6.h. If ~~you use~~ the owner or operator uses selective noncatalytic reduction to comply with the emission limitations, ~~you~~ the owner or operator shall measure the charge rate, the secondary chamber temperature (if applicable to ~~your~~ the CISWI unit), and the reagent flow rate during the nitrogen oxides performance testing. The operating limits for the selective noncatalytic reduction are calculated as the highest one-hour average charge rate, lowest secondary chamber temperature, and lowest reagent flow rate measured during the most recent performance test demonstrating compliance with the nitrogen oxides emission limitations.

9.6.i. If ~~you use~~ the owner or operator uses a dry scrubber to comply with the emission limitations, ~~you~~ the owner or operator shall measure the injection rate of each sorbent during the performance testing. The operating limit for the injection rate of each sorbent is calculated as the lowest one-hour average injection rate of each sorbent measured during the most recent performance test demonstrating compliance with the hydrogen chloride emission limitations. For energy recovery units, when ~~you~~ the unit operates at lower loads, multiply ~~your~~ the sorbent injection rate by the load fraction, as defined in 40 CFR § 60.2265, to determine the required injection rate (e.g., for 50% load, multiply the injection rate operating limit by 0.5).

9.6.j. If ~~you do not~~ the owner or operator does not use a wet scrubber, electrostatic precipitator, or fabric filter to comply with the emission limitations, and if ~~you do not~~ the owner or operator does not determine compliance with ~~your~~ particulate matter emission limitation with a particulate matter CEMS, ~~you~~ the unit shall maintain opacity to less than or equal to ten percent opacity (one-hour block average).

9.6.k. If ~~you use~~ the owner or operator uses a PM CPMS to demonstrate compliance, ~~you~~ the owner or operator shall establish ~~your~~ a PM CPMS operating limit and determine compliance with it according to paragraphs 9.6.k.1 through 9.6.k.5. below:

9.6.k.1. During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record all hourly average output values (milliamps, or the

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digital signal equivalent) from the PM CPMS for the periods corresponding to the test runs (e.g., three one-hour average PM CPMS output values for three one-hour test runs).

9.6.k.1.A. ~~Your~~ The PM CPMS shall provide a 4-20 milliamp output, or digital signal equivalent, and the establishment of its relationship to manual reference method measurements shall be determined in units of milliamps or digital bits.

9.6.k.1.B. ~~Your~~ The PM CPMS operating range shall be capable of reading PM concentrations from zero to a level equivalent to at least two times your the allowable emission limit. If your the PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instruments shall be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit.

9.6.k.1.C. During the initial performance test or any ~~such~~ subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values, or their digital equivalent, from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all ~~your~~ PM CPMS output values for three corresponding two-hour Method 5I test runs).

9.6.k.2. If the average of ~~your the~~ three PM performance test runs are below 75% of ~~your the~~ facility's PM emission limit, you the owner or operator shall calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in paragraphs 9.6.k.1 through 9.6.k.5.

9.6.k.2.A. Determine ~~your the~~ facility's instrument zero output with one of the following procedures:

9.6.k.2.A.1. Zero point data for in-situ instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.

9.6.k.2.A.2. Zero point data for extractive instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air.

9.6.k.2.A.3. The zero point can also ~~can be established obtained~~ by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when ~~your the~~ process is not operating, but the fans are operating or ~~your the~~ source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.

9.6.k.2.A.4. If none of the steps in ~~subparagraphs 9.6.k.2.A parts 9.6.k.2.A.1 through 9.6.k.2.D~~ 9.6.k.2.A.3 are possible, you the owner or operator shall use a zero output value provided by the manufacturer.

9.6.k.2.B. The owner or operator shall determine your its PM CPMS instrument average in milliamps, or the digital equivalent, and the average of your the corresponding three PM compliance test runs, using Equation 1:

$$\bar{x} = \frac{1}{n} \sum_{i=1}^n X_i, \quad \bar{y} = \frac{1}{n} \sum_{i=1}^n Y_i \quad \text{Equation 1}$$

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Where:

$X_1$  = the PM CPMS data points for the three runs constituting the performance test,

$Y_1$  = the PM concentration value for the three runs constituting the performance test, and

$n$  = the number of data points.

9.6.k.2.C. With ~~your~~ the instrument zero expressed in milliamps, or the digital equivalent, ~~your~~ the three run average PM CPMS milliamp value, or its digital equivalent, and ~~your~~ the three run average PM concentration from your three compliance tests, determine a relationship of lb/MMbtu mg/dscm per milliamp or digital signal equivalent, with Equation ~~6~~ 2.

$$R = \frac{Y_1}{(X_1 - z)} \quad \text{Equation 2}$$

Where:

$R$  = the relative mg/dscm per milliamp, or the digital equivalent, for your PM CPMS,

$Y_1$  = the three run average mg/dscm PM concentration,

$X_1$  = the three run average milliamp output or digital equivalent, from the PM CPMS, and

$z$  = the milliamp equivalent or digital signal equivalent of the instrument zero determined from subparagraph 9.6.k.2.A.

9.6.k.2.D. Determine ~~your~~ the source specific 30-day rolling average operating limit using the mg/dscm per milliamp value, or per digital signal equivalent, from Equation ~~6~~ 2 in Equation ~~7~~ 3, below. This sets ~~your~~ the operating limit at the PM CPMS output value corresponding to 75% of your the emission limit.

$$O_1 = z + \frac{0.75(L)}{R} \quad \text{Equation 3}$$

Where:

$O_1$  = the operating limit for the PM CPMS on a 30-day rolling average, in milliamps or their digital signal equivalent.

$L$  = the source emission limit expressed in ~~lb/MMbtu~~ mg/dscm,

$z$  = the instrument zero in milliamps or digital equivalent, determined from subparagraph 9.6.k.2.A, and

$R$  = the relative mg/dscm per milliamp, or per digital signal output equivalent, for the PM CPMS, from Equation ~~6~~ 2.

9.6.k.3. If the average of the three PM compliance test runs is at or above 75% of the PM emission limit ~~you~~ the owner or operator shall determine ~~your~~ the operating limit by averaging the PM CPMS milliamp or digital signal output corresponding to the three PM performance test runs that demonstrate compliance with the emission limit using Equation ~~8~~ 4, and ~~you~~ the owner or operator shall submit all compliance test and PM CPMS data according to the reporting requirements in paragraph 9.6.k.5.

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$$O_h = \frac{1}{n} \sum_{i=1}^n X_i \quad \text{Equation 4}$$

Where:

$X_i$  = the PM CPMS data points for all runs  $i$ ,

$n$  = the number of data points, and

$O_h$  = the site specific operating limit, in milliamps or digital signal equivalent.

9.6.k.4. To determine continuous compliance, ~~you~~ the owner or operator shall record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. ~~You~~ The owner or operator shall demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (e.g., milliamps or digital signal bits, PM concentration, raw data signal) on a 30-day rolling average basis.

9.6.k.5. For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report shall also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g., beta attenuation), span of the instrument's primary analytical range, milliamp or digital signal value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp or digital signals corresponding to each PM compliance test run.

9.6.l. If ~~you use~~ the owner or operator uses an air pollution control device other than a wet scrubber, activated carbon injection, selective noncatalytic reduction, fabric filter, an electrostatic precipitator or a dry scrubber or limit emissions in some other manner, including mass balances, to comply with the emission limitations under subdivisions 9.6.a and 9.6.b, ~~you~~ the owner or operator shall petition the ~~Administrator~~ Secretary for specific operating limits to be established during the initial performance test and continuously monitored thereafter. ~~You~~ The owner or operator shall submit the petition at least 60 days before the performance test is scheduled to begin. ~~Your~~ The owner's or operator's petition shall include the following five items:

9.6.l.1. Identification of the specific parameters ~~you propose~~ the owner or operator proposes to use as additional operating limits;

9.6.l.2. A discussion of the relationship between these parameters and emissions of regulated pollutants, identifying how emissions of regulated pollutants change with changes in these parameters and how limits on these parameters will serve to limit emissions of regulated pollutants;

9.6.l.3. A discussion of how ~~you~~ the owner or operator will establish the upper and/or lower values for these parameters which will establish the operating limits on these parameters;

9.6.l.4. A discussion identifying the methods ~~you~~ the owner or operator will use to measure and the instruments ~~you~~ the owner or operator will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

9.6.l.5. A discussion identifying the frequency and methods for recalibrating the instruments ~~you~~ the owner or operator will use for monitoring these parameters.

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9.6.m. Reserved.

9.6.n. Reserved.

### 9.7. Performance Testing.

9.7.a. All performance tests shall consist of a minimum of three test runs conducted under conditions representative of normal operations.

9.7.b. ~~You~~ The owner or operator shall document that the waste burned during the performance test is representative of the waste burned under normal operating conditions by maintaining a log of the quantity of waste burned (as required in paragraph 9.11.b.1) and the types of waste burned during the performance test.

9.7.c. The owner or operator shall conduct all performance tests ~~shall be conducted~~ using the minimum run duration specified in Table 18-2C and Tables 18-6C through 18-9C.

9.7.d. The owner or operator shall use Method 1 of 40 CFR Part 60, Appendix A ~~shall be used~~ to select the sampling location and number of traverse points.

9.7.e. The owner or operator shall use Method 3A or 3B of 40 CFR Part 60, Appendix A ~~shall be used~~ for gas composition analysis, including measurement of oxygen concentration. The owner or operator shall use Method 3A or 3B of Appendix A ~~shall be used~~ simultaneously with each method.

9.7.f. All pollutant concentrations, except for opacity, shall be adjusted to seven percent oxygen using ~~Equation 4~~ Equation 5:

$$C_{adj} = C_{meas} \frac{(20.9 - 7)}{(20.9 - \%O_2)} \quad \text{Equation 5}$$

Where:

$C_{adj}$  = pollutant concentration adjusted to seven percent (7%) oxygen;

$C_{meas}$  = pollutant concentration measured on a dry basis;

$(20.9 - 7)$  = 20.9% oxygen – 7% oxygen (defined oxygen correction basis);

20.9 = oxygen concentration in air, percent; and

$\%O_2$  = oxygen concentration measured on a dry basis, percent.

9.7.g. ~~You~~ The owner or operator shall determine dioxins/furans toxic equivalency by following the procedures in paragraphs 9.7.g.1 through 9.7.g.4. below:

9.7.g.1. Measure the concentration of each dioxin/furan tetra- through octa-isomer emitted using EPA Method 23 at 40 CFR Part 60, Appendix A and 45CSR16.

9.7.g.2. Quantify isomers meeting identification criteria 2, 3, 4, and 5 in Section 5.3.2.5 of Method 23, regardless of whether the isomers meet identification criteria 1 and 7. ~~You~~ The owner or operator shall quantify the isomers per ~~Section~~ section 9.0 of Method 23 (Note: ~~You~~ The owner or operator may reanalyze the sample aliquot or split to reduce the number of isomers not meeting

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identification criteria 1 or 7 of ~~Section 5.3.2.5~~ section 5.3.2.5 of Method 23).

9.7.g.3. For each dioxin/furan (tetra through octa-chlorinated) isomer measured in accordance with paragraphs 9.7.g.1 and 9.7.g.2, multiply the isomer concentration by its corresponding toxic equivalency factor specified in Table 18-4C.

9.7.g.4. Sum the products calculated in accordance with paragraph 9.7.g.3 to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

9.7.h. The owner or operator shall use Method 22 at 40 CFR Part 60, Appendix A-7 and 45CSR16 ~~shall be used~~ to determine compliance with the fugitive ash emission limit in Table 18-2C or Tables 18-6C through 18-9C.

9.7.i. If ~~you have~~ the facility has an applicable opacity operating limit, ~~you~~ the owner or operator shall determine compliance with the opacity limit using Method 9 at 40 CFR Part 60, Appendix A-4 and 45CSR16, based on three one-hour blocks consisting of ten six-minute average opacity values, unless ~~you~~ are the owner or operator is required to install a continuous opacity monitoring system, consistent with subdivisions 9.9.a through 9.9.w and subdivisions 9.10.a through 9.10.r. of this rule.

9.7.j. ~~You~~ The owner or operator shall determine dioxins/furans total mass basis by following the procedures in paragraphs 9.7.j.1 through 9.7.j.3 below:

9.7.j.1. Measure the concentration of each dioxin/furan tetra- through octa-chlorinated isomer emitted using EPA Method 23 at 40 CFR Part 60, Appendix A-7 and 45CSR16.

9.7.j.2. Quantify isomers meeting identification criteria 2, 3, 4, and 5 in Section 5.3.2.5 of Method 23, regardless of whether the isomers meet identification criteria 1 and 7. You shall quantify the isomers per Section 9.0 of Method 23 (Note: The owner or operator may reanalyze the sample aliquot or split to reduce the number of isomers not meeting identification criteria 1 or 7 of Section 5.3.2.5 of Method 23).

9.7.j.3. Sum the quantities measured in accordance with paragraphs 9.7.j.1 and 9.7.j.2 to obtain the total concentration of dioxins/furans emitted in terms of total mass basis.

9.7.k. ~~You~~ The owner or operator shall use results of performance tests to demonstrate compliance with the emission limitations in Table 18-2C or Tables 18-6C through 18-9C.

### 9.8. Initial Compliance Requirements.

9.8.a. ~~You~~ The owner or operator shall conduct a performance test, as required under subsection 9.7 through paragraph 9.7.j.3 and subdivisions 9.6.a. and 9.6.b, to determine compliance with the emission limitations in Table 18-2C and Tables 18-6C through 18-9C, to establish compliance with any opacity operating limits in subdivisions 9.6.a. through paragraph 9.6.k.5, and to establish operating limits using the procedures in subdivision 9.6.c through paragraph 9.6.k.5 or subdivisions 9.6.l through 9.6.m. The owner or operator shall conduct the performance test ~~shall be conducted~~ using the test methods listed in Table 18-2C and Tables 18-6C through 18-9C and the procedures in subsection 9.7 through paragraph 9.7.j.3. The use of the bypass stack during a performance test shall invalidate the performance test. ~~You~~ The owner or operator shall conduct a performance evaluation of each continuous monitoring system within 60 days of installation of the monitoring system.

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9.8.b. ~~The owner or operator shall conduct~~ the initial performance test ~~shall be conducted~~ no later than 180 days after the final compliance date set forth in subdivision 9.3.b .

9.8.c. ~~If you commence or recommence~~ the owner or operator commences or recommences combusting a solid waste at an existing combustion unit at any commercial or industrial facility and ~~you the owner or operator~~ conducted a test consistent with the provisions of section 9 while combusting the given solid waste within the six months preceding the reintroduction of that solid waste in the combustion chamber, ~~you do the owner or operator does~~ not need to retest until six months from the date ~~you reintroduce~~ of reintroduction of that solid waste.

9.8.d. ~~If you the owner or operator~~ commences combusting or recommences combusting a solid waste at an existing combustion unit at any commercial or industrial facility and ~~you have~~ the owner or operator has not conducted a performance test consistent with the provisions of section 9 while combusting the given solid waste within the six months preceding the reintroduction of that solid waste in the combustion chamber, ~~you the owner or operator shall~~ conduct a performance test within 60 days commencing or recommencing solid waste combustion.

9.8.e. ~~The owner or operator shall conduct~~ the initial air pollution control device inspection ~~shall be conducted~~ within 60 days after installation of the control device and the associated CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after the final compliance date for meeting the amended emission limitations.

9.8.f. Within ten operating days following an air pollution control device inspection, the owner or operator shall complete all necessary repairs, ~~shall be completed~~ unless the owner or operator obtains written approval from the Secretary establishing a date whereby all necessary repairs of the designated facility shall be completed.

### 9.9. Continuous Compliance Requirements.

#### 9.9.a. Compliance with Standards.

9.9.a.1. The emission standards and operating requirements set forth in section 9 apply at all times.

9.9.a.2. ~~If you cease~~ the facility ceases combusting solid waste, ~~you the owner or operator~~ may opt to remain subject to the provisions of section 9. Consistent with the definition of CISWI unit, ~~you are~~ the owner or operator is subject to the requirements of section 9 at least six months following the last date of solid waste combustion. Solid waste combustion is ceased when solid waste is not in the combustion chamber (i.e., the solid waste feed to the combustor has been cut off for a period of time not less than the solid waste residence time).

9.9.a.3. ~~If you cease~~ the facility ceases combusting solid waste, ~~you the owner or operator~~ shall be in compliance comply with any newly applicable standards on the effective date of the waste-to-fuel switch. The effective date of the waste-to-fuel switch is a date selected by ~~you the owner or operator,~~ which shall be at least six months from the date that ~~you the facility~~ ceased combusting solid waste, consistent with paragraph 9.9.a.2. ~~Your~~ The source shall remain in compliance with section 9 until the effective date of the waste-to-fuel switch.



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9.9.a.4. If ~~you~~ the owner or operator owns or operates an existing commercial or industrial combustion unit that combusted a fuel or non-waste material, and ~~you~~ the owner or operator commences or recommences combustion of solid waste, ~~you are~~ the owner or operator is subject to the provisions of section 9 as of the first day ~~you introduce or reintroduce~~ of introduction or reintroduction of solid waste to the combustion chamber, and this date constitutes the effective date of the fuel-to-waste switch. ~~You~~ The owner or operator shall complete all initial compliance demonstrations for any §112 CAA standards that are applicable to ~~your~~ the facility before ~~you~~ commencement or recommencement of combustion of solid waste. ~~You~~ The owner or operator shall provide 30 days prior notice to the Secretary of the effective date of the waste-to-fuel switch. The notification shall identify:

9.9.a.4.A. The name of the owner or operator of the CISWI unit, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

9.9.a.4.B. The currently applicable subcategory under section 9 and any 40 CFR Part 63 Subpart and Subcategory that will be applicable after ~~you~~ the owner or operator ceases combusting solid waste;

9.9.a.4.C. The fuel(s), non-waste material(s), and solid waste(s) the CISWI unit is currently combusting and has combusted over the past six months and the fuel(s) or non-waste materials the unit will commence combusting;

9.9.a.4.D. The date on which ~~you~~ the owner or operator became subject to the currently applicable emission limits;

9.9.a.4.E. The date upon which ~~you~~ the owner or operator will cease combusting solid waste and the date (if different) that ~~you~~ the owner or operator intends for any new requirements to become applicable (i.e., the effective date of the waste-to-fuel switch), consistent with paragraphs 9.9.a.2 and 9.9.a.3.

9.9.a.5. The owner or operator shall install all air pollution control equipment necessary for compliance with any newly applicable emissions limits which apply as a result of the cessation or commencement or recommencement of combusting solid waste, ~~shall be installed~~ and the same shall be operational as of the effective date of the waste-to-fuel or fuel-to-waste switch.

9.9.a.6. The owner or operator shall install all monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of combusting solid waste, ~~shall be installed~~ and the same shall be operational as of the effective date of the waste-to-fuel or fuel-to-waste switch. The owner or operator shall perform all calibration and drift checks ~~shall be performed~~ as of the effective date of the waste-to-fuel or fuel-to-waste switch. The owner or operator shall perform relative accuracy tests ~~shall be performed~~ as of the performance test deadline for PM CEMS (if PM CEMS are elected to demonstrate continuous compliance with the particulate matter emission limits). The owner or operator need not repeat relative accuracy testing for other CEMS ~~need not be repeated~~ if the owner or operator previously performed that testing ~~was previously performed~~ consistent with §112 CAA monitoring requirements or monitoring requirements under section 9.

9.9.b. ~~You~~ The owner or operator shall conduct an annual performance test for the pollutants listed in Table 18-2C or Tables 18-6C through 18-9C and opacity for each CISWI unit as required under subsection 9.7. The owner or operator shall conduct the annual performance test ~~shall be conducted~~ using

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the test methods listed in Table 18-2C or Tables 18-6C through 18-9C and the procedures in subsection 9.7. ~~The owner or operator shall measure opacity shall be measured~~ using EPA Reference Method 9 at 40 CFR Part 60. If the owner or operator uses CEMS or continuous opacity monitoring systems to determine compliance, the owner or operator is not required to perform annual performance tests ~~are not required if you use CEMS or continuous opacity monitoring systems to determine compliance.~~

9.9.c. ~~You~~ The owner or operator shall continuously monitor the operating parameters specified in subdivision 9.6.c through paragraph 9.6.k.5 or established under subdivisions 9.6.l and 9.6.m and as specified in subdivision 9.10.s. Operation above the established maximum or below the established minimum operating limits constitutes a deviation from the established operating limits. Three-hour block average values are used to determine compliance (except for baghouse leak detection system alarms) unless a different averaging period is established under subdivisions 9.6.l and 9.6.m or, for energy recovery units, where the averaging time for each operating parameter is a 30-day rolling average, calculated each hour as the average of the previous 720 operating hours. Operation above the established maximum, below the established minimum, or outside the allowable range of the operating limits specified in subdivision 9.9.a constitutes a deviation from ~~your~~ operating limits, except during performance tests conducted to determine compliance with the emission and operating limits or to establish new operating limits. Operating limits are confirmed or reestablished during performance tests.

9.9.d. ~~You~~ The owner or operator shall burn only the same types of waste and fuels used to establish subcategory applicability (for ERUs) and operating limits during the performance test.

9.9.e. For energy recovery units, incinerators, and small remote units, ~~you~~ the owner or operator shall perform annual visual emissions test for ash handling.

9.9.f. For energy recovery units, ~~you~~ the owner or operator shall conduct an annual performance test for opacity using EPA Reference Method 9 at 40 CFR Part 60 and 45CSR16 (except where particulate matter continuous monitoring system or continuous parameter monitoring systems are used) and the pollutants listed in Table 18-7C.

9.9.g. For facilities using a CEMS to demonstrate compliance with the carbon monoxide emission limit, the owner or operator may demonstrate compliance with the carbon monoxide emission limit ~~may be demonstrated~~ by using the CEMS according to the following requirements:

9.9.g.1. ~~You~~ The owner or operator shall measure emissions according to 40 CFR § 60.13 and 45CSR16 to calculate one-hour arithmetic averages, corrected to seven percent oxygen. CEMS data during startup and shutdown, ~~as defined in 40 CFR §60.2265~~, are not corrected to seven percent oxygen and are measured at stack oxygen content. ~~You~~ The owner or operator shall demonstrate initial compliance with the carbon monoxide emissions limit using a 30-day rolling average of the one-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown, ~~as defined in 40 CFR §60.2265~~, calculated using Equation 19-19 in Section 12.4.1 of EPA Reference Method 19 at 40 CFR Part 60, Appendix A-7 and 45CSR16.

9.9.g.2. ~~You~~ The owner or operator shall operate the carbon monoxide continuous emissions monitoring system in accordance with the applicable requirements of Performance Specification 4A of Appendix B of 40 CFR Part 60 and 45CSR16 and the quality assurance procedures of Appendix F of 40 CFR Part 60 and 45CSR16.

9.9.h. Coal and liquid/gas energy recovery units with annual average heat input rates greater than

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250 MMBtu/hr may elect to demonstrate continuous compliance with the particulate matter emissions limit using a particulate matter CEMS according to the procedures in subdivision 9.10.n instead of the continuous parameter monitoring system specified in subdivision 9.9.i. Coal and liquid/gas energy recovery units with annual average heat input rates less than 250 MMBtu/hr, incinerators, and small remote incinerators may also elect to demonstrate compliance using a particulate matter CEMS according to the procedures in subdivision 9.10.n instead of particulate matter testing with EPA Method 5 at 40 CFR Part 60, Appendix A-3 and 45CSR16 and, if applicable, the continuous opacity monitoring requirements in subdivision 9.9.i.

9.9.i. For energy recovery units with annual average heat input rates greater than or equal to 10 MMBtu/hr but less than 250 MMBtu/hr ~~you the owner or operator~~ shall install, operate, certify, and maintain a continuous opacity monitoring system (COMS) according to the procedures in subdivisions 9.10.a through 9.10.r.

9.9.j. For waste-burning kilns, ~~you the owner or operator~~ shall conduct an annual performance test for the pollutants (except mercury and particulate matter, and hydrogen chloride if no acid gas wet scrubber is used) listed in Table 18-8C. If ~~you the~~ waste-burning kiln is not equipped with a wet scrubber or dry scrubber, ~~you the owner or operator~~ shall determine compliance with the hydrogen chloride emission limit using a CEMS as specified in ~~subdivisions 9.10.a through 9.10.r~~ paragraph 9.9.j.1. ~~You shall determine compliance with particulate matter using CPMS. You~~ The owner or operator shall determine compliance with the mercury emissions limit using a mercury CEMS according to the following requirements: paragraph 9.9.j.2. The owner or operator shall determine compliance with particulate matter using CPMS according to the following requirements:

~~9.9.j.1. Operate a CEMS in accordance with Performance Specification 12A at 40 CFR Part 60, Appendix B or a sorbent trap based integrated monitor in accordance with Performance Specification 12B at 40 CFR Part 60, Appendix B. The duration of the performance test shall be a calendar month. For each calendar month in which the waste-burning kiln operates, hourly mercury concentration data and stack gas volumetric flow rate data shall be obtained. You shall demonstrate compliance with the mercury emissions limit using a 30-day rolling average of these 1-hour mercury concentrations, including CEMS data during startup and shutdown as defined in 40 CFR §60.2265, calculated using Equation 19-19 in Section 12.4.1 of EPA Reference Method 19 at 40 CFR Part 60, Appendix A-7. CEMS data during startup and shutdown, as defined in 40 CFR §60.2265, are not corrected to 7 percent oxygen, and are measured at stack oxygen content.~~

If the owner or operator monitors compliance with the hydrogen chloride (HCl) emissions limit by operating an HCl CEMS, the owner or operator shall do so in accordance with Performance Specification 15 (PS 15) of Appendix B to 40 CFR Part 60, or PS 18 of Appendix B to 40 CFR Part 60. The owner or operator shall operate, maintain, and quality assure a HCl CEMS installed and certified under PS 15 according to the quality assurance requirements in Procedure 1 of Appendix F to 40 CFR Part 60, except that the owner or operator shall replace the relative accuracy test audit requirements of Procedure 1 with the validation requirements and criteria of Sections 11.1.1 and 12.0 of PS 15. The owner or operator shall operate, maintain, and quality assure a HCl CEMS installed and certified under PS 18 according to the quality assurance requirements in Procedure 6 of Appendix F to 40 CFR Part 60. For any performance specification used, the owner or operator shall use Method 321 of Appendix A to 40 CFR Part 63 as the reference test method for conducting relative accuracy testing. The span value and calibration requirements in subparagraphs 9.9.j.1.A and 9.9.j.1.B apply to all HCl CEMS used under this subpart:

9.9.j.1.A. The owner or operator shall use a measurement span value for any HCl CEMS of

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0–10 ppmvw unless the monitor is installed on a kiln without an inline raw mill. For kilns without an inline raw mill, the owner or operator may use a higher span value sufficient to quantify all expected emissions concentrations. The HCl CEMS data recorder output range shall include the full range of expected HCl concentration values, which would include those expected during “mill off” conditions. The owner or operator shall document corresponding data recorder range in the site-specific monitoring plan and associated records;

9.9.j.1.B. In order to quality assure data measured above the span value, the owner or operator shall use one of the three options in parts 9.9.j.1.B.1 through 9.9.j.1.B.3 below:

9.9.j.1.B.1 Include a second span that encompasses the HCl emission concentrations expected to be encountered during “mill off” conditions. This second span may be rounded to a multiple of 5 ppm of total HCl. The owner or operator shall follow requirements of the appropriate HCl monitor performance specification for this second span, except that a RATA with the mill off is not required;

9.9.j.1.B.2. Quality assure any data above the span value by proving instrument linearity beyond the span value established in subparagraph 9.9.j.1.A using the following procedure: conduct a weekly “above span linearity” calibration challenge of the monitoring system using a reference gas with a certified value greater than the highest expected hourly concentration or greater than 75% of the highest measured hourly concentration. The “above span” reference gas shall meet the requirements of the applicable performance specification and shall be introduced to the measurement system at the probe. The owner or operator shall record and report the results of this procedure as it would for a daily calibration. The “above span linearity” challenge is successful if the value measured by the HCl CEMS falls within ten percent of the certified value of the reference gas. If the value measured by the HCl CEMS during the above span linearity challenge exceeds ten percent of the certified value of the reference gas, the owner or operator shall evaluate and repair the monitoring system and meet a new “above span linearity” challenge before returning the HCl CEMS to service, or data above span from the HCl CEMS shall be subject to the quality assurance procedures established in 9.9.j.1.B.4. In this manner, The owner or operator shall normalize values measured by the HCl CEMS in this manner during the above span linearity challenge exceeding plus or minus 20% of the certified value of the reference gas using Equation 6;

9.9.j.1.B.3. Quality assure any data above the span value established in subparagraph 9.9.j.1.A using the following procedure: any time two consecutive one-hour average measured concentration of HCl exceeds the span value the owner or operator shall, within 24 hours before or after, introduce a higher, “above span” HCl reference gas standard to the HCl CEMS. The “above span” reference gas shall meet the requirements of the applicable performance specification and target a concentration level between 50% and 150% of the highest expected hourly concentration measured during the period of measurements above span, and shall be introduced at the probe. While this target represents a desired concentration range that is not always achievable in practice, the owner or operator shall demonstrate its intent to meet this range by the value of the reference gas. Expected values may include above span calibrations done before or after the above-span measurement period. The owner or operator shall record and report the results of this procedure as it would for a daily calibration. The “above span” calibration is successful if the value measured by the HCl CEMS is within 20% of the certified value of the reference gas. If the value measured by the HCl CEMS is not within 20% of the certified value of the reference gas, then the owner or operator shall normalize the stack gas values measured above span as described in part 9.9.j.1.B.4. If the “above span” calibration is conducted during the period when measured emissions are above span and the owner or operator fails to collect the one data point in an hour due to the calibration duration, then the owner or operator shall determine the emissions

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average for that missed hour as the average of hourly averages for the hour preceding the missed hour and the hour following the missed hour. In an hour where an owner or operator is conducting an “above span” calibration and collects one or more data points, the emissions average is represented by the average of all valid data points collected in that hour;

9.9.j.1.B.4. In the event that the “above span” calibration is not successful (i.e., the HCl CEMS measured value is not within 20% of the certified value of the reference gas), then the owner or operator shall normalize the one-hour average stack gas values measured above the span during the 24-hour period preceding or following the “above span” calibration for reporting based on the HCl CEMS response to the reference gas as shown in Equation 6. Only one “above span” calibration is needed per 24-hour period.

$$\frac{\text{Certified reference gas value}}{\text{Measured value of reference gas}} = \text{Measured stack gas result} = \text{Normalized stack gas result} \text{ Equation 6}$$

~~9.9.j.2. Owners or operators using a mercury continuous emissions monitoring systems shall install, operate, calibrate and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of Performance Specifications 6 and 12A at 40 CFR Part 60, Appendix B and Quality Assurance Procedure 5 at 40 CFR Part 60, Appendix F.~~

9.9.j.2. The owner or operator shall determine compliance with the mercury emissions limit using a mercury CEMS according to the following requirements:

9.9.j.2.A. The owner or operator shall operate a CEMS system in accordance with performance specification 12A of 40 CFR Part 60, Appendix B or a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR Part 60, Appendix B. The duration of the performance test shall be a calendar month. For each calendar month in which the waste-burning kiln operates, the owner or operator shall obtain hourly mercury concentration data and stack gas volumetric flow rate data. The owner or operator shall demonstrate compliance with the mercury emissions limit using a 30-day rolling average of these one-hour mercury concentrations, including CEMS data during startup and shutdown calculated using equation 19-19 in section 12.4.1 of Method 19 of 40 CFR Part 60, Appendix A-7. CEMS data during startup and shutdown are not corrected to seven percent oxygen and are measured at stack oxygen content;

9.9.j.2.B. Owners or operators using a mercury CEMS shall install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A of 40 CFR Part 60, Appendix B, and quality assurance procedure 6 of 40 CFR Part 60, Appendix F; and

~~9.9.j.3~~ 9.9.j.2.C. The owner or operator of a waste-burning kiln shall demonstrate initial compliance by operating a mercury CEMS while the raw mill of the in-line kiln/raw mill is operating under normal conditions and including at least one period when the raw mill is off.

9.9.k. If ~~you~~ the owner or operator uses an air pollution control device to meet the emission limitations in section 9, ~~you~~ the owner or operator shall conduct an initial and annual inspection of the air pollution control device. The inspection shall include, at a minimum, the following:

9.9.k.1. Inspect air pollution control device(s) for proper operation; and

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9.9.k.2. Develop a site-specific monitoring plan according to the requirements in subdivision 9.9.l. This requirement also applies to ~~you~~ the owner or operator if ~~you~~ the owner or operator petitions the Administrator for alternative monitoring parameters under 40 CFR § 60.13(i).

9.9.l. For each CMS required in this section, ~~you~~ the owner or operator shall develop and submit to the Secretary for approval a site-specific monitoring plan according to the requirements of this subdivision that addresses subparagraphs 9.9.l.1.A through 9.9.l.1.F below.

9.9.l.1. ~~You~~ The owner or operator shall submit this site-specific monitoring plan at least 60 days before ~~your~~ the initial performance evaluation of ~~your~~ the continuous monitoring system.

9.9.l.1.A. Installation of the continuous monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

9.9.l.1.B. Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer and the data collection and reduction systems;

9.9.l.1.C. Performance evaluation procedures and acceptance criteria (e.g., calibrations);

9.9.l.1.D. Ongoing operation and maintenance procedures in accordance with the general requirements of 40 CFR § 60.11(d);

9.9.l.1.E. Ongoing data quality assurance procedures in accordance with the general requirements of 40 CFR § 60.13; and

9.9.l.1.F. Ongoing recordkeeping and reporting procedures in accordance with the general requirements of 40 CFR §§ 60.7(b), (c), (c)(1), (c)(4), (d), (e), (f), and (g).

9.9.l.2. ~~You~~ The owner or operator shall conduct a performance evaluation of each continuous monitoring system in accordance with ~~your~~ the site-specific monitoring plan.

9.9.l.3. ~~You~~ The owner or operator shall operate and maintain the continuous monitoring system in continuous operation according to the site-specific monitoring plan.

9.9.m. ~~If you have~~ the owner or operator has an operating limit that requires the use of a flow monitoring system, ~~you~~ the owner or operator shall meet the requirements in subdivision 9.9.l and paragraphs 9.9.m.1 through 9.9.m.4 below:

9.9.m.1. Install the flow sensor and other necessary equipment in a position that provides a representative flow;

9.9.m.2. Use a flow sensor with a measurement sensitivity at full scale of no greater than two percent;

9.9.m.3. Minimize the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances; and

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9.9.m.4. Conduct a flow monitoring system performance evaluation in accordance with ~~you~~ the monitoring plan at the time of each performance test, but no less frequently than annually.

9.9.n. If ~~you have~~ the owner or operator has an operating limit that requires the use of a pressure monitoring system, ~~you~~ the owner or operator shall meet the requirements in subdivision 9.9.1 and paragraphs 9.9.n.1 through 9.9.n.6 below:

9.9.n.1. Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., PM scrubber pressure drop);

9.9.n.2. Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion;

9.9.n.3. Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of one percent of the pressure monitoring system operating range, whichever is less;

9.9.n.4. Perform checks at the frequency outlined in ~~you~~ the site-specific monitoring plan to ensure pressure measurements are not obstructed (e.g., check for pressure tap pluggage daily);

9.9.n.5. Conduct a performance evaluation of the pressure monitoring system in accordance with ~~you~~ the monitoring plan at the time of each performance test, but no less frequently than annually and

9.9.n.6. If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with ~~you~~ the monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in ~~you~~ the monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

9.9.o. If ~~you have~~ the owner or operator has an operating limit that requires a pH monitoring system, ~~you~~ the owner or operator shall meet the requirements in paragraphs 9.9.o.1 through 9.9.o.4 below:

9.9.o.1. Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH;

9.9.o.2. Ensure the sample is properly mixed and representative of the fluid to be measured;

9.9.o.3. Conduct a performance evaluation of the pH monitoring system in accordance with ~~you~~ the monitoring plan at least once each process operating day; and

9.9.o.4. Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with ~~you~~ the monitoring plan at the time of each performance test, but no less frequently than quarterly.

9.9.p. If ~~you have~~ the owner or operator has an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator, ~~you~~ the owner or operator shall meet the requirements in subdivision 9.9.1 and paragraphs 9.9.p.1 and 9.9.p.2 below:

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9.9.p.1. Install sensors to measure (secondary) voltage and current to the precipitator collection plates; and

9.9.p.2. Conduct a performance evaluation of the electric power monitoring system in accordance with ~~you~~ the monitoring plan at the time of each performance test, but no less frequently than annually.

9.9.q. If ~~you have~~ the owner or operator has an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper or hopper flow measurement device), ~~you~~ the owner or operator shall meet the requirements in subdivision 9.9.l and paragraphs 9.9.q.1 through 9.9.q.2 below:

9.9.q.1. Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate; and

9.9.q.2. Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with ~~you~~ the monitoring plan at the time of each performance test, but no less frequently than annually.

9.9.r. If ~~you~~ the owner or operator elects to use a fabric filter bag leak detection system to comply with the requirements of section 9, ~~you~~ the owner or operator shall install, calibrate, maintain, and continuously operate a bag leak detection system as specified in subdivision 9.9.l and paragraphs 9.9.r.1 through 9.9.r.5 below:

9.9.r.1. Install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute particulate matter loadings for each exhaust stack, roof vent or compartment (e.g., for a positive pressure fabric filter) of the fabric filter;

9.9.r.2. Use a bag leak detection system certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of ten milligrams per actual cubic meter or less;

9.9.r.3. Conduct a performance evaluation of the bag leak detection system in accordance with ~~you~~ the monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (refer to 40 CFR § 60.17);

9.9.r.4. Use a bag leak detection system equipped with a device to continuously record the output signal from the sensor; and

9.9.r.5. Use a bag leak detection system equipped with a system that will sound an alarm when it detects an increase in relative particulate matter emissions over a preset level ~~is detected~~. The alarm shall be located where it is observed readily by plant operating personnel.

9.9.s. For facilities using a CEMS to demonstrate compliance with the sulfur dioxide emission limit, the owner or operator may demonstrate compliance with the sulfur dioxide emission limit ~~may be demonstrated~~ by using the CEMS specified in subdivisions 9.10.a through 9.10.r to measure sulfur dioxide. CEMS data during startup and shutdown, as defined in 40 CFR § 60.2265, are not corrected to seven percent oxygen, and are measured at stack oxygen content. ~~You~~ The owner or operator shall calculate a 30-day rolling average of the one-hour arithmetic average emission concentrations, including



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CEMS data during startup and shutdown as defined in 40 CFR § 60.2265, using Equation 19-19 in Section 12.4.1 of EPA Reference Method 19 at 40 CFR Part 60, Appendix A-7. The owner or operator shall operate the sulfur dioxide CEMS ~~shall be operated~~ according to Performance Specification 2 in Appendix B of 40 CFR Part 60 and shall follow the procedures and methods specified in this subdivision. For sources that have actual inlet emissions less than 100 parts per million dry volume, the relative accuracy criterion for inlet sulfur dioxide CEMS should be no greater than 20% of the mean value of the reference method test data in terms of the units of the emission standard, or five parts per million dry volume absolute value of the mean difference between the reference method and the CEMS, whichever is greater.

9.9.s.1. During each relative accuracy test run of the CEMS required by Performance Specification 2 in Appendix B of 40 CFR Part 60, the owner or operator shall collect sulfur dioxide and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the CEMS and the test methods specified ~~in subparagraphs 9.9.s.1.A and 9.9.s.1.B~~ below:

9.9.s.1.A. For sulfur dioxide, EPA Reference Method 6 or 6C, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see 40 CFR § 60.17) ~~shall be used;~~ and

9.9.s.1.B. For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B at 40 CFR Part 60, Appendix A-2, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see 40 CFR § 60.17), as applicable, ~~shall be used.~~

9.9.s.2. The span value of the CEMS at the inlet to the sulfur dioxide control device shall be 125% of the maximum estimated hourly potential sulfur dioxide emissions of the unit. The span value of the CEMS at the outlet of the sulfur dioxide control device shall be 50% of the maximum estimated hourly potential sulfur dioxide emissions of the unit.

9.9.s.3. The owner or operator shall conduct accuracy determinations quarterly and calibration drift tests daily in accordance with Procedure 1 in Appendix F of 40 CFR Part 60.

9.9.t. For facilities using a CEMS to demonstrate continuous compliance with the nitrogen oxides emission limit, the owner or operator may demonstrate compliance with the nitrogen oxides emission limit ~~may be demonstrated~~ by using the CEMS specified in subdivisions 9.10.a through 9.10.r to measure nitrogen oxides. CEMS data during startup and shutdown, as defined in 40 CFR § 60.2265, are not corrected to seven percent oxygen, and are measured at stack oxygen content. ~~You~~ The owner or operator shall calculate a 30-day rolling average of the one-hour arithmetic average emission concentrations using Equation 19-19 in Section 12.4.1 of EPA Reference Method 19 at 40 CFR Part 60, Appendix A-7. The owner or operator shall operate the nitrogen oxides CEMS ~~shall be operated~~ according to Performance Specification 2 in Appendix B of 40 CFR Part 60 and shall follow the procedures and methods specified in paragraphs 9.9.t.1 through 9.9.t.4 below:

9.9.t.1. During each relative accuracy test run of the CEMS required by Performance Specification 2 of Appendix B of 40 CFR Part 60, the owner or operator shall collect nitrogen oxides and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the CEMS and the test methods specified in subparagraphs 9.9.t.1.A and 9.9.t.1.B below:

9.9.t.1.A. For nitrogen oxides, EPA Reference Method 7 or 7E of 40 CFR Part 60, Appendix A-4 ~~shall be used;~~ and

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9.9.t.1.B. For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B at 40 CFR Part 60, Appendix A-2, or as an alternative ANSI/ASME PTC 19.10-1981 (refer to 40 CFR § 60.17), as applicable, ~~shall be used;~~

9.9.t.2. The span value of the CEMS shall be 125% of the maximum estimated hourly potential nitrogen oxide emissions of unit;

9.9.t.3. Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with Procedure 1 in Appendix F of 40 CFR Part 60; and

9.9.t.4. The owner or operator of an affected facility may request that it determine compliance with the nitrogen oxides emission limit ~~be determined~~ using carbon dioxide measurements corrected to an equivalent of seven percent oxygen. If the owner or operator selects carbon dioxide is selected for use in diluent corrections, the owner or operator shall establish the relationship between oxygen and carbon dioxide levels ~~shall be established~~ during the initial performance test according to the procedures and methods specified in subparagraphs 9.9.t.4.A through ~~9.9.t.4.D~~ 9.9.t.4.C below. The owner or operator may reestablish this relationship ~~may be reestablished~~ during performance compliance tests. The owner or operator shall:

9.9.t.4.A. ~~Use~~ The fuel factor equation in Method 3B shall be used to determine the relationship between oxygen and carbon dioxide at a sampling location, and use Method 3A, 3B or, as an alternative, ANSI/ASME PTC 19.10-1981 (refer to 40 CFR § 60.17), as applicable, ~~shall be used~~ to determine the oxygen concentration at the same location as the carbon dioxide monitor;

9.9.t.4.B. Take samples shall be taken for at least 30 minutes in each hour. Each sample shall represent a one-hour average;

~~9.9.t.4.C. Each sample shall represent a 1-hour average.~~

~~9.9.t.4.D. 9.9.t.4.C. Perform a minimum of three runs shall be performed.~~

9.9.u. For facilities using a CEMS to demonstrate continuous compliance with any of the emission limits of section 9, ~~you~~ the owner or operator shall complete the following:

9.9.u.1. Demonstrate compliance with the appropriate emission limit(s) using a 30-day rolling average of one-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown, as defined in 40 CFR § 60.2265, calculated using Equation 19-19 in Section 12.4.1 of EPA Reference Method 19 at 40 CFR Part 60, Appendix A-7. CEMS data during startup and shutdown, as defined in 40 CFR § 60.2265, are not corrected to seven percent oxygen and are measured at stack oxygen content; and

9.9.u.2. Operate all CEMS in accordance with the applicable procedures under Appendices B and F of 40 CFR Part 60.

9.9.v. Use of the bypass stack at any time is an emissions standards deviation for particulate matter, HCl, Pb, Cd, Hg, NO<sub>x</sub>, SO<sub>2</sub>, and dioxin/furans.

9.9.w. For energy recovery units with a design heat input capacity of 100 MMBtu/hr or greater that do not use a carbon monoxide CEMS, ~~you~~ the owner or operator shall install, operate, and maintain

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an oxygen analyzer system as defined in 40 CFR § 60.2265 according to the procedures in paragraphs 9.9.w.1 through 9.9.w.4 below:

9.9.w.1. ~~Install~~ the oxygen analyzer system ~~shall be installed~~ by the initial performance test date as specified in subdivision 9.6.c through paragraph 9.6.k.5;

9.9.w.2. ~~You shall o~~Operate the oxygen trim system ~~with~~in compliance with paragraph 9.9.w.3 at all times;

9.9.w.3. ~~You shall m~~Maintain the oxygen level such that the 30-day rolling average that is established as the operating limit for oxygen is not below the lowest hourly average oxygen concentration measured during the most recent (carbon monoxide) CO performance test; and

9.9.w.4. ~~You shall e~~Calculate and record a 30-day rolling average oxygen concentration using Equation 19-19 in Section 12.4.1 of EPA Reference Method 19 of Appendix A7 of 40 CFR Part 60.

9.9.x. For energy recovery units with annual average heat input rates greater than or equal to 250 MMBtu/hour and waste-burning kilns, ~~you the owner or operator~~ shall install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in paragraphs 9.9.x.1 through 9.9.x.8 below. For other energy recovery units, ~~you the owner or operator~~ may elect to use PM CPMS operated in accordance with this section. PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure). As stated above, the owner shall:

9.9.x.1. Install, calibrate, operate, and maintain ~~your~~ the PM CPMS according to the procedures in ~~your~~ the approved site-specific monitoring plan developed in accordance with subdivision 9.9.1 and subparagraphs 9.9.x.1.A through 9.9.x.1.C;

9.9.x.1.A. The owner or operator shall base the operating principle of the PM CPMS ~~shall be based~~ on in-stack or extractive light scatter, light scintillation, beta attenuation or mass accumulation of the exhaust gas or representative sample. The owner or operator shall express the reportable measurement output from the PM CPMS ~~shall be expressed~~ as milliamperes;

9.9.x.1.B. The PM CPMS shall have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes; and

9.9.x.1.C. The PM CPMS shall be capable of detecting and responding to particulate matter concentrations ~~of~~ increments no greater than 0.5 mg/actual cubic meter.

9.9.x.2. During the initial performance test or any ~~such~~ subsequent performance test that demonstrates compliance with the PM limit, ~~you shall~~ adjust the site-specific operating limit in accordance with the results of the performance test according to the procedures specified in subdivision 9.6.c through paragraph 9.6.k.5 of this rule;

9.9.x.3. Collect PM CPMS hourly average output data for all energy recovery unit or waste-burning kiln operating hours and express the PM CPMS output as milliamperes;

9.9.x.4. Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit or waste-burning kiln operating hours data (milliamperes);

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9.9.x.5. ~~You shall~~ Collect data using the PM CPMS at all times the energy recovery unit or waste-burning kiln is operating and at the intervals specified in subparagraph 9.9.x.1.B, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in ~~you~~ the site-specific monitoring plan;

9.9.x.6. ~~You shall~~ Use all the data collected during all energy recovery unit or waste-burning kiln operating hours in assessing ~~the~~ compliance with ~~you~~ the operating limit except:

9.9.x.6.A. Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions ~~are not used in calculations~~ (report any such periods in ~~you~~ the annual deviation report); or

9.9.x.6.B. Any data collected during periods when the monitoring system is out of control as specified in ~~you~~ the site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control or required monitoring system quality assurance or quality control activities conducted during out-of-control periods ~~are not used in calculations~~ (report emissions or operating levels and report any such periods in ~~you~~ the annual deviation report); or

9.9.x.6.C. Any PM CPMS data recorded during periods of CEMS data during startup and shutdown, as defined in 40 CFR § 60.2265.

9.9.x.7. ~~You shall~~ Record and make available upon request results of PM CPMS system performance audits, as well as the dates and duration of periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return the PM CPMS to operation consistent with ~~you~~ the site-specific monitoring plan; and

9.9.x.8. For any deviation of the 30-day rolling average PM CPMS average value from the established operating parameter limit, ~~you shall~~:

9.9.x.8.A. Within 48 hours of the deviation, visually inspect the air pollution control device;

9.9.x.8.B. If inspection of the air pollution control device identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

9.9.x.8.C. Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify the operation of the emission control device. Within 45 days of the deviation, ~~you~~ the owner or operator shall re-establish the CPMS operating limit. ~~You are~~ The owner or operator is not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this subparagraph.

9.9.x.8.D. PM CPMS deviations leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a violation of section 9.

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9.9.y. When there is an alkali bypass or an in-line coal mill that exhausts emissions through a separate stack(s), the combined emissions are subject to the emission limits applicable to waste-burning kilns. To determine the kiln-specific emission limit for demonstrating compliance, the owner or operator shall:

9.9.y.1. (1) Calculate a kiln-specific emission limit using Equation 7:

$$C_{ks} = \frac{\left( (Emission\ limit \times (Q_{ab} + Q_{cm} + Q_{ks})) - (Q_{ab} \times C_{ab}) - (Q_{cm} \times C_{cm}) \right)}{Q_{ks}} \text{ Equation 7}$$

$C_{ks}$  = Kiln stack concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O<sub>2</sub>.)

$Q_{ab}$  = Alkali bypass flow rate (volume/hr)

$C_{ab}$  = Alkali bypass concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O<sub>2</sub>.)

$Q_{cm}$  = In-line coal mill flow rate (volume/hr)

$C_{cm}$  = In-line coal mill concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O<sub>2</sub>.)

$Q_{ks}$  = Kiln stack flow rate (volume/hr)

9.9.y.2. Measure particulate matter concentration downstream of the in-line coal mill and measure all other pollutant concentrations either upstream or downstream of the in-line coal mill; and

9.9.y.3. For purposes of determining the combined emissions from kilns equipped with an alkali bypass or that exhaust kiln gases to a coal mill that exhausts through a separate stack, instead of installing a CEMS or PM CPMS on the alkali bypass stack or inline coal mill stack, the owner or operator may use the results of the initial and subsequent performance test to demonstrate compliance with the relevant emissions limit. The owner or operator shall conduct a performance test on an annual basis (between 11 and 13 calendar months following the previous performance test).

9.9.z. Timing of Performance Tests and Control Device Inspections. – The owner or operator shall:

~~9.9.y.1~~ 9.9.z.1. ~~You shall~~ Conduct annual performance tests between 11 and 13 months of the previous performance test;

~~9.9.y.2~~ 9.9.z.2. ~~You shall~~ Conduct the air pollution control device inspections on an annual basis (but no more than 12 months following the previous annual air pollution control device inspection) and complete the air pollution control device inspection as described in subdivisions 9.8.e and 9.8.f above;

~~9.9.y.3~~ 9.9.z.3. ~~You shall~~ Conduct annual performance tests according to the schedule specified in subdivision 9.9.x, with the following exceptions:

~~9.9.y.3.A~~ 9.9.z.3.A. ~~You~~ The owner or operator may conduct a repeat performance test at any time to establish new values for the operating limits to apply from that point forward, as specified in subdivision ~~9.9.z~~ 9.9.aa. The Secretary may request a repeat performance test at any time;

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~~9.9.y.3.B~~ 9.9.z.3.B. ~~You~~ The owner or operator shall repeat the performance test within 60 days of a process change, ~~as defined in 40 CFR §60.2265;~~

~~9.9.y.3.C~~ 9.9.z.3.C. If the initial or any subsequent performance test for any pollutant in Table 18-2C or Tables 18-6C through 18-9C, as applicable, demonstrates that the emission level for the pollutant is no greater than the emission level specified in parts ~~9.9.y.3.C.1~~ 9.9.z.3.C.1 or ~~9.9.y.3.C.2~~ 9.9.z.3.C.2, as applicable, and ~~you are the owner or operator is~~ not required to conduct a performance test for the pollutant in response to a request by the Secretary in subparagraph ~~9.9.y.3.A~~ 9.9.z.3.A or a process change in subparagraph ~~9.9.y.3.B~~ 9.9.z.3.B, ~~you~~ the owner or operator may elect to skip conducting a performance test for the pollutant for the next two years. ~~You~~ The owner or operator shall conduct a performance test for the pollutant during the third year and no more than 37 months following the previous performance test for the pollutant. For cadmium and lead, the owner or operator shall emit both cadmium and lead ~~shall be emitted~~ at emission levels no greater than their respective emission levels specified in part ~~9.9.y.3.C.1~~ 9.9.z.3.C.1 ~~for you in order~~ to qualify for less frequent testing under paragraph ~~9.9.y.3~~ 9.9.z.3.

~~9.9.y.3.C.1~~ 9.9.z.3.C.1. For particulate matter, hydrogen chloride, mercury, carbon monoxide, nitrogen oxides, sulfur dioxide, cadmium, lead, and dioxins/furans, the emission level equal to 75% of the applicable emission limit in Table 18-2C or Tables 18-6C through 18-9C, as applicable.

~~9.9.y.3.C.2~~ 9.9.z.3.C.2. For fugitive emissions, visible emissions (of combustion ash from the ash conveying system) for two percent of the time during each of the three one-hour observation periods.

~~9.9.y.3.D~~ 9.9.z.3.D. If ~~you are~~ The owner or operator is conducting less frequent testing for a pollutant as provided in subparagraph ~~9.9.y.3.C~~ 9.9.z.3.C, and a subsequent performance test for the pollutant indicates that ~~you~~ the CISWI unit does not meet the emission level specified in parts ~~9.9.y.3.C.1~~ 9.9.z.3.C.1 or ~~9.9.y.3.C.2~~ 9.9.z.3.C.2, as applicable, ~~you~~ the owner or operator shall conduct annual performance tests for the pollutant according to the schedule specified in paragraph ~~9.9.y.3~~ 9.9.z.3 until ~~you qualify~~ the facility qualifies for less frequent testing for the pollutant as specified in subparagraph ~~9.9.y.3.C~~ 9.9.z.3.C.

~~9.9.y.4~~ Reserved.

~~9.9.z~~ 9.9.aa. Repeat Performance Test to Establish New Operating Limits.

~~9.9.z.1~~ 9.9.aa.1. ~~You~~ The owner or operator may conduct a repeat performance test at any time to establish new values for the operating limits. The Secretary may request a repeat performance test at any time.

~~9.9.z.2~~ 9.9.aa.2. ~~You~~ The owner or operator shall repeat the performance test if ~~you~~ the feed stream is different than the feed streams used during any performance test used to demonstrate compliance.

9.10. Monitoring Equipment and Parameters.

9.10.a. If ~~you are~~ the owner or operator is using a wet scrubber to comply with the emission limitation under subdivisions 9.6.a. and 9.6.b, ~~you~~ the owner or operator shall install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the

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value of the operating parameters used to determine compliance with the operating limits listed in Table 18-3C. These devices (or methods) shall measure and record the values for these operating parameters at the frequencies indicated in Table 18-3C at all times, except as specified in paragraph 9.10.s.1.

9.10.b. If ~~you~~ the owner or operator uses a fabric filter to comply with the requirements of section 9, ~~you~~ the owner or operator shall install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraphs 9.10.b.1 through 9.10.b.8 below:

9.10.b.1. Install and operate a bag leak detection system for each exhaust stack of the fabric filter;

9.10.b.2. Each bag leak detection system shall be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations;

9.10.b.3. The bag leak detection system shall be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of ten milligrams per actual cubic meter or less;

9.10.b.4. The bag leak detection system sensor shall provide output of relative or absolute particulate matter loadings;

9.10.b.5. The bag leak detection system shall be equipped with a device to continuously record the output signal from the sensor;

9.10.b.6. The bag leak detection system shall be equipped with an alarm system that will alert automatically ~~an operator~~ when it detects an increase in relative particulate matter emission over a preset level ~~is detected~~. The alarm shall be located where it is observed easily by plant operating personnel;

9.10.b.7. For positive pressure fabric filter systems, a bag leak detection system shall be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector shall be installed downstream of the fabric filter; and

9.10.b.8. Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

9.10.c. If ~~you are~~ the owner or operator is using something other than a wet scrubber, activated carbon, selective non-catalytic reduction, an electrostatic precipitator or a dry scrubber to comply with the emission limitations under subdivisions 9.6.a. and 9.6.b, ~~you~~ the owner or operator shall install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor compliance with the site-specific operating limits established using the procedures in subdivisions 9.6.l through 9.6.m.

9.10.d. If ~~you~~ the owner or operator uses activated carbon injection to comply with the emission limitations in section 9, ~~you~~ the owner or operator shall measure the minimum sorbent flow rate once per hour.

9.10.e. If ~~you~~ the owner or operator uses selective noncatalytic reduction to comply with the emission limitations, ~~you~~ the owner or operator shall complete the following:

9.10.e.1. Following the date on which the initial performance test is completed or is required to

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be completed under subsection 9.7 through paragraph 9.7.j.3, whichever date comes first, ensure that the affected facility does not operate above the maximum charge rate or below the minimum secondary chamber temperature (if applicable to ~~you~~ the CISWI unit) or the minimum reagent flow rate measured as three-hour block averages at all times.

9.10.e.2. Operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature and below the minimum reagent flow rate simultaneously constitute a violation of the nitrogen oxides emissions limit.

9.10.f. If ~~you~~ the owner or operator uses an electrostatic precipitator to comply with the emission limits of section 9, ~~you~~ the owner or operator shall monitor the secondary power to the electrostatic precipitator collection plates and maintain the three-hour block averages at or above the operating limits established during the mercury or particulate matter performance test.

9.10.g. For waste-burning kilns not equipped with a wet scrubber or dry scrubber, in place of hydrogen chloride testing with EPA Method 321 at 40 CFR Part 63, Appendix A, an owner or operator shall install, calibrate, maintain, and operate a CEMS for monitoring hydrogen chloride emissions discharged to the atmosphere and record the output of the system. To demonstrate continuous compliance with the hydrogen chloride emissions limit for units other than waste-burning kilns not equipped with a wet scrubber or dry scrubber, a facility may substitute use of a hydrogen chloride CEMS for conducting the hydrogen chloride annual performance test, monitoring the minimum hydrogen chloride sorbent flow rate and monitoring the minimum scrubber liquor pH.

9.10.h. To demonstrate continuous compliance with the particulate matter emissions limit, a facility may substitute use of a particulate matter CEMS for conducting the particulate matter annual performance test and other CMS monitoring for PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure).

9.10.i. To demonstrate continuous compliance with the dioxin/furan emissions limit, a facility may substitute use of a continuous automated sampling system for the dioxin/furan annual performance test. ~~You~~ The owner or operator shall record the output of the system and analyze the sample according to EPA Method 23 at 40 CFR Part 60, Appendix A-7. This option to use a continuous automated sampling system takes effect on the date a final performance specification applicable to dioxin/furan from continuous monitors is published in the Federal Register. The owner or operator who elects to continuously sample dioxin/furan emissions instead of sampling and testing using EPA Method 23 at 40 CFR Part 60, Appendix A-7, shall install, calibrate, maintain, and operate a continuous automated sampling system and shall comply with the requirements specified in 40 CFR §§ 60.58b(p) and (q). A facility may substitute continuous dioxin/furan monitoring for the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the dioxin/furan emission limit.

9.10.j. To demonstrate continuous compliance with the mercury emissions limit, a facility may substitute use of a continuous automated sampling system for the mercury annual performance test. ~~You~~ The owner or operator shall record the output of the system and analyze the sample at set intervals using any suitable determinative technique that can meet Performance Specification 12B criteria. This option to use a continuous automated sampling system takes effect on the date a final performance specification applicable to mercury from monitors is published in the Federal Register. The owner or operator who elects to continuously sample mercury emissions instead of sampling and testing using EPA Method 29 or 30B at 40 CFR Part 60, Appendix A-8, ASTM D6784-02 (Reapproved 2008) (incorporated by reference, see 40 CFR § 60.17), or an approved alternative method for measuring mercury emissions, shall install,



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calibrate, maintain, and operate a continuous automated sampling system and shall comply with the requirements specified in 40 CFR §§ 60.58b(p) and (q). A facility may substitute continuous mercury monitoring for the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the mercury emission limit.

9.10.k. To demonstrate continuous compliance with the nitrogen oxides emissions limit, a facility may substitute use of a CEMS for the nitrogen oxides annual performance test to demonstrate compliance with the nitrogen oxides emissions limits.

9.10.k.1. Install, calibrate, maintain, and operate a CEMS for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system. The owner or operator shall follow the requirements under Performance Specification 2 of Appendix B of 40 CFR Part 60, the Quality Assurance Procedure 1 of Appendix F of 40 CFR Part 60, and the procedures under 40 CFR § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

9.10.k.2. Following the date that the initial performance test for nitrogen oxides is completed or is required to be completed under subsection 9.7 through paragraph 9.7.j.3, the owner or operator shall determine compliance with the emission limit for nitrogen oxides required under 40 CFR § 60.52b(d) ~~shall be determined~~ based on the 30-day rolling average of the hourly emission concentrations using CEMS outlet data. The owner or operator shall express the one-hour arithmetic averages ~~shall be expressed~~ in parts per million by volume corrected to seven percent oxygen (dry basis) and used to calculate the 30-day rolling average concentrations. CEMS data during startup and shutdown, ~~as defined in 40 CFR § 60.2265,~~ are not corrected to seven percent oxygen and are measured at stack oxygen content. The owner or operator shall calculate the one-hour arithmetic averages ~~shall be calculated~~ using the data points required under 40 CFR § 60.13(e)(2).

9.10.l. To demonstrate continuous compliance with the sulfur dioxide emissions limit, a facility may substitute use of a continuous automated sampling system for the sulfur dioxide annual performance test ~~to demonstrate compliance with the sulfur dioxide emissions limits.~~

9.10.l.1. The owner or operator shall install, calibrate, maintain, and operate a CEMS for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system. The owner or operator shall follow the requirements under Performance Specification 2 of Appendix B of 40 CFR Part 60, the Quality Assurance requirements of Procedure 1 of Appendix F of 40 CFR Part 60, and the procedures under 40 CFR § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

9.10.l.2. Following the date that the initial performance test for sulfur dioxide is completed or is required to be completed under subsection 9.7 through paragraph 9.7.j.3, the owner or operator may demonstrate compliance with the sulfur dioxide emission limit ~~may be determined~~ based on the 30-day rolling average of the hourly arithmetic average emission concentrations using CEMS outlet data. The owner or operator shall express the one-hour arithmetic averages ~~shall be expressed~~ in parts per million corrected to seven percent oxygen (dry basis) and used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, ~~as defined in 40 CFR § 60.2265,~~ are not corrected to seven percent oxygen and are measured at stack oxygen content. The owner or operator shall calculate the one-hour arithmetic averages ~~shall be calculated~~ using the data points required under 40 CFR § 60.13(e)(2).

9.10.m. For energy recovery units over 10 MMBtu/hr but less than 250 MMBtu/hr annual average

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heat input rates that do not use a wet scrubber, fabric filter with bag leak detection system or particulate matter CEMS, ~~you~~ the owner or operator shall install, operate, certify, and maintain a continuous opacity monitoring system according to the procedures in paragraphs 9.10.m.1 through 9.10.m.5 by the compliance date specified in subdivisions 9.6.a. and 9.6.b. Energy recovery units that use a particulate matter CEMS to demonstrate initial and continuing compliance according to the procedures in subdivision 9.10.n are not required to install a continuous opacity monitoring system and shall perform the annual performance tests for opacity consistent with subdivision 9.9.f. The owner or operator shall:

9.10.m.1. Install, operate, and maintain each continuous opacity monitoring system according to Performance Specification 1 at 40 CFR Part 60, Appendix B;

9.10.m.2. Conduct a performance evaluation of each continuous opacity monitoring system according to the requirements in 40 CFR § 60.13 and according to Performance Specification 1 at 40 CFR Part 60, Appendix B;

9.10.m.3. As specified in 40 CFR §60.13(e)(1), for each continuous opacity monitoring system, ~~shall~~ complete a minimum of one cycle of sampling and analyzing for each successive ten-second period and one cycle of data recording for each successive six-minute period;

9.10.m.4. Reduce the continuous opacity monitoring system data as specified in 40 CFR § 60.13(h)(1); and

9.10.m.5. Determine and record all the six-minute averages (and one-hour block averages as applicable) collected.

9.10.n. For coal and liquid/gas energy recovery units, incinerators, and small remote incinerators, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring particulate matter emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who continuously monitors particulate matter emissions instead of conducting performance testing using EPA Method 5 at 40 CFR Part 60, Appendix A-3 or, as applicable, monitors with a particulate matter CPMS according to subdivision 9.10.r. ~~shall~~ install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs 9.10.n.1 through 9.10.n.13.

9.10.n.1. Notify the Secretary one month before starting use of the system;

9.10.n.2. Notify the Secretary one month before stopping use of the system;

9.10.n.3. ~~The monitor shall be i~~Installed, evaluated and operated the monitor in accordance with the requirements of Performance Specification 11 of Appendix B of 40 CFR Part 60 and the quality assurance requirements of Procedure 2 of Appendix F of 40 CFR Part 60 and 40 CFR § 60.13.

9.10.n.4. ~~The initial performance evaluation shall be c~~Completed no later than 180 days after the final compliance date for meeting the amended emission limitations, as specified under subsection 9.7 through paragraph 9.7.j.3, or within 180 days of notification to the Secretary of use of the continuous monitoring system, if the owner or operator was previously determining compliance by Method 5 at 40 CFR Part 60, Appendix A-3 performance tests, whichever is later.

9.10.n.5. The owner or operator of an affected facility may request that compliance with the

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particulate matter emission limit be determined using carbon dioxide measurements corrected to an equivalent of seven percent oxygen. The owner or operator shall establish the relationship between oxygen and carbon dioxide levels for the affected facility ~~shall be established~~ according to the procedures and methods specified in subparagraphs 9.9.t.4.A through 9.9.t.4.D of this rule.

9.10.n.6. The owner or operator of an affected facility shall conduct an initial performance test for particulate matter emissions as required under subsection 9.7 through paragraph 9.7.j.3. The owner or operator shall determine compliance with the particulate matter emission limit, if PM CEMS are elected for demonstrating compliance, shall be determined by using the CEMS specified in subdivision 9.10.n to measure particulate matter. ~~You~~ The owner or operator shall calculate a 30-day rolling average of one-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown, as defined in 40 CFR §60.2265, using Equation 19-19 in Section 12.4.1 of EPA Reference Method 19 at 40 CFR Part 60, Appendix A-7.

9.10.n.7. The owner or operator shall determine compliance with the particulate matter emission limit ~~shall be determined~~ based on the 30-day rolling average calculated using Equation 19-19 in Section 12.4.1 of EPA Reference Method 19 at 40 CFR Part 60, Appendix A-7 from the one-hour arithmetic average of the CEMS outlet data.

9.10.n.8. At a minimum, the owner or operator shall obtain valid continuous monitoring system hourly averages ~~shall be obtained~~ as specified in subdivision 9.10.s.

9.10.n.9. The owner or operator shall express the one-hour arithmetic averages required under paragraph 9.10.n.7 ~~shall be expressed~~ in milligrams per dry standard cubic meter corrected to seven percent oxygen (or carbon dioxide) (dry basis), and ~~shall be used~~ the owner or operator shall use the one-hour arithmetic averages to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, ~~as defined in 40 CFR §60.2265,~~ are not corrected to seven percent oxygen and are measured at stack oxygen content. The owner or operator shall calculate the one-hour arithmetic averages ~~shall be calculated~~ using the data points required under 40 CFR § 60.13(e)(2).

9.10.n.10. ~~The owner or operator shall use all valid CEMS data shall be used~~ in calculating average emission concentrations, even if the minimum CEMS data requirements of paragraph 9.10.n.8 are not met.

9.10.n.11. The owner or operator shall operate the continuous CEMS ~~shall be operated~~ according to Performance Specification 11 in Appendix B of 40 CFR Part 60.

9.10.n.12. During each relative accuracy test run of the CEMS required by Performance Specification 11 in Appendix B of 40 CFR Part 60, the owner or operator shall collect the particulate matter and oxygen (or carbon dioxide) data ~~shall be collected~~ concurrently (or within a 30- to 60-minute period) by both the CEMS and the following test methods:

9.10.n.12.A. For particulate matter, EPA Reference Method 5 at 40 CFR Part 60, Appendix A-3 ~~shall be used~~.

9.10.n.12.B. For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B at 40 CFR Part 60, Appendix A-2, as applicable, ~~shall be used~~.

9.10.n.13. The owner or operator shall perform quarterly accuracy determinations and daily

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calibration drift tests ~~shall be performed~~ in accordance with Procedure 2 in Appendix F of 40 CFR Part 60.

9.10.o. To demonstrate continuous compliance with the carbon monoxide emissions limit, a facility may substitute use of a continuous automated sampling system for the carbon monoxide annual performance test to demonstrate compliance with the carbon monoxide emissions limits.

9.10.o.1. The owner or operator shall install, calibrate, maintain, and operate a CEMS for measuring carbon monoxide emissions discharged to the atmosphere and record the output of the system. The owner or operator shall follow the requirements under Performance Specification 4B of Appendix B of 40 CFR Part 60, the Quality Assurance Procedure 1 of Appendix F of 40 CFR Part 60, and the procedures under 40CFR § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

9.10.o.2. Following the date that the initial performance test for carbon monoxide is completed or is required to be completed under subsection 9.7 through paragraph 9.7.j.3, the owner or operator may determine compliance with the carbon monoxide emission limit may be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in 40 CFR §60.2265, using CEMS outlet data. Except for CEMS data during startup and shutdown, as defined in 40 CFR §60.2265, the owner or operator shall express the one-hour arithmetic averages shall be expressed in parts per million corrected to seven percent oxygen (dry basis) and used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, as defined in 40 CFR §60.2265, are not corrected to seven percent oxygen and are measured at stack oxygen content. The owner or operator shall calculate the one-hour arithmetic averages shall be calculated using the data points required under 40 CFR § 60.13(e)(2).

9.10.p. The owner or operator of an affected source with a bypass stack shall install, calibrate (to manufacturers' specifications), maintain, and operate a device or method for measuring the use of the bypass stack including date, time, and duration.

9.10.q. For energy recovery units with a heat input capacity of 100 MMBtu/hr or greater that do not use a carbon monoxide continuous emission monitoring system, ~~you~~ the owner or operator shall install, operate, and maintain the continuous oxygen monitoring system according to the procedures in paragraphs 9.10.q.1 through 9.10.q.4 by the compliance date specified in Table 18-1C. The owner or operator shall monitor oxygen level shall be monitored at the outlet of the energy recovery unit.

9.10.q.1. ~~Each monitor shall be installed, operated, and maintained according to the applicable procedures under Performance Specification 3 of Appendix B of 40 CFR Part 60, the Quality Assurance Procedure 1 of Appendix F of 40 CFR Part 60, the procedures under 40 CFR §60.13 and according to the site specific monitoring plan developed according to subdivision 9.9.1. The owner or operator shall install the oxygen analyzer system by the initial performance test date specified in section 9.6;~~

9.10.q.2. ~~During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 3 of Appendix B of 40 CFR Part 60, oxygen data shall be collected concurrently (or within a 30 to 60 minute period) by both the continuous emission monitor and the test methods specified in paragraphs 9.10.q.3 and 9.10.q.4. The owner or operator shall operate the oxygen trim system in compliance with paragraph 9.10.q.3 at all times;~~

9.10.q.3. ~~For oxygen, EPA Reference Method 3A or 3B, or as an alternative ANSI/ASME PTC~~

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~~19.10-1981 (incorporated by reference, see 40 CFR §60.17), as applicable, shall be used. The owner or operator shall maintain the oxygen level such that the 30-day rolling average that is established as the operating limit for oxygen according to paragraph 9.10.q.4 is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test; and~~

~~9.10.q.4. You shall calculate and record a 30-day rolling average oxygen concentration using Equation 19-19 in Section 12.4.1 of EPA Reference Method 19 of Appendix A-7 of 40 CFR Part 60. The 1-hour arithmetic averages shall be calculated using the data points required under 40 CFR §60.13(e)(2). The owner or operator shall calculate and record a 30-day rolling average oxygen concentration using equation 19-19 in section 12.4.1 of EPA Reference Method 19 of Appendix A-7 of 40 CFR Part 60.~~

9.10.r. For energy recovery units with annual average heat input rates greater than or equal to 250 MMBtu/hour and waste-burning kilns, ~~you~~ the owner or operator shall install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in paragraphs 9.10.r.1 through 9.10.r.8 below. For other energy recovery units, ~~you~~ the owner or operator may elect to use PM CPMS operated in accordance with this section. PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure). The owner or operator shall:

9.10.r.1. Install, calibrate, operate, and maintain ~~you~~ the PM CPMS according to the procedures in ~~you~~ the approved site-specific monitoring plan developed in accordance with subdivision 9.9 and subparagraphs 9.10.r.1.A through 9.10.r.1.C;

9.10.r.1.A. ~~The owner or operator shall base the operating principle of the PM CPMS shall be based on~~ the owner or operator shall base the operating principle of the PM CPMS ~~shall be based on~~ in-stack or extractive light scatter, light scintillation, beta attenuation or mass accumulation of the exhaust gas or representative sample. The owner or operator shall express the reportable measurement output from the PM CPMS ~~shall be expressed~~ as milliamps.

9.10.r.1.B. The PM CPMS shall have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

9.10.r.1.C. The PM CPMS shall be capable of detecting and responding to particulate matter concentrations ~~of increments~~ no greater than 0.5 mg/actual cubic meter.

9.10.r.2. During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, ~~you shall~~ the owner or operator shall adjust the site-specific operating limit in accordance with the results of the performance test according to the procedures specified in subdivision 9.6.c through paragraph 9.6.k.5;

9.10.r.3. Collect PM CPMS hourly average output data for all energy recovery unit or waste-burning kiln operating hours and express the PM CPMS output as millamps; and

9.10.r.4. Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit or wasteburning kiln operating hours data (milliamps).

9.10.r.5. ~~You~~ The owner or operator shall collect data using the PM CPMS at all times the energy recovery unit or waste-burning kiln is operating and at the intervals specified in subparagraph 9.10.r.1.B, except for periods of monitoring system malfunctions, repairs associated with monitoring

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system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in ~~you~~ the site-specific monitoring plan.

9.10.r.6. ~~You~~ The owner or operator shall use all the data collected during all energy recovery unit or waste-burning kiln operating hours in assessing ~~the~~ compliance with ~~you~~ the operating limit, except that the owner or operator shall not use the following in these calculations:

9.10.r.6.A. Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions ~~are not used in calculations~~ (report any such periods in ~~you~~ the annual deviation report); or

9.10.r.6.B. Any data collected during periods when the monitoring system is out of control as specified in ~~you~~ the site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control or required monitoring system quality assurance or quality control activities conducted during out of control periods ~~are not used in calculations~~ (report emissions or operating levels and report any such periods in ~~you~~ the annual deviation report); or

9.10.r.6.C. Any PM CPMS data recorded during periods of CEMS data during startup and shutdown, ~~as defined in 40 CFR §60.2265.~~

9.10.r.7. ~~You~~ The owner or operator shall record and make available to the Secretary upon request results of PM CPMS system performance audits, as well as the dates and ~~duration of~~ periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return the PM CPMS to operation consistent with ~~you~~ the site-specific monitoring plan.

9.10.r.8. For any deviation of the 30-day rolling average PM CPMS average value from the established operating parameter limit, ~~you~~ the owner or operator shall:

9.10.r.8.A. Within 48 hours of the deviation, visually inspect the air pollution control device;

9.10.r.8.B. If inspection of the air pollution control device identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

9.10.r.8.C. Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify the operation of the emission control device. Within 45 days of the deviation, ~~you~~ the owner or operator shall reestablish the CPMS operating limit. ~~You are~~ The owner or operator is not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this subparagraph.

9.10.r.8.D. PM CPMS deviations leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a violation of section 9.

9.10.r.9. If ~~you~~ the owner or operator uses a dry scrubber to comply with the emission limits of section 9, ~~you~~ the owner or operator shall monitor the injection rate of each sorbent and maintain the

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three-hour block averages at or above the operating limits established during the hydrogen chloride performance test.

9.10.s. Monitoring Data. -- For each continuous monitoring system required or optionally allowed under subdivisions 9.10.a through 9.10.r, ~~you~~ the owner or operator shall monitor and collect data according to the following:

9.10.s.1. ~~You~~ The owner or operator shall operate the monitoring system and collect data at all required intervals at all times compliance is required, except for periods of monitoring system malfunctions or out of control periods, repairs associated with monitoring system malfunctions or out of control periods (as specified in paragraph 9.12.e.15), and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. ~~You are~~ The owner or operator is required to affect monitoring system repairs in response to monitoring system malfunctions or out of control periods and to return the monitoring system to operation as expeditiously as practicable.

9.10.s.2. ~~You~~ The owner or operator may not use data recorded during the monitoring system malfunctions, repairs associated with monitoring system malfunctions or out of control periods or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. ~~You~~ The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system.

9.10.s.3. Except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out of control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments, failure to collect required data is a deviation of the monitoring requirements.

9.11. Recordkeeping Requirements. -- ~~You~~ The owner or operator shall maintain the items (as applicable) as specified in subdivisions 9.11.a, 9.11.b, and subdivisions 9.11.e through 9.11.w for a period of at least five years:

9.11.a. Calendar date of each record;

9.11.b. Records of the data described in paragraphs 9.11.b.1 through 9.11.b.6:

9.11.b.1. The CISWI unit charge dates, times, weights, and hourly charge rates;

9.11.b.2. Liquor flow rate to the wet scrubber inlet every 15 minutes of operation, as applicable;

9.11.b.3. Pressure drop across the wet scrubber system every 15 minutes of operation or amperage to the wet scrubber every 15 minutes of operation, as applicable;

9.11.b.4. Liquor pH as introduced to the wet scrubber every 15 minutes of operation, as applicable;

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9.11.b.5. For affected CISWI units that establish operating limits for controls other than wet scrubbers under subdivisions 9.6.f through 9.6.i or subdivisions 9.6.l through 9.6.m, ~~you~~ the owner or operator shall maintain data collected for all operating parameters used to determine compliance with the operating limits. For energy recovery units using activated carbon injection or a dry scrubber, ~~you~~ the owner or operator shall also maintain records of the load fraction and corresponding sorbent injection rate records;

9.11.b.6. If the owner or operator uses a fabric filter ~~is used~~ to comply with the emission limitations, ~~you~~ the owner or operator shall record the date, time, and duration of each alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. ~~You~~ The owner or operator shall also record the percent of operating time during each six-month period that the alarm sounds, calculated as specified in subdivision 9.6.e.

9.11.c. Reserved.

9.11.d. Reserved.

9.11.e. Identification of calendar dates and times for which data show a deviation from the operating limits in Table 18-3C or a deviation from other operating limits established under subdivisions 9.6.f through 9.6.i or subdivisions 9.6.l through 9.6.m, with a description of the deviations, reasons for ~~such~~ the deviations, and a description of corrective actions taken;

9.11.f. The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating limits, as applicable. Retain a copy of the complete test report including calculations;

9.11.g. Records showing the names of CISWI unit operators who have completed review of the information in subdivision 9.5 h as required by subdivision 9.5.i, including the date of the initial review and all subsequent annual reviews;

9.11.h. Records showing the names of the CISWI operators who have completed the operator training requirements under subdivisions 9.5.a and 9.5.b, met the criteria for qualification under subdivisions 9.5.d and 9.5.e, and maintained or renewed their qualification under subdivisions 9.5.f or 9.5.g. Records shall include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications;

9.11.i. For each qualified operator, the phone and/or ~~pager number~~ cell phone number at which ~~they~~ he or she can be reached during operating hours;

9.11.j. Records of calibration of any monitoring devices as required under subdivisions 9.10.a through 9.10.r;

9.11.k. Equipment vendor specifications and related operation and maintenance requirements for the incinerator, emission controls, and monitoring equipment;

9.11.l. The information listed in subdivision 9.5.h;

9.11.m. ~~On a daily basis, keep a~~ A daily log of the quantity of waste burned and the types of waste burned (always required);



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9.11.n. ~~Maintain~~ Records of the annual air pollution control device inspections that are required for each CISWI unit subject to the emissions limits in Table 18-2C or Tables 18-6C through 18-9C and records of any required maintenance and any repairs not completed within ten days of an inspection or the timeframe established by the Secretary;

9.11.o. For continuously monitored pollutants or parameters, ~~you shall document and keep a records~~ of the following parameters measured using continuous monitoring systems:

9.11.o.1. All six-minute average levels of opacity;

9.11.o.2. All one-hour average concentrations of sulfur dioxide emissions; ~~You shall indicate~~ indicating which data are CEMS data during startup and shutdown;

9.11.o.3. All one-hour average concentrations of nitrogen oxides emissions; ~~You shall indicate~~ indicating which data are CEMS data during startup and shutdown;

9.11.o.4. All one-hour average concentrations of carbon monoxide emissions; ~~You shall indicate~~ indicating which data are CEMS data during startup and shutdown;

9.11.o.5. All one-hour average concentrations of particulate matter emissions; ~~You shall indicate~~ indicating which data are CEMS data during startup and shutdown;

9.11.o.6. All one-hour average concentrations of mercury emissions; ~~You shall indicate~~ indicating which data are CEMS data during startup and shutdown;

9.11.o.7. All one-hour average concentrations of hydrogen chloride emissions; ~~You shall indicate~~ indicating which data are CEMS data during startup and shutdown;

9.11.o.8. All one-hour average percent oxygen concentrations; and

9.11.o.9. All one-hour average PM CPMS readings or particulate matter CEMS outputs.

9.11.p. Records indicating use of the bypass stack, including dates, times, and durations;

9.11.q. If ~~you~~ the owner or operator chooses to stack test less frequently than annually, consistent with paragraphs 9.9.y.1 9.9.z.1 and 9.9.y.2 9.9.z.2, ~~you shall keep a~~ Annual records that document that ~~your~~ the emissions in the previous stack test(s) were less than 75% of the applicable emission limit and document that there was no change in source operations, including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

9.11.r. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment;

9.11.s. Records of all required maintenance performed on the air pollution control and monitoring equipment;

9.11.t. Records of actions taken during periods of malfunction to minimize emissions in

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accordance with 40 CFR §60.11(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation;

9.11.u. For operating units that combust non-hazardous secondary materials that ~~have been the Secretary has determined not to be~~ are not solid waste pursuant to 40 CFR § 241.3(b)(1), ~~you shall keep a records~~ which documents how the secondary material meets each of the legitimacy criteria under 40 CFR § 241.3(d)(1); if ~~you~~ the owner or operator combusts a fuel that has been processed from a discarded non-hazardous secondary material pursuant to 40 CFR § 241.3(b)(4), ~~you shall keep~~ records as to how the operations that produced the fuel satisfies the definition of processing in 40 CFR § 241.2 and each of the legitimacy criteria in 40 CFR § 241.3(d)(1); if the fuel received a non-waste determination pursuant to the petition process submitted under 40 CFR § 241.3(c), ~~you shall keep a records~~ that documents how the fuel satisfies the requirements of the petition process; for operating units that combust nonhazardous secondary materials as fuel per 40 CFR § 241.4, ~~you shall keep~~ records documenting that the material is a listed non-waste under 40 CFR § 41.4(a);

9.11.v. Records of the criteria used to establish that the unit qualifies as a small power production facility under Section 3(17)(C) of the Federal Power Act (16 U.S.C. § 796(17)(C)) and that the waste material the unit is proposed to burn is homogeneous; and

9.11.w. Records of the criteria used to establish that the unit qualifies as a cogeneration facility under Section 3(18)(B) of the Federal Power Act (16 U.S.C. § 796(18)(B)) and that the waste material the unit is proposed to burn is homogeneous.

### 9.12. Reporting Requirements.

9.12.a. ~~Refer to Table 18-5C for a~~ In addition to the summary of the reporting requirements set out in Table 18-5C, the owner or operator shall:

9.12.b. ~~You shall s~~Submit a waste management plan no later than the date specified in Table 18-1C for submittal of the final control plan;

9.12.c. ~~You shall s~~Submit the information specified in paragraphs 9.12.c.1 through 9.12.c.3 no later than 60 days following the initial performance test; with All reports ~~shall be~~ signed by the facilities manager;

9.12.c.1. The complete test report for the initial performance test results obtained under subdivision 9.8.a, as applicable;

9.12.c.2. The values for the site-specific operating limits established in subdivision 9.6.c through paragraph 9.6.k.5 or subdivisions 9.6.l through 9.6.m; and

9.12.c.3. ~~If you are using a fabric filter to comply with the emission limitations,~~ Documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by subdivision 9.10.b, if the owner or operator is using a fabric filter to comply with the emission limitations.

9.12.d. ~~You shall s~~Submit an annual report no later than 12 months following the submission of the information in subdivision 9.12.c. ~~You shall submit subsequent reports no more than and no more than every 12 months following the previous report thereafter.~~ If the unit is subject to Title V permitting

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requirements under 45CSR30, ~~you~~ the owner or operator may be required by the permit to submit these reports more frequently.

9.12.e. The annual report required under subdivision 9.12.d shall include the items listed in paragraphs 9.12.e.1 through 9.12.e.16 below: ~~If you have a deviation from the operating limits or the emission limitations, you shall also submit deviation reports as specified in subdivisions 9.12.f, 9.12.g and 9.12.h.~~

9.12.e.1. Company name and address;

9.12.e.2. Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report;

9.12.e.3. Date of report and beginning and ending dates of the reporting period;

9.12.e.4. The values for the operating limits established pursuant to subdivision 9.6.c through paragraph 9.6.k.5 or subdivisions 9.6.l through 9.6.m;

9.12.e.5. ~~If no deviation from any emission limitation or operating limit that applies to you has been reported,~~ a statement that there was no deviation from the emission limitations or operating limits during the reporting period, if the facility has not experienced a deviation from any applicable emission limitation or operating limit;

9.12.e.6. The highest recorded three-hour average and the lowest recorded three-hour average, as applicable, for each operating parameter recorded for the calendar year being reported;

9.12.e.7. Information recorded under paragraph 9.11.b.6 and subdivisions 9.11.c through 9.11.e for the calendar year being reported;

9.12.e.8. ~~If a performance test was conducted during the reporting period, the results of that test.~~ If a performance test was conducted during the reporting period, the process unit tested, the pollutant tested and the performance test date. The owner or operator shall not submit the performance test report later than the date of submittal of the annual report and shall follow the procedure specified in subparagraph 9.12.j.2.A;

9.12.e.9. ~~If you met the requirements of paragraph 9.9.y.1 9.9.z.1 or 9.9.y.2 9.9.z.2, and did not conduct a performance test during the reporting period, you shall~~ A statement that you the facility met the requirements of paragraph 9.9.y.1 9.9.z.1 or 9.9.y.2 9.9.z.2, and, therefore, you were was not required to conduct a performance test during the reporting period, if the facility met the requirements of paragraph 9.9.z.1 or 9.9.z.2, and the owner or operator did not conduct a performance test during the reporting period;

9.12.e.10. Documentation of periods when all qualified CISWI unit operators were unavailable for more than eight hours, but less than two weeks;

9.12.e.11. ~~If you had a malfunction during the reporting period, the compliance report shall include~~ A record including the number, duration, and brief description for each type of malfunction that occurred during the reporting period and that caused or may have caused an exceedance of any applicable emission limitation to be exceeded, if the facility experienced a malfunction during the reporting period,

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as well as ~~The report shall also include~~ a description of actions taken ~~by an owner or operator~~ during a malfunction of an affected source to minimize emissions in accordance with 40 CFR § 60.11(d), including actions taken to correct a malfunction;

9.12.e.12. For each deviation from an emission or operating limitation that occurs for a CISWI unit for which ~~you are~~ the owner or operator is not using a CMS to comply with the emission or operating limitations in section 9, the annual report shall contain the following information.

9.12.e.12.A. The total operating time of the CISWI unit at which the deviation occurred during the reporting period; and

9.12.e.12.B. Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

9.12.e.13. If there were periods during which the continuous monitoring system, including the CEMS, was out of control as specified in paragraph 9.12.e.15, the annual report shall contain the following information for each deviation from an emission or operating limitation occurring for a CISWI unit for which ~~you are~~ the owner or operator is using a continuous monitoring system to comply with the emission and operating limitations in section 9:

9.12.e.13.A. The date and time that each malfunction started and stopped;

9.12.e.13.B. The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks;

9.12.e.13.C. The date, time, and duration that each continuous monitoring system was out of control, including start and end dates and hours and descriptions of corrective actions taken;

9.12.e.13.D. The date and time that each deviation started and stopped and whether each deviation occurred during a period of malfunction or during another period;

9.12.e.13.E. A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period;

9.12.e.13.F. ~~A breakdown of the total duration of the deviations during the reporting period into those that are due to~~ The total duration of the deviations during the reporting period categorized according to each of the following attributed causes: control equipment problems, process problems, other known causes, and other unknown causes;

9.12.e.13.G. A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of continuous monitoring system downtime as a percent of the total operating time of the CISWI unit at which the continuous monitoring system downtime occurred during that reporting period;

9.12.e.13.H. An identification of each parameter and pollutant that was monitored at the CISWI unit;

9.12.e.13.I. A brief description of the CISWI unit;

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9.12.e.13.J. A brief description of the continuous monitoring system;

9.12.e.13.K. The date of the latest continuous monitoring system certification or audit; and

9.12.e.13.L. A description of any changes in continuous monitoring system, processes or controls since the last reporting period.

9.12.e.14. If there were periods during which the continuous monitoring system, including the CEMS, was not out of control as specified in paragraph 9.12.e.15, a statement that there were not periods during which the continuous monitoring system was out of control during the reporting period;

9.12.e.15. A continuous monitoring system is out of control if any of the following occur:

9.12.e.15.A. The zero (low-level), mid-level (if applicable) or high-level calibration drift exceeds two times the applicable calibration drift specification in the applicable performance specification or in the relevant standard;

9.12.e.15.B. The continuous monitoring system fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit or linearity test audit; or

9.12.e.15.C. The continuous opacity monitoring system calibration drift exceeds two times the limit in the applicable performance specification in the relevant standard.

9.12.e.16. For energy recovery units, include the annual heat input and average annual heat input rate of all fuels being burned in the unit to verify which subcategory of energy recovery unit applies;

9.12.f. Deviation from the Operating Limits or Emission Limitations.

9.12.f.1. ~~You~~ The owner or operator shall submit a deviation report if any recorded three-hour average parameter level is above the maximum operating limit or below the minimum operating limit established under section 9, if the bag leak detection system alarm sounds for more than five percent of the operating time for the six-month reporting period or if a performance test was conducted that deviated from any emission limitation.

9.12.f.2. The owner or operator shall submit the deviation report ~~shall be submitted~~ by August 1 of that year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data ~~you~~ collected during the second half of the calendar year (July 1 to December 31).

9.12.g. In each report required under subdivision 9.12.f, for any pollutant or parameter that deviated from the emission limitations or operating limits specified in section 9, the owner or operator shall include the four items described in paragraphs 9.12.g.1 through 9.12.g.4 below:

9.12.g.1. The calendar dates and times ~~you~~ the unit deviated from the emission limitations or operating limit requirements;

9.12.g.2. The averaged and recorded data for those dates;

9.12.g.3. Durations and causes of the following:

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9.12.g.3.A. Each deviation from emission limitations or operating limits and ~~your~~ corrective actions; ~~and~~

9.12.g.3.B. Bypass events and ~~your~~ corrective actions.

9.12.g.4. A copy of the operating limit monitoring data during each deviation and any test report that documents the emission levels, the process unit tested, the pollutant tested and the date that the performance test was conducted. The owner or operator shall not submit the performance test report later than the date of submittal of the deviation report according to the subparagraph 9.12.j.2.A.

9.12.h. Deviation from the Requirement to have a Qualified Operator Accessible. -- If ~~all~~ no qualified operators ~~are not~~ is accessible for two weeks or more, ~~you~~ the owner or operator shall take the two actions in paragraphs 9.12.h.1 and 9.12.h.2 below:

9.12.h.1. Submit a notification of the deviation within ten days that includes the three items in subparagraphs 9.12.h.1.A through 9.12.h.1.C below:

9.12.h.1.A. A statement of what caused the deviation;

9.12.h.1.B. A description of what ~~you are~~ the owner or operator is doing to ensure that a qualified operator is accessible; and

9.12.h.1.C. The date when ~~you~~ the owner or operator anticipates that a qualified operator will be available;

9.12.h.2. Submit a status report to the Administrator and Secretary every four weeks that includes the three items in subparagraphs 9.12.h.2.A through 9.12.h.2.C below:

9.12.h.2.A. A description of what ~~you are~~ the owner or operator is doing to ensure that a qualified operator is accessible;

9.12.h.2.B. The date when ~~you~~ the owner or operator anticipates that a qualified operator will be accessible; and

9.12.h.2.C. A Rrequest for approval from the Administrator to continue operation of the CISWI unit.

9.12.h.3. If ~~your~~ the Administrator ~~shuts down the unit~~ was shut down by the Administrator under the provisions of paragraph 9.12.h.2 due to ~~a~~ the owner's or operator's failure to provide an accessible qualified operator, ~~you~~ the owner or operator shall notify the Administrator and Secretary that ~~you are~~ the unit is resuming operation once a qualified operator is accessible.

9.12.i. Other Notifications and Reports.

9.12.i.1. ~~You~~ The owner or operator shall submit notifications as provided by 40 CFR § 60.7\_ and 45CSR16.

9.12.i.2. If ~~you~~ the owner or operator ceases combusting solid waste but continues to operate,

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~~you~~ the owner or operator shall provide 30 days prior notice of the effective date of the waste-to-fuel switch, consistent with subdivision 9.9.a. The notification shall identify:

9.12.i.2.A. The name of the owner or operator of the CISWI unit, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

9.12.i.2.B. The currently applicable subcategory under section 9, and any 40 CFR Part 63 subpart and subcategory that will be applicable after ~~you~~ the unit ceases combusting solid waste;

9.12.i.2.C. The fuel(s), non-waste material(s) and solid waste(s) the CISWI unit is currently combusting and has combusted over the past six months, and the fuel(s) or non-waste materials the unit will commence combusting;

9.12.i.2.D. The date on which ~~you~~ the unit became subject to the currently applicable emission limits; and

9.12.i.2.E. The date upon which ~~you~~ the unit will cease combusting solid waste and the date (if different) that ~~you~~ the owner or operator intends for any new requirements to become applicable (i.e., the effective date of the waste to fuel switch), consistent with subparagraphs 9.12.i.2.B and 9.12.i.2.C.

### 9.12.j. Form of Reports.

9.12.j.1. ~~Submit initial, annual and deviation reports electronically or in paper format, postmarked on or before the submittal due dates. The owner or operator shall submit initial, annual, and deviation reports electronically on or before the submittal due dates. The owner or operator shall submit the reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) on EPA's website. Once the XML schema is available, the owner or operator shall use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI website. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the owner or operator shall submit the report to the Administrator at the appropriate address listed in 40 CFR § 60.4. Once the form has been available in CEDRI for 90 calendar days, the owner or operator shall submit all reports via CEDRI. The owner or operator shall submit the reports by the deadlines specified in this subpart, regardless of the method by which the owner or operator submits the report.~~

9.12.j.2. Submit results of performance tests and CEMS performance evaluation tests as follows:

9.12.j.2.A. Within 60 days after the date of completing each performance test as required by section 9, ~~you~~ the owner or operator shall submit the results of the performance tests ~~required by section 9 to EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX)(www.epa.gov/edx). Performance test data shall be submitted in the file format generated through use of EPA's Electronic Reporting Tool (ERT) (see <http://www.epa.gov/ttn/chief/ert/index.html>). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) shall submit a complete ERT file including information claimed to be CBI on a compact disk, flash drive, or other commonly used electronic storage media to~~

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~~EPA. The electronic media shall be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404 02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted shall be submitted to EPA via CDX as described earlier in this subparagraph. At the discretion of the delegated authority, you shall also submit these reports, including the confidential business information, to the delegated authority in the format specified by the delegated authority. For any performance test conducted using test methods that are not listed on the ERT Web site, the owner or operator shall submit the results of the performance test in paper submissions to the Administrator, following the procedure specified in either part 9.12.j.2.A.1 or 9.12.j.2.A.2 below:~~

9.12.j.2.A.1. For data collected using test methods supported by the EPA's electronic reporting tool (ERT) at the time of the test, as listed on the EPA's ERT website, the owner or operator shall submit the results of the performance test to the EPA via the CEDRI, which can be accessed through the EPA's CDX website. The owner or operator shall submit performance test data in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the XML schema listed on the EPA's ERT website. If the owner or operator claims that some of the performance test information being submitted is confidential business information (CBI), the owner or operator shall submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage media to the EPA. The owner or operator shall clearly mark the electronic media as CBI and mail it to the address listed on EPA's website. The owner or operator shall submit the same ERT or alternate file with the CBI omitted to the EPA via the EPA's CDX as described earlier in this paragraph; and

9.12.j.2.A.2. For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test, the owner or operator shall submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR. § 60.4.

~~9.12.j.2.B. Within 60 days after the date of completing each CEMS performance evaluation test as defined and required by section 9, you the owner or operator shall submit the relative accuracy test audit (RATA) data electronically into EPA's Central Data Exchange by using CEDRI as mentioned in subparagraph 9.12.j.2.A. Only RATA pollutants that can be documented with the ERT (as listed on the ERT Web site) are subject to this requirement. For any performance evaluations with no corresponding RATA pollutants listed on the ERT Web site, the owner or operator shall submit the results of the performance evaluation in paper submissions to the Administrator. performance evaluation results following the procedures specified in either part 9.12.j.2.B.1 or 9.12.j.2.B.2 below:~~

9.12.j.2.B.1. For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation, the owner or operator shall submit the performance evaluation results to the EPA via the CEDRI. The owner or operator shall submit the performance evaluation data in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT website. If the owner or operator claims that some of the performance evaluation information being submitted is CBI, the owner or operator shall submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage media to the EPA. The owner or operator shall clearly mark the electronic storage media as CBI and mail it to the appropriate address listed on EPA's ERT website. The owner or operator shall submit the same ERT or alternate file with the CBI omitted to the EPA via the EPA's CDX as described earlier in this paragraph; and



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9.12.j.2.B.2. For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation, the owner or operator shall submit the performance evaluation results to the Administrator at the appropriate address listed in 40 CFR. §60.4.

9.12.k. Changes to Reporting Dates. -- If the Secretary agrees, ~~you~~ the owner or operator may change the semiannual or annual reporting dates. ~~Refer to by following the procedures set out in 40 CFR § 60.19(c) for procedures to seek approval to change your reporting date.~~

### 9.13. Requirements for Air Curtain Incinerators.

9.13.a. Description. -- An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology, such as mass burn, modular, and fluidized bed combustors.

9.13.b. Air curtain incinerators that burn only the materials listed in paragraphs 9.13.b.1 through 9.13.b.3 below are only required to meet the requirements under ~~subsection 9.13~~ subsections 13.3 and 9.3.

9.13.b.1. 100% wood waste;

9.13.b.2. 100% clean lumber; or

9.13.b.3. 100% mixture of only wood waste, clean lumber, and/or yard waste.

9.13.c. Increments of Progress. -- If ~~you~~ the owner or operator plans to achieve compliance more than one year following the effective date of ~~the~~ West Virginia's CAA §111(d)/129 plan approval, ~~you~~ the owner or operator shall meet the two increments of progress specified ~~in paragraphs 9.13.e.1 and 9.13.e.2~~ below:

9.13.c.1. Submit a final control plan; and

9.13.c.2. Achieve final compliance.

9.13.d. Table 18-1C specifies compliance dates for each of the increments of progress.

9.13.e. Notifications of Achievement. -- ~~You~~ the owner's or operator's notification of achievement of increments of progress shall include the three items described ~~in paragraphs 9.13.e.1 through 9.13.e.3~~ below:

9.13.e.1. Notification that the owner or operator has achieved the increment of progress ~~has been achieved~~;

9.13.e.2. Any items required to be submitted with each increment of progress (refer to subdivision 9.13.h); and

9.13.e.3. Signature of the owner or operator of the incinerator.

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9.13.f. Notifications for achieving increments of progress shall be postmarked no later than ten business days after the compliance date for the increment.

9.13.g. Failure to Meet an Increment of Progress. -- If ~~you~~ the owner or operator fails to meet an increment of progress, ~~you~~ the owner or operator shall submit a notification to the Secretary postmarked within ten business days after the date for that increment of progress in Table 18-1C. ~~You~~ The owner or operator shall inform the Secretary that ~~you~~ the unit did not meet the increment, and ~~you~~ the owner or operator shall continue to submit reports each subsequent calendar month until the unit meets the increment of progress ~~is met~~.

9.13.h. For ~~you~~ the control plan increment of progress, ~~you~~ the owner or operator shall satisfy the two requirements specified ~~in paragraphs 9.13.h.1 and 9.13.h.2.~~ below:

9.13.h.1. Submit the final control plan, including a description of any devices for air pollution control and any process changes that ~~you~~ the owner or operator will use to comply with the emission limitations and other requirements of section 9; and

9.13.h.2. Maintain an onsite copy of the final control plan.

9.13.i. For the final compliance increment of progress, ~~you~~ the owner or operator shall complete all process changes and retrofit construction of control devices as specified in the final control plan so that, if the affected incinerator is brought online, all necessary process changes and air pollution control devices would operate as designed.

9.13.j. Closure and Restart.

9.13.j.1. If ~~you~~ the owner or operator closes ~~you~~ the incinerator but will reopen it prior to the final compliance date, ~~you~~ the unit shall meet the increments of progress specified in subdivision 9.13.c.

9.13.j.2. If ~~you~~ the owner or operator closes ~~you~~ the incinerator but will restart it after ~~you~~ the final compliance date, ~~you~~ the owner or operator shall complete emission control retrofits and meet the emission limitations on the date ~~you~~ the incinerator restarts operation.

9.13.k. Permanent Closure. -- If ~~you~~ the owner or operator plans to close ~~you~~ the incinerator rather than comply with section 9, the owner or operator shall submit a closure notification, including the date of closure, to the Secretary by the date ~~you~~ the final control plan is due.

9.13.l. Emission Limitations for Air Curtain Incinerators. -- After the date the initial stack test is required or completed (whichever is earlier), ~~you~~ the owner or operator shall meet the below limitations: ~~in paragraphs 9.13.l.1 and 9.13.l.2.~~

9.13.l.1. Maintain opacity to less than or equal to ten percent opacity (as determined by the average of three one-hour blocks consisting of ten six-minute average opacity values), except as described in paragraph 9.13.l.2.; or

9.13.l.2. Maintain opacity to less than or equal to 35% opacity (as determined by the average of three one-hour blocks consisting of ten six-minute average opacity values) during the startup period that is within the first 30 minutes of operation.

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### 9.13.m. Opacity Monitoring for Air Curtain Incinerators. – The owner or operator shall:

9.13.m.1. Use Method 9 of Appendix A of 40 CFR Part 60 to determine compliance with the opacity limitation;

9.13.m.2. Conduct an initial test for opacity as specified in 40 CFR § 60.8 no later than 180 days after ~~your~~ the final compliance date; and

9.13.m.3. ~~After the initial test for opacity, e~~Conduct annual tests no more than 12 calendar months following the date of ~~your previous test~~ the initial opacity test.

### 9.13.n. Recordkeeping and Reporting Requirements for Air Curtain Incinerators. – The owner or operator shall:

9.13.n.1. Keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format, unless the Secretary approves another format, for at least five years;

9.13.n.2. Make all records available ~~for submittal to the Secretary or for an inspector's onsite review;~~

9.13.n.3. Submit an initial report no later than 60 days following the initial opacity test, which includes the information specified in subparagraphs ~~9.13.n.3.A and 9.13.n.3.B~~ below:

9.13.n.3.A. The types of materials ~~you~~ the owner or operator plans to combust in ~~your~~ the air curtain incinerator; and

9.13.n.3.B. The results (as determined by the average of three one-hour blocks consisting of ten six-minute average opacity values) of the initial opacity tests.

9.13.n.4. Submit annual opacity test results to the Secretary within 12 months following the previous report; and

9.13.n.5. Submit initial and annual opacity test reports to the Secretary as electronic or paper copy on or before the applicable submittal date and keep a copy onsite for a period of five years.

9.14. Authority. -- The following authorities are retained by the Administrator and are not transferred or delegated to the Secretary:

9.14.a. Approval of alternatives to the emission limitations in Table 18-2C and operating limits established under subdivision 9.6.c;

9.14.b. Approval of major alternatives to test methods;

9.14.c. Approval of major alternatives to monitoring;

9.14.d. Approval of major alternatives to recordkeeping and reporting;

9.14.e. [Reserved].

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9.14.f. The requirements in subdivision 9.6.l of this rule;

9.14.g. The requirements in subparagraph 9.5.k.2.B of this rule;

9.14.h. Approval of alternative opacity emission limits in subdivisions 9.6.a and 9.6.b of this rule and under 40 CFR §§ 60.11(e)(6) through (e)(8);

9.14.i. Performance test and data reduction waivers under subdivision 9.7.j of this rule and 40 CFR §§ 60.8(b)(4) and (5); and

9.14.j. Determination of whether a qualifying small power production facility or cogeneration facility under paragraphs 9.2.d.5 and 9.2.d.6 of this rule is combusting homogenous waste as that term is defined in 40 CFR § 60.2265.

### **§45-18-10. Requirements for New Other Solid Waste Incineration Units.**

10.1. Requirements for New OSWI Units. -- The owner or operator of another solid waste incineration unit (OSWI unit) under subsection 10.2 shall comply with all applicable standards of performance, requirements, and provisions of 40 CFR Part 60, Subpart EEEE, including any reference methods, performance specifications, and other test methods associated with Subpart EEEE. No person shall construct or operate, or cause to be constructed or operated, a new OSWI unit that results in a violation of 40 CFR Part 60, Subpart EEEE or this rule.

10.2. Applicability. -- The owner or operator of a OSWI unit that meets the following criteria ~~shall be~~ is subject to the requirements for new OSWI units set forth in section 10. A new OSWI unit is an OSWI unit that either:

10.2.a. Commenced construction after December 9, 2004; or

10.2.b. Commenced modification or reconstruction after June 16, 2006.

### **§45-18-11. Requirements for New Sewage Sludge Incinerators.**

11.1. Requirements for New SSI Units. -- The owner or operator of a SSI unit under subsection 11.2 shall comply with all applicable standards of performance, requirements, and provisions of 40 CFR Part 60, Subpart LLLL, including any reference methods, performance specifications, and other test methods associated with Subpart LLLL. No person shall construct, reconstruct, modify or operate, or cause to be constructed, reconstructed, modified or operated, a new SSI unit that results in a violation of 40 CFR Part 60, Subpart LLLL or this rule.

11.2. Applicability. -- The owner or operator of a SSI unit that meets the following criteria ~~shall be~~ is subject to the requirements for new SSI units set forth in section 11. A new SSI unit is a SSI unit that either:

11.2.a. Commenced construction after October 14, 2010; or

11.2.b. Commenced modification after September 21, 2011.

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### §45-18-12. Secretary.

12.1. Any and all references in 40 CFR Part 60, Subparts Ce, Eb, Ec, AAAA, CCCC, EEEE, and LLLL to “the Administrator” are amended to be “the “Secretary”, except in the following references, which shall remain “Administrator”:

12.1.a. Where the Federal Regulations specifically provide that the Administrator shall retain authority and not transfer such authority to the Secretary;

12.1.b. Where provisions occur which refer to:

12.1.b.1. Alternate means of emission limitations;

12.1.b.2. Alternate control technologies;

12.1.b.3. Innovative technology waivers;

12.1.b.4. Alternate test methods;

12.1.b.5. Alternate monitoring methods;

12.1.b.6. Waivers/adjustments to recordkeeping and reporting; ~~or~~

12.1.b.7. Applicability determinations;

12.1.b.8. The requirements of 40 CFR § 60.56c(i) establishing operating parameters when using controls other than those listed in 40 CFR § 60.56c(d);

12.1.b.9. Alternative methods of demonstrating compliance under 40 CFR § 60.8;

12.1.b.10. Performance test and data reduction waivers under 40 CFR § 60.8(b); ~~and~~

12.1.b.11. Alternate operating limits established under Section 9;

12.1.b.12. The qualified operators “temporarily not accessible requirements under Section 9;

12.1.b.13. Approval of alternative opacity emission limits under Section 9 of this rule and 40 CFR § 60.11(e)(6); and

12.1.b.14. Determination of whether a qualifying small power production facility or cogeneration facility under Section 9 is combusting homogeneous waste.

12.1.c. Where the context of the Regulation clearly requires otherwise.

### §45-18-13. Permits.

13.1. ~~On or before September 15, 2000, the~~ The owner or operator of existing HMIWI units shall operate pursuant to a Title V permit in accordance with the requirements of 45CSR30.

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13.2. The owner or operator of a new HMIWI unit shall submit to the Secretary a complete application for a Title V permit in accordance with the requirements of 45CSR30 within twelve (12) months after commencing operation.

13.3. The owner or operator of an existing CISWI unit or air curtain incinerator subject to section 9 shall operate pursuant to a permit issued under §129(e) of the CAA and 45CSR30.

13.4. The owner or operator of a new CISWI unit shall operate pursuant to a CAA Title V permit in accordance with the requirements of 45CSR30.

13.5. The owner or operator of a new OSWI unit shall submit a complete application for a Title V permit in accordance with the requirements of 45CSR30 within twelve (12) months after commencing operation: Provided, that the Secretary may require a new OSWI unit ~~may be required~~ to apply for and obtain a Title V permit prior to this date, as specified in 40 CFR § 60.2967(b).

13.6. The owner or operator of a new SSI unit shall apply for and obtain a Title V permit in accordance with the requirements of 45CSR30, unless the unit meets the relevant requirements for and exemption set forth in 40 CFR § 60.4780.

13.7. Nothing contained in this rule shall be construed or inferred to mean that permit requirements in accordance with applicable rules shall be in any way limited or inapplicable, including but not limited to the permitting requirements under 45CSR13, 45CSR14, 45CSR19, 45CSR25 and 45CSR30.

### **§45-18-14. Exemptions.**

14.1. The exemption provisions under 40 CFR Part 60, Subparts Eb, Ec, AAAA, CCCC, EEEE, and LLLL ~~shall be~~ are incorporated in this rule.

14.2. Temporary air curtain incinerators approved by the Secretary under the requirements of 45CSR6 that are operated for the disposal of only on-site land clearing debris (as defined in 45CSR6) ~~shall be~~ are exempt from the requirements of this rule.

14.3. Temporary incinerators approved by the Secretary under the requirements of 45CSR6 that are operated for the disposal of animal or poultry remains and related pathological waste ~~shall be~~ are exempt from the requirements of this rule.

14.4. Pathological waste incineration units. -- Any institutional waste incineration unit, very small municipal waste combustion unit, incinerator or combustor ~~shall be~~ is exempt from the requirements of this rule: Provided, that:

14.4.a. The unit burns 90% or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste or chemotherapeutic waste;

14.4.b. The owner or operator of the unit keeps records on a calendar quarter basis of the periods of time when only pathological waste, low-level radioactive waste or chemotherapeutic waste is incinerated;

14.4.c. The unit is subject to the requirements of 45CSR6 or 45CSR25; and

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14.4.d. The owner or operator of the unit notifies the Administrator and the Secretary that the unit meets these criteria.

14.5. Any incinerator or combustor subject to 40 CFR Part 60, Subparts Cb, Cc, E, Ea, O, WWW, BBBB, FFFF or MMMM ~~shall be~~ is exempt from the requirements of this rule.

14.6. Any incinerator or combustor subject to 42 U.S.C. § 6925, 45CSR25, and 33CSR20 ~~shall be~~ is exempt from the requirements of this rule.

14.7. Any combustor subject to 40 CFR Part 63, Subpart EEE ~~shall be~~ is exempt from the requirements of this rule.

### **§45-18-15. Effect of the Rule.**

15.1. Nothing in this rule shall be construed to allow or permit the installation, establishment or construction of a new municipal or commercial solid waste facility utilizing incineration technology for the purpose of solid waste incineration in violation of W.Va. Code § 22-15-19.

### **§45-18-16. Inconsistency Between Rules.**

16.1. In the event of any inconsistency between this rule and any other rule of the ~~West Virginia Department of Environmental Protection~~ Division of Air Quality, the inconsistency shall be resolved by the determination of the Secretary, and the determination shall be based upon the application of the more stringent provision, term, condition, method or rule.

**TABLE 18-1A**  
**Emissions Limits for Small, Medium, and Large HMIWI at Designated Facilities as Set Forth in 45CSR§18-7.2.a.1.**

Pollutant	Units (7 percent oxygen, dry basis)	Emissions Limits			Averaging Time <sup>1</sup>	Compliance Method <sup>2</sup>
		HMIWI Size				
		Small	Medium	Large		
Particulate matter	Milligrams per dry standard cubic meter (mg/dscm) (grains per dry standard cubic foot (gr/dscf))	115 (0.05)	69 (0.03)	34 (0.015)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 5 of Appendix A-3 of 40 CFR Part 60, or EPA Reference Method 26A or 29 of Appendix A-8 of 40 CFR Part 60.
Carbon monoxide	Parts per million by volume (ppmv)	40	40	40	3-run average (1-hour minimum sample time per run)	EPA Reference Method 10 or 10B of Appendix A-4 of 40 CFR Part 60.
Dioxins/furans	Nanograms per dry standard cubic meter total dioxins/furans (ng/dscm) (grains per billion dry standard cubic feet (gr/109dscf)) or ng/dscm TEQ (gr/109dscf)	125 (55) or 2.3 (1.0)	125 (55) or 2.3 (1.0)	125 (55) or 2.3 (1.0)	3-run average (4-hour minimum sample time per run)	EPA Reference Method 23 of Appendix A-7 of 40 CFR Part 60.
Hydrogen chloride	ppmv or percent reduction	100 or 93%	100 or 93%	100 or 93%	3-run average (1-hour minimum sample time per run)	EPA Reference Method 26 or 26A of Appendix A-8 of 40 CFR Part 60.
Sulfur dioxide	ppmv	55	55	55	3-run average (1-hour minimum sample time per run)	EPA Reference Method 6 or 6C of Appendix A-4 of 40 CFR Part 60.
Nitrogen oxides	ppmv	250	250	250	3-run average (1-hour minimum sample time per run)	EPA Reference Method 7 or 7E of Appendix A-4 of 40 CFR Part 60.
Lead	mg/dscm (grains per thousand dry standard cubic feet (gr/10 <sup>3</sup> dscf)) or percent reduction	1.2 (0.52) or 70%	1.2 (0.52) or 70%	1.2 (0.52) or 70%	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of Appendix A-8 of 40 CFR Part 60.
Cadmium	mg/dscm (gr/10 <sup>3</sup> dscf) or percent reduction	0.16 (0.07) or 65%	0.16 (0.07) or 65%	0.16 (0.07) or 65%	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of Appendix A-8 of 40 CFR Part 60.
Mercury	mg/dscm (gr/10 <sup>3</sup> dscf) or percent reduction	0.55 (0.24) or 85%	0.55 (0.24) or 85%	0.55 (0.24) or 85%	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of Appendix A-8 of 40 CFR Part 60.

<sup>1</sup>Except as allowed under 40 CFR §60.56c(c) for HMIWI equipped with CEMS.

<sup>2</sup>Does not include CEMS and approved alternative non-EPA test methods allowed under 40 CFR §60.56c(b).



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TABLE 18-1B

Emissions Limits for Small, Medium, and Large HMIWI at Designated Facilities as Set Forth in 45CSR§§18-7.2.a.1 and 7.2.a.2.

Pollutant	Units (7 percent oxygen, dry basis)	Emissions Limits			Averaging Time <sup>1</sup>	Compliance Method <sup>2</sup>
		HMIWI Size				
		Small	Medium	Large		
Particulate matter	Milligrams per dry standard cubic meter (mg/dscm) (grains per dry standard cubic foot (gr/dscf))	66 (0.029)	46 (0.020)	25 (0.011)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 5 of Appendix A-3 of 40 CFR Part 60, or EPA Reference Method 26A or 29 of Appendix A-8 of 40 CFR Part 60.
Carbon monoxide	Parts per million by volume (ppmv)	20	5.5	11	3-run average (1-hour minimum sample time per run)	EPA Reference Method 10 or 10B of Appendix A-4 of 40 CFR Part 60.
Dioxins/furans	Nanograms per dry standard cubic meter total dioxins/furans (ng/dscm) (grains per billion dry standard cubic feet (gr/10 <sup>9</sup> dscf)) or ng/dscm TEQ (gr/10 <sup>9</sup> dscf)	16 (7.0) or 0.013 (0.0057)	0.85 (0.37) or 0.020 (0.0087)	9.3 (4.1) or 0.054 (0.024)	3-run average (4-hour minimum sample time per run)	EPA Reference Method 23 of Appendix A-7 of 40 CFR Part 60.
Hydrogen chloride	ppmv	44	7.7	6.6	3-run average (1-hour minimum sample time per run)	EPA Reference Method 26 or 26A of Appendix A-8 of 40 CFR Part 60.
Sulfur dioxide	ppmv	4.2	4.2	9.0	3-run average (1-hour minimum sample time per run)	EPA Reference Method 6 or 6C of Appendix A-4 of 40 CFR Part 60.
Nitrogen oxides	ppmv	190	190	140	3-run average (1-hour minimum sample time per run)	EPA Reference Method 7 or 7E of Appendix A-4 of 40 CFR Part 60.
Lead	mg/dscm (grains per thousand dry standard cubic feet (gr/10 <sup>3</sup> dscf))	0.31 (0.14)	0.018 (0.0079)	0.036 (0.016)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of Appendix A-8 of 40 CFR Part 60.
Cadmium	mg/dscm (gr/10 <sup>3</sup> dscf)	0.017 (0.0074)	0.013 (0.0057)	0.0092 (0.0040)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of Appendix A-8 of 40 CFR Part 60.
Mercury	mg/dscm (gr/10 <sup>3</sup> dscf)	0.014 (0.0061)	0.025 (0.011)	0.018 (0.0079)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of Appendix A-8 of 40 CFR Part 60.

<sup>1</sup>Except as allowed under 40 CFR §60.56c(c) for HMIWI equipped with CEMS.

<sup>2</sup>Does not include CEMS and approved alternative non-EPA test methods allowed under 40 CFR §60.56c(b).

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**TABLE 18-2A**  
**Emissions Limits for Small HMIWI Which Meet the Criteria Under 45CSR§18-7.3.b.1.**

<b>Pollutant</b>	<b>Units</b> (7 percent oxygen, dry basis)	<b>HMIWI Emissions Limits</b>	<b>Averaging Time<sup>1</sup></b>	<b>Compliance Method<sup>2</sup></b>
Particulate matter	mg/dscm (gr/dscf)	197 (0.086)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 5 of Appendix A-3 of 40 CFR Part 60, or EPA Reference Method 26A or 29 of Appendix A-8 of 40 CFR Part 60.
Carbon monoxide	ppmv	40	3-run average (1-hour minimum sample time per run)	EPA Reference Method 10 or 10B of Appendix A-4 of 40 CFR Part 60.
Dioxins/furans	ng/dscm total dioxins/furans (gr/109dscf) or ng/dscm TEQ (gr/109dscf)	800 (350) or 15 (6.6)	3-run average (4-hour minimum sample time per run)	EPA Reference Method 23 of Appendix A-7 of 40 CFR Part 60.
Hydrogen chloride	ppmv	3,100	3-run average (1-hour minimum sample time per run)	EPA Reference Method 26 or 26A of Appendix A-8 of 40 CFR Part 60.
Sulfur dioxide	ppmv	55	3-run average (1-hour minimum sample time per run)	EPA Reference Method 6 or 6C of Appendix A-4 of 40 CFR Part 60.
Nitrogen oxides	ppmv	250	3-run average (1-hour minimum sample time per run)	EPA Reference Method 7 or 7E of Appendix A-4 of 40 CFR Part 60.
Lead	mg/dscm (gr/10 <sup>3</sup> dscf)	10 (4.4)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of Appendix A-8 of 40 CFR Part 60.
Cadmium	mg/dscm (gr/10 <sup>3</sup> dscf)	4 (1.7)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of Appendix A-8 of 40 CFR Part 60.
Mercury	mg/dscm (gr/10 <sup>3</sup> dscf)	7.5 (3.3)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of Appendix A-8 of 40 CFR Part 60.

<sup>1</sup>Except as allowed under 40 CFR §60.56c(c) for HMIWI equipped with CEMS.

<sup>2</sup>Does not include CEMS and approved alternative non-EPA test methods allowed under 40 CFR §60.56c(b).

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**TABLE 18-2B**  
**Emissions Limits for Small HMIWI Which Meet the Criteria Under 45CSR§18-7.3.b.2.**

<b>Pollutant</b>	<b>Units</b> (7 percent oxygen, dry basis)	<b>HMIWI</b> <b>Emissions Limits</b>	<b>Averaging Time</b> <sup>1</sup>	<b>Compliance Method</b> <sup>2</sup>
Particulate matter	mg/dscm (gr/dscf)	87 (0.038)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 5 of Appendix A-3 of 40 CFR Part 60, or EPA Reference Method 26A or 29 of Appendix A-8 of 40 CFR Part 60.
Carbon monoxide	ppmv	20	3-run average (1-hour minimum sample time per run)	EPA Reference Method 10 or 10B of Appendix A-4 of 40 CFR Part 60.
Dioxins/furans	ng/dscm total dioxins/furans (gr/109dscf) or ng/dscm TEQ (gr/109dscf)	240 (100) or 5.1 (2.2)	3-run average (4-hour minimum sample time per run)	EPA Reference Method 23 of Appendix A-7 of 40 CFR Part 60.
Hydrogen chloride	ppmv	810	3-run average (1-hour minimum sample time per run)	EPA Reference Method 26 or 26A of Appendix A-8 of 40 CFR Part 60.
Sulfur dioxide	ppmv	55	3-run average (1-hour minimum sample time per run)	EPA Reference Method 6 or 6C of Appendix A-4 of 40 CFR Part 60.
Nitrogen oxides	ppmv	130	3-run average (1-hour minimum sample time per run)	EPA Reference Method 7 or 7E of Appendix A-4 of 40 CFR Part 60.
Lead	mg/dscm (gr/10 <sup>3</sup> dscf)	0.50 (0.22)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of Appendix A-8 of 40 CFR Part 60.
Cadmium	mg/dscm (gr/10 <sup>3</sup> dscf)	0.11 (0.048)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of Appendix A-8 of 40 CFR Part 60.
Mercury	mg/dscm (gr/10 <sup>3</sup> dscf)	0.0051 (0.0022)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of Appendix A-8 of 40 CFR Part 60.

<sup>1</sup>Except as allowed under 40 CFR §60.56c(c) for HMIWI equipped with CEMS.

<sup>2</sup>Does not include CEMS and approved alternative non-EPA test methods allowed under 40 CFR §60.56c(b).

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**TABLE 18-1C**  
**Increments of Progress and Compliance Schedules for Existing CISWI Units**

<b>Comply with these Increments of Progress</b>	<b>By no Later Than<sup>a</sup></b>
Increment 1. -- The owner or operator of an existing CISWI unit shall submit a final control plan to the Secretary as expeditiously as practicable after approval of the West Virginia §111(d)/129 plan.	February 7, 2016
Increment 2. -- The owner or operator of an existing CISWI unit shall achieve final compliance as expeditiously as practicable after approval of the West Virginia §111(d)/129 plan.	February 7, 2018; or three years after the effective date of West Virginia §111(d)/129 plan approval. <sup>b</sup>

<sup>a</sup> Site-specific schedules can be used at the discretion of the Secretary.

<sup>b</sup> The date can be no later than 3 years after the effective date of state plan approval or December 1, 2005 for CISWI units that commenced construction on or before November 30, 1999. The date can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018 for CISWI units that commenced construction on or before June 4, 2010.

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**TABLE 18-2C**  
**Emission Limits for Existing Commercial and Industrial Solid Waste Incineration Units that Apply Before February 7, 2018<sup>b</sup>**

<b>Air Pollutant</b>	<b>Emission Limit <sup>a</sup></b>	<b>Averaging Time</b>	<b>Performance Test Methods</b>
Cadmium	0.004 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of 40 CFR Part 60, Appendix A)
Carbon monoxide	157 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 10, 10A, or 10B, of 40 CFR Part 60, Appendix A)
Dioxins/furans (toxic equivalency basis)	0.41 nanograms per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 23 of 40 CFR Part 60, Appendix A)
Hydrogen chloride	62 parts per million by dry volume.	3-run average (For Method 26, collect a minimum volume of 120 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run).	Performance test (Method 26 or 26A of 40 CFR Part 60, Appendix A-8)
Lead	0.04 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of 40 CFR Part 60, Appendix A)
Mercury	0.47 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 or 30B of 40 CFR Part 60, Appendix A-8) or ASTM D6784-02 (Reapproved 2008) <sup>c</sup>
Opacity	10 percent	Three 1-hour blocks consisting of ten 6-minute average opacity values.	Performance test (Method 9 of 40 CFR Part 60, Appendix A-4)
Oxides of nitrogen	388 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 7 or 7E of 40 CFR Part 60, Appendix A-4)
Particulate matter	70 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 5 or 29 of 40 CFR Part 60, Appendix A)
Sulfur dioxide	20 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 6 or 6C of 40 CFR Part 60, Appendix A)

<sup>a</sup>All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions.

<sup>b</sup>Applies only to incinerators subject to the CISWI standards through a state plan prior to June 4, 2010. The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018.

<sup>c</sup>Incorporated by reference, see 40 CFR §60.17.

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**TABLE 18-3C**  
**Operating Limits for Wet Scrubbers**

For These Operating Parameters	You Shall Establish These Operating Limits	And Monitor Using These Minimum Frequencies		
		Data Measurement	Data Recording	Averaging Time
Charge rate	Maximum charge rate	Continuous	Every hour	Daily (batch units). 3-hour rolling (continuous and intermittent units) <sup>a</sup>
Pressure drop across the wet scrubber or amperage to wet scrubber	Minimum pressure drop or amperage	Continuous	Every 15 minutes	3-hour rolling <sup>a</sup>
Scrubber liquor flow rate	Minimum flow rate	Continuous	Every 15 minutes	3-hour rolling <sup>a</sup>
Scrubber liquor pH	Minimum pH	Continuous	Every 15 minutes	3-hour rolling <sup>a</sup>

<sup>a</sup> Calculated each hour as the average of the previous 3 operating hours.

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**TABLE 18-4C**  
**Toxic Equivalency Factors**

<b>Dioxin/Furan Isomer</b>	<b>Toxic Equivalency Factor</b>
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin	0.5
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
octachlorinated dibenzo-p-dioxin	0.001
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.5
1,2,3,7,8-pentachlorinated dibenzofuran	0.05
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
octachlorinated dibenzofuran	0.001

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**TABLE 18-5C**  
**Summary of Reporting Requirements for Existing CISWI Units<sup>a</sup>**

Report	Due Date	Contents	Reference
Waste Management Plan	No later than the date specified in Table 18-1C for submittal of the final control plan	Waste management plan.	subdivision 9.12.b
Initial Test Report	No later than 60 days following the initial performance test	Complete test report for the initial performance test. The values for the site-specific operating limits. Installation of bag leak detection systems for fabric filters.	subdivision 9.12.c
Annual Report	No later than 12 months following the submission of the initial test report. Subsequent reports are to be submitted no more than 12 months following the previous report.	Name and address. Statement and signature by responsible official. Date of report. Values for the operating limits. Highest recorded 3-hour average and the lowest 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported. If a performance test was conducted during the reporting period, the results of the test. If a performance test was not conducted during the reporting period, a statement that the requirements of paragraph 9.9.y.1 <del>9.9.z.1</del> were met. Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours but less than 2 weeks. If you are conducting performance tests once every 3 years consistent with paragraph 9.9.y.1 <del>9.9.z.1</del> , the date of the last 2 performance tests, a comparison of the emission level you achieved in the last 2 performance tests to the 75 percent emission limit threshold required in paragraph 9.9.y.1 <del>9.9.z.1</del> and a statement as to whether there have been any operational changes since the last performance test that could increase emissions.	subdivisions 9.12.d and 9.12.e.
Emission Limitation or Operating Limit Deviation Report.	By August 1 of that year for data collected during the first half of the calendar year. By February 1 of the following year for data collected during the second half of the calendar year.	Dates and times of deviation. Averaged and recorded data for those dates. Duration and causes of each deviation and the corrective actions taken. Copy of operating limit monitoring data and any test reports. Dates, times and causes for monitor downtime incidents.	subdivisions 9.12.f and 9.12.g.
Qualified Operator Deviation Notification	Within 10 days of deviation	Statement of cause of deviation. Description of efforts to have an accessible qualified operator. The date a qualified operator will be accessible.	paragraph 9.12.h.1



Qualified Operator Deviation Status Report	Every 4 weeks following deviation	Description of efforts to have an accessible qualified operator. The date a qualified operator will be accessible. Request for approval to continue operation.	paragraph 9.12.h.2
Qualified Operator Deviation	Notification of resumed operation prior to resuming operation	Notification that you are resuming operation.	paragraph 9.12.h.3

<sup>a</sup> This table is only a summary, see the referenced subdivisions and paragraphs for the complete requirements.

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**TABLE 18-6C**  
**Emission Limits for Existing Commercial and Industrial Solid Waste Incineration Units that Apply After February 7, 2018<sup>a</sup>**

Air Pollutant	Emission Limit <sup>b</sup>	Averaging Time	Performance Test Methods
Cadmium	0.0026 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 of 40 CFR Part 60, Appendix A-8). Use ICPMS for the analytical finish.
Carbon monoxide	17 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 10 at 40 CFR Part 60, Appendix A-4).
Dioxins/furans (total mass basis)	4.6 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 23 at 40 CFR Part 60, Appendix A-7).
Dioxins/furans (toxic equivalency basis)	0.13 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 23 of 40 CFR Part 60, Appendix A-7).
Hydrogen chloride	29 parts per million by dry volume.	3-run average (For Method 26, collect a minimum volume of 60 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run).	Performance test (Method 26 or 26A of 40 CFR Part 60, Appendix A-8).
Lead	0.015 milligrams per dry standard cubic meter. <sup>c</sup>	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 of 40 CFR Part 60, Appendix A-8). Use ICPMS for the analytical finish.
Mercury	0.0048 milligrams per dry standard cubic meter.	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008) <sup>d</sup> , collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum sample as specified in Method 30B at 40 CFR Part 60, Appendix A).	Performance test (Method 29 or 30B of 40 CFR Part 60, Appendix A-8) or ASTM D6784-02 (Reapproved 2008) <sup>d</sup> .
Oxides of nitrogen	53 parts per million by dry volume.	3-run average (for Method 7E, 1 hour minimum sample time per run).	Performance test (Method 7 or 7E of 40 CFR Part 60, Appendix A-4).
Particulate matter filterable	34 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 5 or 29 of 40 CFR Part 60, Appendix A-3 or Appendix A-8).
Sulfur dioxide	11 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 6 or 6C of 40 CFR Part 60, Appendix A-4).

Fugitive ash	Visible emissions for no more than 5% of the hourly observation period.	Three 1-hour observation periods.	Visible emission test (Method 22 at 40 CFR Part 60, Appendix A-7).
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<sup>a</sup> The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018.

<sup>b</sup> All emission limitations are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you shall meet either the total mass basis limit or the toxic equivalency basis limit.

<sup>c</sup> If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to subdivision ~~9.9.y~~ 9.9.z if all of the other provisions of subdivision ~~9.9.y~~ 9.9.z are met. For all other pollutants that do not contain a footnote “c”, your performance tests for this pollutant for at least 2 consecutive years shall show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

<sup>d</sup> Incorporated by reference, see 40 CFR §60.17.

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**TABLE 18-7C**  
**Emission Limits That Apply to Energy Recovery Units After February 7, 2018<sup>a</sup>**

Air Pollutant	Emission Limitation <sup>a,b</sup>		Averaging Time	Performance Test Methods
	Liquid/Gas	Solids		
Cadmium	0.023 milligrams per dry standard cubic meter.	Biomass - 0.0014 milligrams per dry standard cubic meter. <sup>c</sup> Coal - <del>0.0095</del> 0.0017 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 of 40 CFR Part 60, Appendix A-8). Use ICPMS for the analytical finish.
Carbon monoxide	35 parts per million by dry volume.	Biomass - 260 parts per million dry volume. Coal - 95 parts per million dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 10 at 40 CFR Part 60, Appendix A-4).
Dioxins/furans (total mass basis)	2.9 nanograms per dry standard cubic meter.	Biomass - 0.52 nanograms per dry standard cubic meter. <sup>c</sup> Coal - 5.1 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meters).	Performance test (Method 23 at 40 CFR Part 60, Appendix A-7).
Dioxins/furans (toxic equivalency basis)	0.32 nanograms per dry standard cubic meter.	Biomass - 0.12 nanograms per dry standard cubic meter. Coal - 0.075 nanograms per dry standard cubic meter. <sup>c</sup>	3-run average (collect a minimum volume of 4 dry standard cubic meters).	Performance test (Method 23 of 40 CFR Part 60, Appendix A-7).
Hydrogen chloride	14 parts per million by dry volume.	Biomass- 0.20 parts per million dry volume. Coal - <del>43-58</del> parts per million dry volume.	3-run average (for Method 26, collect a minimum of 120 liters; for Method 26A, collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 26 or 26A of 40 CFR Part 60, Appendix A-8).
Lead	0.096 milligrams per dry standard cubic meter.	Biomass - 0.014 milligrams per dry standard cubic meter. <sup>c</sup> Coal - <del>0.14</del> 0.057 milligrams per dry standard cubic meter. <sup>c</sup>	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 of 40 CFR Part 60, Appendix A-8). Use ICPMS for the analytical finish.

Mercury	0.0024 milligrams per dry standard cubic meter.	Biomass- 0.0022 milligrams per dry standard cubic meter. Coal - <del>0.016</del> <u>0.013</u> milligrams per dry standard cubic meter.	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008) <sup>d</sup> , collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum sample as specified in Method 30B at 40 CFR Part 60, Appendix A.	Performance test (Method 29 or 30B of 40 CFR Part 60, Appendix A-8) or ASTM D6784-02 (Reapproved 2008) <sup>d</sup> .
Oxides of nitrogen	76 parts per million by dry volume.	Biomass - 290 parts per million dry volume. Coal - <del>340</del> <u>460</u> parts per million dry volume.	3-run average (for Method 7E, 1 hour minimum sample time per run).	Performance test (Method 7 or 7E of 40 CFR Part 60, Appendix A-4).
Particulate matter filterable	110 milligrams per dry standard cubic meter.	Biomass - 11 milligrams per dry standard cubic meter. Coal - <del>160</del> <u>130</u> milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter ).	Performance test (Method 5 or 29 of 40 CFR Part 60, Appendix A-3 or Appendix A-8) if the unit has an annual average heat input rate less than or equal to 250 MMBtu/hr; or PM CPMS ( as specified in subdivision 9.9.x) if the unit has an annual average heat input rate greater than 250 MMBtu/hr.
Sulfur dioxide	720 parts per million by dry volume.	Biomass - 7.3 parts per million dry volume. Coal - <del>650</del> <u>850</u> parts per million dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 6 or 6C of 40 CFR Part 60, Appendix A-4).
Fugitive ash	Visible emissions for no more than 5% of the hourly observation period.	Visible emissions for no more than 5% of the hourly observation period.	Three 1-hour observation periods.	Visible emission test (Method 22 at 40 CFR Part 60, Appendix A-7).

<sup>a</sup> The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018.

<sup>b</sup> All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you shall meet either the total mass basis limit or the toxic equivalency basis limit.

<sup>c</sup> If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to subdivision ~~9.9.y~~ 9.9.z if all of the other provision of subdivision ~~9.9.y~~ 9.9.z are met. For all other pollutants that do not contain a superscript “c”, your performance tests for this pollutant for at least 2 consecutive years shall show that your emissions are at or 75 percent of this limit in order to qualify for skip testing, with the exception of annual performance tests to certify a CEMS or PM CPMS.

<sup>d</sup> Incorporated by reference, see 40 CFR §60.17.

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**TABLE 18-8C**  
**Emission Limits That Apply to Waste-Burning Kilns After February 7, 2018<sup>a</sup>**

<b>Air Pollutant</b>	<b>Emission Limit<sup>b</sup></b>	<b>Averaging Time</b>	<b>Performance Test Methods<sup>d</sup></b>
Cadmium	0.0014 milligrams per dry standard cubic meter. <sup>c</sup>	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 of 40 CFR Part 60, Appendix A-8).
Carbon monoxide	110 (long kilns)/ 790 (preheater-precalciner) parts per million dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 10 at 40 CFR Part 60, Appendix A-4).
Dioxins/furans (total mass basis)	1.3 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meters).	Performance test (Method 23 at 40 CFR Part 60, Appendix A-7).
Dioxins/furans (toxic equivalency basis)	0.075 nanograms per dry standard cubic meter. <sup>c</sup>	3-run average (collect a minimum volume of 4 dry standard cubic meters).	Performance test (Method 23 of 40 CFR Part 60, Appendix A-7).
Hydrogen chloride	3.0 parts per million dry volume. <sup>c</sup>	3-run average (collect a minimum volume of 1 dry standard cubic meter) or 30-day rolling average if HCL CEMS is being used.	Performance test (Method 321 at 40 CFR Part 63, Appendix A) or HCL CEMS if a wet scrubber or dry scrubber is not used, as specified in subdivision 9.9.j.
Lead	0.014 milligrams per dry standard cubic meter. <sup>c</sup>	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 of 40 CFR Part 60, Appendix A-8).
Mercury	0.011 milligrams per dry standard cubic meter.	30-day rolling average.	Mercury CEMS or sorbent trap monitoring system (Performance Specification 12A or 12B, respectively, of Appendix B of 40 CFR Part 60.)
Oxides of nitrogen	630 parts per million by dry volume.	3-run average (for Method 7E, 1 hour minimum sample time per run).	Performance test (Method 7 or 7E of 40 CFR Part 60, Appendix A-4).
Particulate matter filterable	<del>4.6</del> 13.5 milligrams per dry standard cubic meter.	30-day rolling average.	PM CPMS as specified in subdivision 9.9.x).
Sulfur dioxide	600 parts per million by dry volume.	3-run average (for Method 6, collect a minimum of 20 liters; for Method 6C, 1 hour minimum sample time per run).	Performance test (Method 6 or 6C of 40 CFR Part 60, Appendix A-4).

<sup>a</sup>The date specified in the State Plan can be no later than 3 years after the effective date of approval of a revised State Plan or February 7, 2018.

<sup>b</sup> All emission limitations are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you shall meet either the total mass basis limit or the toxic equivalency basis limit.

<sup>c</sup> If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to subdivision ~~9.9.y~~ 9.9.z if all of the other provision of subdivision ~~9.9.y~~ 9.9.z are met. For all other pollutants that do not contain a superscript “c”, your performance tests for this pollutant for at least 2 consecutive years shall show that your emissions are at or 75 percent of this limit in order to qualify for skip testing, with the exception of annual performance tests to certify a CEMS or PM CPMS.

<sup>d</sup> Alkali bypass and in-line coal mill stacks are subject to performance testing only, as specified in paragraph 9.y.3. They are not subject to the CEMS, sorbent trap or CPMS requirements that otherwise may apply to the main kiln exhaust.

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**TABLE 18-9C**  
**Emission Limits That Apply to Small, Remote Incinerators After February 7, 2018<sup>a</sup>**

<b>Air Pollutant</b>	<b>Emission Limit<sup>b</sup></b>	<b>Averaging Time</b>	<b>Performance Test Methods</b>
Cadmium	0.95 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 29 of 40 CFR Part 60, Appendix A-8).
Carbon monoxide	64 parts per million dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 10 at 40 CFR Part 60, Appendix A-4).
Dioxins/furans (total mass basis)	4400 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 23 at 40 CFR Part 60, Appendix A-7).
Dioxins/furans (toxic equivalency basis)	180 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 23 of 40 CFR Part 60, Appendix A-7).
Fugitive ash	Visible emissions for no more than 5% of the hourly observation period.	Three 1-hour observation periods.	Visible emission test (Method 22 at 40 CFR Part 60, Appendix A-7).
Hydrogen chloride	300 parts per million dry volume.	3-run average (For Method 26, collect a minimum volume of 120 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run).	Performance test (Method 26 or 26A at 40 CFR Part 60, Appendix A-8).
Lead	2.1 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 29 of 40 CFR Part 60, Appendix A-8). Use ICPMS for the analytical finish.
Mercury	0.0053 milligrams per dry standard cubic meter.	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008) <sup>c</sup> , collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum sample as specified in Method 30B at 40 CFR Part 60, Appendix A).	Performance test (Method 29 or 30B at 40 CFR Part 60, Appendix A-8) or ASTM D6784-02 (Reapproved 2008). <sup>c</sup>
Oxides of nitrogen	190 parts per million by dry volume.	3-run average (for Method 7E, 1 hour minimum sample time per run).	Performance test (Method 7 or 7E of 40 CFR Part 60, Appendix A-4).
Particulate matter (filterable)	270 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 5 or 29 at 40 CFR Part 60, Appendix A-3 or Appendix A-8).



Sulfur dioxide	150 parts per million dry volume.	3-run average (for Method 6, collect a minimum of 20 liters per run; for Method 6C, 1 hour minimum sample time per run).	Performance test (Method 6 or 6C of 40 CFR Part 60, Appendix A-4).
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<sup>a</sup> The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018.

<sup>b</sup> All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you shall meet either the total mass basis limit or the toxic equivalency basis limit.

<sup>c</sup> Incorporated by reference, see 40 CFR §60.17.



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Part II

## Environmental Protection Agency

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40 CFR Part 60

Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Final Rule

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 60**

[EPA-HQ-OAR-2003-0119; FRL-9945-72-OAR]

RIN 2060-AS11

**Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule; notice of final action on reconsideration.

**SUMMARY:** This action sets forth the Environmental Protection Agency's (EPA) final decision on the issues for which it granted reconsideration on January 21, 2015, which pertain to certain aspects of the February 7, 2013, final rule titled "Standards of Performance for New Stationary Sources and Emissions Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units" (CISWI rule). The EPA is finalizing proposed actions on these four topics: Definition of "continuous emission monitoring system (CEMS) data during startup and shutdown periods;" particulate matter (PM) limit for the waste-burning kiln subcategory; fuel variability factor (FVF) for coal-burning energy recovery units (ERUs); and the definition of "kiln." This action also includes our final decision to deny the requests for reconsideration of all other issues raised in the petitions for reconsideration of the 2013 final commercial and industrial solid waste incineration rule for which we did not grant reconsideration.

**DATES:** The amendments in this rule to 40 CFR part 60, subpart DDDD, are effective June 23, 2016, and to 40 CFR part 60, subpart CCCC, are effective December 23, 2016. The incorporation by reference of certain publications listed in this rule was approved February 7, 2013.

**ADDRESSES:** The EPA has established a docket for this action on the commercial and industrial solid waste incineration rule under Docket ID No. EPA-HQ-OAR-2003-0119. All documents in the docket are listed in the <http://www.regulations.gov> index. Although listed in the index, some information is not publicly available, e.g., confidential business information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material,

will be publicly available only in hard copy. Publicly available docket materials are available either electronically in <http://www.regulations.gov> or in hard copy at the EPA Docket Center, EPA West Building, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744 and the telephone number for the Docket Center is (202) 566-1742.

**FOR FURTHER INFORMATION CONTACT:** For further information, contact Dr. Nabanita Modak Fischer, Fuels and Incineration Group, Sector Policies and Programs Division (E143-05), Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-5572; fax number: (919) 541-3470; email address: [modak.nabanita@epa.gov](mailto:modak.nabanita@epa.gov).

**SUPPLEMENTARY INFORMATION:**

*Organization of This Document.* The following outline is provided to aid in locating information in this preamble.

- I. General Information
  - A. Does this reconsideration action apply to me?
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- V. Technical Corrections and Clarifications
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- VII. Statutory and Executive Order Reviews
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- G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks
- H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
- I. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR part 51
- J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations
- K. Congressional Review Act (CRA)

*Preamble Acronyms and Abbreviations.* The following acronyms and abbreviations are used in this document.

Btu British thermal unit  
 CAA Clean Air Act  
 CBI Confidential business information  
 Cd Cadmium  
 CEMS Continuous emissions monitoring systems  
 CFR Code of Federal Regulations  
 CISWI Commercial and Industrial Solid Waste Incineration  
 CO Carbon monoxide  
 CO<sub>2</sub> Carbon dioxide  
 CPMS Continuous Parameter Monitoring System  
 dscm Dry standard cubic meter  
 EG Emission Guidelines  
 EJ Environmental Justice  
 EPA U.S. Environmental Protection Agency  
 ERU Energy recovery unit  
 ESP Electrostatic precipitator  
 FVF Fuel variability factor  
 HCl Hydrogen chloride  
 Hg Mercury  
 ICR Information collection request  
 MACT Maximum achievable control technology  
 mg/dscm Milligrams per dry standard cubic meter  
 mmBtu/hr Million British thermal units per hour  
 NAICS North American Industrial Classification System  
 NESHAP National emission standards for hazardous air pollutants  
 ng/dscm Nanograms per dry standard cubic meter  
 NHSM Non-hazardous secondary material(s)  
 NO<sub>x</sub> Nitrogen oxides  
 NSPS New source performance standards  
 NTTAA National Technology Transfer and Advancement Act  
 OAQPS Office of Air Quality Planning and Standards  
 OMB Office of Management and Budget  
 Pb Lead  
 PM Particulate matter (filterable, unless otherwise specified)  
 ppm Parts per million  
 ppmv Parts per million by volume  
 ppmvd Parts per million by dry volume  
 PS Performance Specification  
 RCRA Resource Conservation and Recovery Act  
 RIN Regulatory Information Number  
 SBA Small Business Administration  
 SO<sub>2</sub> Sulfur dioxide

SSM Startup, shutdown, and malfunction  
 The Court United States Court of Appeals  
 for the District of Columbia Circuit  
 TTN Technology Transfer Network  
 ug/dscm Micrograms per dry standard  
 cubic meter  
 UMRA Unfunded Mandates Reform Act  
 U.S.C. United States Code  
 VCS Voluntary consensus standards

WWW World Wide Web

**I. General Information**

*A. Does this reconsideration action apply to me?*

Categories and entities potentially affected by the proposed action are

those that operate Commercial and Industrial Solid Waste Incineration (CISWI) units. The New Source Performance Standards (NSPS) and Emission Guidelines (EG), hereinafter referred to as “standards,” for CISWI affect the following categories of sources:

Category	NAICS <sup>1</sup> code	Examples of potentially regulated entities
Any industrial or commercial facility using a solid waste incinerator.	211, 212, 486	Mining; oil and gas exploration operations; pipeline operators.
	221	Utility providers.
	321, 322, 337	Manufacturers of wood products; manufacturers of pulp, paper and paperboard; manufacturers of furniture and related products.
	325, 326	Manufacturers of chemicals and allied products; manufacturers of plastics and rubber products.
	327	Manufacturers of cement; nonmetallic mineral product manufacturing.
	333, 336	Manufacturers of machinery; manufacturers of transportation equipment.
	423, 44	Merchant wholesalers, durable goods; retail trade.

<sup>1</sup> North American Industrial Classification System.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this final action. To determine whether your facility would be affected by this final action, you should examine the applicability criteria in 40 CFR 60.2010 of subpart CCCC, 40 CFR 60.2505 of subpart DDDD and 40 CFR part 241. If you have any questions regarding the applicability of this final action to a particular entity, contact the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

*B. How do I obtain a copy of this document and other related information?*

The docket number for this final action regarding the CISWI NSPS (40 CFR part 60, subpart CCCC) and EG (40 CFR part 60, subpart DDDD) is Docket ID No. EPA-HQ-OAR-2003-0119. In addition to being available in the docket, an electronic copy of this final action is available on the World Wide Web (WWW) through the Technology Transfer Network (TTN) Web. Following signature, the EPA posted a copy of the proposed action at <http://www.epa.gov/ttn/atw/129/ciwi/ciwigp.html>. The TTN provides information and technology exchange in various areas of air pollution control.

*C. Judicial Review*

Under the CAA section 307(b)(1), judicial review of this final rule is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia

Circuit (D.C. Circuit) by August 22, 2016. Under CAA section 307(d)(7)(B), only an objection to this final rule that was raised with reasonable specificity during the period for public comment can be raised during judicial review. Any person seeking to make such a demonstration to us should submit a Petition for Reconsideration to the Office of the Administrator, Environmental Protection Agency, Room 3000, Ariel Rios Building, 1200 Pennsylvania Ave. NW., Washington, DC 20004, with a copy to the persons listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20004. Note, under CAA section 307(b)(2), the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by the EPA to enforce these requirements.

**II. Summary of Final Amendments**

*A. Background Information*

On March 21, 2011, the EPA promulgated revised NSPS and EG for CISWI units. Following that action, the Administrator received petitions for reconsideration that identified certain issues that warranted further opportunity for public comment. In response to the petitions, the EPA reconsidered and requested comment on several provisions of the February 2011 final NSPS and EG for commercial and

industrial solid waste incineration units. The EPA published the proposed revisions to the NSPS and EG for commercial and industrial solid waste units on December 23, 2011 (76 FR 80452).

On February 7, 2013, the EPA promulgated the final reconsidered NSPS and EG for CISWI units (78 FR 9112). The final rule made some revisions to the December 2011 proposed reconsideration rule in response to comments and additional information received. Following that action, the EPA again received petitions for reconsideration. These petitions stated certain provisions should be reconsidered and that the public lacked sufficient opportunity to comment on some of the provisions contained in the final 2013 CISWI rule. On January 21, 2015, the EPA reconsidered and requested comment on four provisions of the 2013 final NSPS and EG for CISWI units. Additionally, the EPA proposed clarifying changes and corrections to the final rule, some of which were raised in petitions for reconsideration of the 2013 CISWI rule. The EPA also proposed to amend the final rule by removing the affirmative defense provision. The EPA continued to evaluate the remaining issues raised in the petitions for reconsideration of the February 7, 2013 final CISWI reconsideration based on public comments received on the January 21, 2015, proposed reconsideration. For a more detailed background and additional information on how this rule is related to other CAA combustion rules issued under CAA section 112 and

the Resource Conservation and Recovery Act (RCRA) definition of solid waste, refer to prior notices (76 FR 15704, 78 FR 9112).

#### B. Actions We Are Taking

In this document, we are finalizing amendments associated with certain issues raised by Petitioners in their petitions for reconsideration on the 2013 CISWI rule. These provisions are: (1) Definition of “CEMS data during startup and shutdown periods;” (2) particulate matter (PM) limit for the waste-burning kiln subcategory; (3) fuel variability factor (FVF) for coal-burning energy recovery units (ERUs); and (4) the definition of “kiln.” The final amendments are summarized as follows:

1. Definition of “CEMS data during startup and shutdown periods”: The EPA is revising the “CEMS data during startup and shutdown” definition to be subcategory-specific. For ERUs and waste-burning kilns, the definitions reflect provisions similar to those of the non-waste counterpart National Emission Standards for Hazardous Air Pollutants (NESHAP) to CISWI for the type of source (*i.e.*, boilers and cement kilns). Therefore, ERUs will comply with provisions similar to those in the major source Boiler NESHAP, and waste-burning kilns will comply with provisions similar to those in the Portland Cement NESHAP. For incinerators and small remote incinerators, the proposed definition (*i.e.*, from a cold start and up to 48 hours for startup and 24 hours or less for shutdown) will apply.

2. Particulate matter limit for the waste-burning kiln subcategory: The EPA has determined that the test averages, instead of the individual test runs, should be used to establish the standards for new and existing waste-burning kilns. Based on that approach, the final PM emission limits for existing kilns is 13.5 mg/dscm and the final PM emission limit for new kilns is 4.9 mg/dscm.

3. Fuel variability factor (FVF) for coal-burning energy recovery units: The EPA is incorporating a fuel variability factor and adopting as final the emission limits discussed in the proposed rule for cadmium (Cd), hydrogen chloride (HCl), mercury (Hg), lead (Pb), filterable particulate matter (PM), and nitrogen oxides (NO<sub>x</sub>). Additionally, the EPA has re-evaluated the fuel sulfur data with paired sulfur dioxide (SO<sub>2</sub>) data and is incorporating a FVF into the floor calculations for SO<sub>2</sub>. The final SO<sub>2</sub> limit for existing and new coal ERUs is 850 parts per million by dry volume (ppmvd).

4. Definition of “kiln”: The EPA is finalizing a definition of “kiln” that is consistent with that of the Portland Cement NESHAP. The terms “in-line raw mill” and “in-line coal mill” are included in the definition, and, therefore, have been added to the definitions within the CISWI rule. Furthermore, the EPA is finalizing the proposed compliance demonstration and ongoing monitoring method for waste-burning kilns that combine emission streams from the in-line raw mill and/or the in-line coal mill and exhaust through multiple stacks. The EPA is also finalizing clarifying language that makes the monitoring requirements for waste-burning kilns consistent with those in the Portland Cement NESHAP. Specifically, we are not requiring that CEMS or PM continuous parameter monitoring systems (CPMS) be installed on separate alkali bypass or in-line coal mill stacks. Instead, as is the case with the Portland Cement NESHAP, the results of the initial and subsequent performance tests for the alkali bypass and in-line coal mill stacks can be used to determine the combined emissions to demonstrate compliance with the relevant emissions limit. However, unlike the Portland Cement NESHAP, the performance test must be conducted on an annual basis (between 11 and 13 calendar months following the previous performance test) to keep the testing schedule for these stacks consistent with the CISWI rule’s annual performance testing requirements.

Section IV of this preamble discusses these issues in further detail and presents the revisions necessary to address each issue.

Additionally, the EPA is clarifying certain applicability provisions relating to incinerator units and air curtain incinerator units subject to the 2000 CISWI NSPS and is correcting various typographical errors identified in the rule as published in the CFR. Section V of this preamble discusses these issues in further detail.

The EPA is also finalizing the proposed amendments to the final rule by removing the affirmative defense provision for the reasons set forth in the proposed rule. *See* 80 FR 3018, 3025 (January 21, 2015).

#### C. Other Actions We Are Taking

Section 307(d)(7)(B) of the CAA states that “[o]nly an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. If the person raising an objection can demonstrate to the

Administrator that it was impracticable to raise such objection within such time or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule, the Administrator shall convene a proceeding for reconsideration of the rule and provide the same procedural rights as would have been afforded had the information been available at the time the rule was proposed. If the Administrator refuses to convene such a proceeding, such person may seek review of such refusal in the United States court of appeals for the appropriate circuit (as provided in subsection (b)).”

As to the first procedural criterion for reconsideration, a petitioner must show why the issue could not have been presented during the comment period, either because it was impracticable to raise the issue during that time or because the grounds for the issue arose after the period for public comment (but within 60 days of publication of the final action). The EPA is denying the petitions for reconsideration on a number of issues because this criterion has not been met. In many cases, the petitions reiterate comments made on the proposed December 2011 rule during the public comment period for that rule. On those issues, the EPA responded to those comments in the final rule and made appropriate revisions to the proposed rule after consideration of public comments received. It is well established that an agency may refine its proposed approach without providing an additional opportunity for public comment. *See Community Nutrition Institute v. Block*, 749 F.2d at 58 and *International Fabricare Institute v. EPA*, 972 F.2d 384, 399 (D.C. Cir. 1992) (notice and comment is not intended to result in “interminable back-and-forth[.]” nor is an agency required to provide additional opportunity to comment on its response to comments) and *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 547 (D.C. Cir. 1983) (“notice requirement should not force an agency endlessly to repropose a rule because of minor changes”).

In the EPA’s view, an objection is of central relevance to the outcome of the rule only if it provides substantial support for the argument that the promulgated regulation should be revised. *See Union Oil v. EPA*, 821 F.2d 768, 683 (D.C. Cir. 1987) (court declined to remand rule because petitioners failed to show substantial likelihood that final rule would have been changed

based on information in petition). See also the EPA's Denial of the Petitions to Reconsider the Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202 of the Clean Air Act, 75 FR at 49556, 49561 (August 13, 2010). See also 75 FR at 49556, 49560–49563 (August 13, 2010) and 76 FR at 4780, 4786–4788 (January 26, 2011) for additional discussion of the standard for reconsideration under CAA section 307(d)(7)(B).

This action includes our final decision to deny the requests for reconsideration with respect to all issues raised in the petitions for reconsideration of the final 2013 CISWI rule for which we did not grant reconsideration. These denied requests for reconsideration are discussed in detail in the “Reconsideration issues on the 2013 final rule” memorandum found in the docket to this rulemaking.

### III. Summary of Significant Changes Since Proposal

The EPA did not propose revisions to the definition of “CEMS data during startup and shutdown,” but requested comment and suggestions for provisions in this definition that would address the transitional operation period at startup. Based on our review of comments received and suggestions on provisions, we are finalizing revised subcategory-specific definitions for “CEMS data during startup and shutdown” that are operationally representative for the subcategory of unit, and more closely resemble the non-waste burning regulatory definitions of these periods of operation. This issue, and the rationale for doing so, are discussed in greater detail in section IV.A. of this preamble.

Similarly, the EPA did not propose PM emission limits for waste-burning kilns based on test average data instead of test run data, but requested comment on the appropriateness of such an approach for this set of data. Upon consideration of comments, the EPA has determined to adopt the emission limits based on test average data for PM for the waste-burning kiln subcategory, and we have discussed our rationale for this in section IV.B. of this preamble.

The EPA did not propose but requested comment and additional data concerning the need for a FVF for coal-fired ERUs. Potential emission limits based on periods of non-waste combustion and, if applicable, a FVF for coal ERUs were discussed in the proposal for coal-burning ERUs for Cd, HCl, Hg, Pb, PM, and NO<sub>x</sub>. Based on comments and additional analysis, the EPA is adopting these emission limits and also incorporating a FVF into the

floor calculations for the SO<sub>2</sub> emission limit. The EPA did not discuss a FVF for SO<sub>2</sub> at proposal because the sulfur data the EPA had intended to use to develop the FVF appeared to have only one data point that could be paired with SO<sub>2</sub> emissions test data. It was brought to the EPA's attention during the comment period, however, that there were in fact two data points in the sulfur data set that could be paired with emissions test data. It was not initially clear that the coal samples dated 4–9 days prior to the emissions test were paired samples. However, during the comment period, a commenter informed the EPA these data were paired and the different dates were due to the lag time between sampling and actual combustion. This clarification enabled the EPA to determine that sufficient paired data exist for the calculation of a FVF for SO<sub>2</sub>, which resulted in a revised SO<sub>2</sub> emission limit of 850 ppmvd for new and existing coal ERUs. Consistent with the January 21, 2015 proposal, the EPA is adopting this revised emission limit to account for the fuel variability for this subcategory of CISWI units. Section IV.C of this preamble discusses this issue in further detail and responds to comments on the issue.

Additionally, the HCl CEMS requirements for waste-burning kilns not equipped with acid gas wet or dry scrubbers have been revised in response to comments and to be more consistent with more recently promulgated monitoring provisions included in the Portland Cement NESHAP rule. These revised provisions allow sources to use CEMS installed and operated according to either Performance Specification 15 or Performance Specification 18 to continuously monitor HCl emissions. The revised provisions also provide additional clarification and detail to sources on the procedures to use for calibrating and verifying the performance of the HCl CEMS.

### IV. Summary of Significant Comments and Responses

This section of the preamble summarizes the major comments received regarding the reconsidered issues and the EPA's responses in support of this final rule. For other comments not discussed here, refer to the “Summary of Public Comments and Responses for Commercial and Industrial Solid Waste Incineration Units: 2015 Reconsideration and Final Amendments” in the docket.

#### A. Definition of “CEMS Data During Startup and Shutdown Periods”

*Background:* In the January 21, 2015, proposal, the EPA requested comments

on the definition of “CEMS data during startup and shutdown” that was in the February 2013 final rule. As background, the 2011 CISWI final rule contained CEMS monitoring requirements for carbon monoxide (CO) from new sources, including a provision that mandated a 7 percent oxygen correction. After the 2011 CISWI final rule was published, petitioners indicated that correcting CO concentration measurements to 7 percent oxygen is problematic during startup and shutdown periods when the flue gas oxygen content approaches the oxygen content of ambient air, especially with regard to the ERU subcategory. Oxygen contents are often maintained relatively close to ambient air during combustion unit startup and shutdown in order to safely operate the unit, but, as a result, the corrected CO values during these periods are artificially inflated due to the oxygen correction calculation. Petitioners presented data that demonstrated how these inflated data points drive the 30-day rolling average values beyond the emission limit.

To resolve this issue, the EPA determined that the 7 percent oxygen correction would not be required for CEMS data collected during periods of startup and shutdown, referred to and defined as “CEMS data during startup and shutdown.”

Based on data submitted for coal-burning ERUs, a new definition of “CEMS data during startup and shutdown” was proposed in the December 2011 reconsideration proposal that referred to the data collected during the first 4 hours of operation of an energy recovery unit starting up from a cold start and the hour of operation following the cessation of waste material being fed to the unit during shutdown.

The EPA received comments on the proposed definition expressing concern that the time limits included in the definition may not accurately represent all CISWI unit types. Further, commenters argued that the same logic should apply for all CEMS-measured emission limits, not just CO. They explained that, even though CEMS is a compliance alternative rather than a requirement for most CISWI standards, other air regulations and permit requirements may require the units to continue to monitor emissions using CEMS data. Therefore, in the February 2013 CISWI final rule, the definition was revised to include all pollutants measured with a CEMS, expanded to include a separate definition for waste-burning kilns, and revised to remove the 4-hour and 1-hour time limits in the

definition. Within that definition, the EPA defined the end of the startup period and the beginning of the shutdown period as the introduction and cessation of waste fed to the unit, respectively. Information available for the best performing units described their typical operation and supported defining the startup and shutdown periods based on the introduction and cessation of waste being fed to the units. Furthermore, for the incinerator, small remote incinerator, and the ERU subcategories, the February 2013 action specified an upper limit of 48 hours for startup periods and 24 hours for shutdown periods of CEMS data, consistent with information provided by commenters.

After the February 2013 CISWI final rule was promulgated, the EPA received petitions stating that stakeholders did not have the opportunity to comment on the final definition, especially the clause that defines the beginning and ending of these periods as the introduction and cessation, respectively, of waste material being fed to the combustor. Petitioners argued that, with the inclusion of the provision ending startup when waste is added to the unit, the end of startup will occur too early because units that combust waste often introduce waste before steady state operations to transition from startup fuel to waste and other primary fuel combustion. For this reason, the petitioners argued that the EPA should extend the startup period duration to include the period of time when sources are transitioning to waste combustion from the startup fuel.

On January 21, 2015, the EPA requested comment on whether the definition should be revised to extend the startup period to include this transitional period of combustor operation. In addition, the EPA requested that commenters suggest provisions that would ensure adequate application of the CEMS data during startup and shutdown definition, such as maximum allowable time limits after introduction of waste, if the agency were to allow solid waste combustion during startup.

*Comment:* Several commenters supported, to a degree, the EPA's change in the 2013 final rule from the proposed 4-hour and 1-hour time limits on the definitions of CEMS data during startup and shutdown to the more subcategory-specific definitions found in the 2013 final rule, but suggested additional revisions to make the definition more accurately reflect these periods for certain types of units. Commenters noted technical reasons during startup that cause corrected emissions

concentrations to possibly show emissions in excess of those occurring during normal, steady-state operation due to the 7 percent oxygen correction. These reasons included: (1) Stack oxygen levels approach ambient levels, inflating oxygen correction factors even though mass emission rates are low; (2) the combustor has not attained optimal temperature, turbulence, and residence time conditions, which are key factors for control of combustion-related emissions; and (3) air pollution control equipment has not achieved necessary minimum temperature and/or other operating conditions necessary for effective steady-state performance on which the standards are based. The commenters also asserted that, while elevated emissions do occur during startups, the magnitude and period of elevated emissions will be actively minimized as required by the "general duty" provisions to minimize emissions at all times including startups and shutdowns. Additionally, the commenters argued that, for ERUs, at least, unit operators are economically motivated to minimize the duration of any startups, because the shorter the startup, the quicker a unit can be brought online to sell steam and/or connect to the grid and sell power. Also with respect to ERUs, commenters stated that units firing solid material on grates or in fluidized beds require more time for the material to fully ignite and achieve the optimal combustion conditions than gaseous or liquid-fired units do. The commenters stated that elevated corrected emission concentrations following initial solid material firing is an inherent characteristic of ERU subcategories such as stoker and fluidized bed biomass ERUs. In conclusion, the commenters recommended that, given the virtually identical technologies used for both boilers and CISWI ERUs, the EPA should incorporate language in the CEMS data definition similar to that which it proposed in the major source and area source Boiler NESHAP rules. One commenter provided mark-up language reflecting major source boiler language in the "CEMS data for startup and shutdown" definition that would apply specifically to CISWI ERUs, and a separate definition that could apply to incinerators and small remote incinerators. For ERUs, the commenter suggested the following definition, which eliminates the "cold start" and "until waste is fed to the unit" language, and adds the concept of tying the CEMS data during startup period to the time that useful thermal energy is generated.

The commenter suggested that CEMS data during startup and shutdown should be defined as follows:

*For energy recovery units:* CEMS data collected during the first hours of operation of a CISWI unit startup including the hours of operation firing non-waste fuel and the hours following introduction of waste to the unit until 4 hours after when the ERU makes useful thermal energy (such as steam or heat) for heating, cooling, and process purposes, or generates electricity, whichever is earlier, and the hours of operation following the cessation of waste material being fed to the CISWI unit during a unit shutdown. For each startup event, the length of time that CEMS data may be claimed as being CEMS data during startup must be 48 operating hours or less. For each shutdown event, the length of time that CEMS data may be claimed as being CEMS data during shutdown must be 24 operating hours or less.

As an alternative to the above definition, the commenter suggested the definition could include the period of time up to 6 hours following introduction of waste to the unit instead of tying the definition to "useful thermal energy." The commenter noted that this might allow the definition to be applicable to incinerators and small remote incinerators.

Another commenter suggested that the first 48 hours of startup and the last 24 hours of shutdown for incinerators, small remote incinerators, and energy recovery units is adequate in most cases. This commenter stated that any time the feed to a combustion chamber is modified (e.g., new material added, same material with higher or lower feed rates), the combustion process is disturbed. The commenter further stated that the length of time it takes for the combustion process to re-stabilize depends upon a number of factors (size of the combustion unit, amount of waste introduced, the Btu content of the waste introduced, the combustibility of that waste, the operating conditions, etc.). Therefore, the commenter recommended that the CEMS data during startup and shutdown are best decided on a site-specific basis and urged the EPA to allow this as an option.

With respect to waste-burning kilns, one commenter argued that it is highly beneficial to have the definitions of startup and shutdown for kilns in the CISWI rule match the definitions in the Portland Cement NESHAP. Therefore, the commenter supported having a separate definition of CEMS data during startup and shutdown that applied to waste-burning kilns, and that this

definition should also reflect provisions found in the Portland Cement NESHAP. The commenter provided the following language as a suggestion on what would be appropriate, and also suggested a corresponding footnote to clarify that the 7 percent oxygen adjustment need not be applied during periods of startup and shutdown:

*“CEMS data during startup and shutdown means the following: (2) For waste-burning kilns: CEMS data collected during the periods of kiln operation that do not include normal operations. Startup means the time from when a shutdown kiln first begins firing fuel until it begins producing clinker. Startup begins when a shutdown kiln turns on the induced draft fan and begins firing fuel in the main burner. Startup ends when feed is being continuously introduced into the kiln for at least 120 minutes or when the feed rate exceeds 60 percent of the kiln design limitation rate, whichever occurs first. Shutdown means the cessation of kiln operation. Shutdown begins when feed to the kiln is halted and ends when continuous kiln rotation ceases.”*

*Response:* Based on these comments and the EPA's goal to provide, where appropriate, consistent regulatory provisions, the EPA has determined to revise the definition of “CEMS data during startup and shutdown” to be subcategory-specific. For ERUs and waste-burning kilns, for example, the definition will reflect definitions similar to those of the non-waste counterpart NESHAP to CISWI for the type of source. Therefore, the final definition for ERUs will reflect provisions found in the major source Boiler NESHAP, and the final definition for waste-burning kilns will reflect provisions similar to those in the Portland Cement NESHAP. For incinerators and small remote incinerators, the proposed definition (*i.e.*, from a cold start and up to 48 hours for startup and 24 hours or less for shutdown) will still apply. These subcategory-specific definitions provide a consistent basis for ERUs and kilns that may change applicability periodically so that owners and operators will have a consistent requirement for demonstrating compliance regardless of the mode (waste or non-waste) the unit is being operated in. Furthermore, for incinerators and small remote incinerators, industry commenters are confident that the full range of these sources will be able to maintain compliance with these time allowances that were proposed.

We note that certain commenters indicate that reasons for changing the definitions include that the units may

have greater emissions during startup and shutdown and also that pollution control equipment may not be fully operational during startup. The EPA is not revising the definitions to allow sources to violate the standard; instead the change is designed to better reflect the actual operating conditions during startup and shutdown. The oxygen correction is thus designed to allow sources to use actual stack oxygen levels during these periods instead of numbers corrected to 7 percent oxygen.<sup>1</sup> If sources believe that, even with the stack oxygen correction, emissions will exceed the levels of the standard because of incomplete combustion or because air pollution controls are not fully operational, they must take steps (*e.g.*, burn clean startup fuel for longer periods) to ensure compliance.

Finally, the subcategory-specific definitions of “CEMS data during startup and shutdown” in this final rule more clearly specify the beginning and end of startup and shutdown periods for each subcategory of CISWI unit. However, we realize in doing so that the previous, separate definitions of “startup period” and “shutdown” that have been held over from the 2000 CISWI rule may now cause confusion for waste-burning kilns and ERUs especially. Because the 2000 CISWI rule applied to incinerator units (and not ERUs and waste-burning kilns), we recognize the need to clarify that the “startup period” and “shutdown” definitions apply only to incinerators and small, remote incinerators. For this reason, the EPA is revising the definitions of “startup period” and “shutdown” to clarify that they are intended to apply only to incinerators and small, remote incinerators.

*Comment:* One commenter argued that allowing sources to comply with emissions standards based on uncorrected emissions measurements would be unlawful and arbitrary. The commenter explained that the EPA does not claim that all units will have oxygen levels close to the ambient air, that any units' oxygen levels will actually be at the level of the ambient air during these periods, or that any units' oxygen levels will be at that high level consistently. The commenter suggested that the EPA should instead consider several other approaches. First, the commenter suggested that the EPA could require sources to show compliance during these periods using another method,

<sup>1</sup> Stack oxygen data must still be measured during these periods, but since a correction to stack oxygen essentially means multiplying the measured concentration by 1, the concentration value measured at stack oxygen is used to calculate average concentrations.

such as stack tests. The commenter stated that the EPA recognized that CEMS are a compliance alternative rather than a requirement for most CISWI standards. The commenter also argued that the EPA stated it is maintaining CEMS as a compliance alternative during these periods because “other air regulations and permit requirements may require” CEMS data. However, the commenter argued that the EPA did not state what these other requirements are, or why the same CEMS problems it has identified here do not apply to them. The commenter further argued that even if other regulatory requirements do require sources to maintain CEMS data, that does not compel the EPA to accept their data as demonstrative of compliance with the requirements of the performance standards and emissions guidelines for air pollution from CISWI. The commenter also suggested that, if the CEMS compliance alternative were retained, the EPA could require sources to correct their measurements to the level of oxygen actually present, as measured by an oxygen analyzer or another method. Finally, the commenter offered as an alternative that the EPA could develop mass-based limits instead of concentration-based limits, which do not require oxygen correction. The commenter concluded that, because the EPA has not even considered these alternatives, the proposal to allow sources to show compliance based on measurements it does not dispute will be inaccurate is arbitrary as well as unlawful.

*Response:* As we noted in the proposed rule, the rules generally require stack emissions testing. These tests can span several hours. The CISWI rule emission limits were based on data obtained during normal operations, which is also what the rule requires for conducting performance testing (*see* 40 CFR 60.2125(a) and 40 CFR 60.2690(a)). As has been noted in other comments and in the costing analyses presented in support of the CISWI rulemaking, the emission testing program is not trivial in cost and effort. Therefore, adding a requirement for additional stack testing during startup and shutdown periods, which seems to be what this commenter suggests, would further add to the compliance cost of the rule for obtaining data for a small portion of the source's operations. The EPA does not believe this additional monitoring is required to assure compliance with the standards.

As noted before and by some commenters, monitoring by CEMS is an alternative, and may be useful for sources that are required by permit or for Acid Rain program requirements (40



CFR part 75) to continually monitor emissions of certain pollutants, primarily NO<sub>x</sub> and SO<sub>2</sub>. The EPA realized that the interaction of newly applicable CISWI standards to ERUs and waste-burning kilns may differ from existing requirements for these sources developed under the Acid Rain program, permit requirements enacted for state or local conditions, or even under various consent decrees. The EPA also recognizes that different programs measure and evaluate emissions for various purposes and in differing formats (e.g., lb/MMBtu), and therefore disagrees with the commenter's assertions that if these other programs do not need these provisions, then neither should CISWI. In fact, the EPA maintains that the reasons other programs may not require separate definitions is because they already have separate startup and shutdown requirements in place for the program. For example, appendix F of 40 CFR part 75 allows sources to calculate a NO<sub>x</sub> emission rate using a "diluent cap" during periods of operation (startup and shutdown) where CO<sub>2</sub> and O<sub>2</sub> are near ambient air levels.<sup>2</sup> As many commenters have noted, these "CEMS data during startup and shutdown" revisions being finalized are necessary to make attainable the CISWI requirement for the standards to "apply at all times" for sources that are otherwise required to measure emissions using CEMS or that opt to measure emissions continually. Further, the EPA does acknowledge that there are instances, such as this one, where consistent regulatory provisions will make compliance demonstrations easier for affected sources and implementing agencies while still maintaining the integrity and goals of the regulation. That is the case here, where multiple programs may require or allow CEMS data for continuous compliance demonstrations.

The commenter also suggested that either using CEMS data corrected to stack oxygen or developing a mass-based standard should be investigated. In essence, though, the revised provisions allow CEMS data to be "corrected to" stack oxygen levels (that is, the numerator and denominator of the oxygen correction are equal, so the correction factor equals 1). Sources must still measure and record concentrations and stack oxygen levels during these periods, and must keep records of

periods of CEMS data that are being claimed as periods of startup and shutdown (See 40 CFR 60.2175(p) and 40 CFR 60.2740(o)). As many commenters have already noted, the oxygen levels fluctuate widely during startup and shutdown periods, so any basis other than using stack oxygen levels for correction during this period would run into the same type of calculation issue that we are attempting to remedy. Similarly, a mass-based standard for CISWI units would be a significant departure from the format of the existing standards, further complicating compliance demonstrations by the facility and assessment by the implementing agency. In order to develop a calculation-based approach, the EPA would need to have information on the specific materials being fed and resultant emissions for each of the best performing units during startup and shutdown periods. These are data that we do not have and the commenter did not provide any recommendations on an approach that the EPA could consider absent these data. In addition, the EPA did not reopen the specific standards or form of the standards in the proposed rule, and we decline to establish mass-based emission standards for that reason as well. We are not revising the standards, but are revising only the monitoring provisions of the standards to ensure that CEMS data collected are representative of actual emissions during startup and shutdown periods and are not being artificially inflated or influenced due to the 7 percent oxygen correction. In the revisions, these intervals are clearly defined and specific to the unit type to ensure this period is reasonable to ensure safe operation while minimizing emissions.

#### *B. PM Limit for the Waste-Burning Kiln Subcategory*

*Background:* In the January 21, 2015, proposal, the EPA solicited comments on the data set used to determine PM limits for new and existing waste-burning kilns in the February 2013 final rule.

The March 2011 CISWI final rule promulgated PM emissions limits of 6.2 milligrams per dry standard cubic meter (mg/dscm) for existing units, and 2.5 mg/dscm for new units, both corrected to 7 percent oxygen. In an action parallel to the March 21, 2011, final CISWI rule, the EPA promulgated a final rule that identifies the standards and procedures for identifying whether non-hazardous secondary materials (NHSM) are or are not solid waste when used as fuels or ingredients in combustion units. The EPA defines the NHSM that are

solid waste under RCRA in the final "Identification of Non-Hazardous Secondary Materials That Are Solid Waste" rulemaking. The RCRA definition of solid waste is integral in defining the CISWI source category. Commercial and industrial units that combust solid waste are subject to standards issued pursuant to CAA section 129, rather than to standards issued pursuant to CAA section 112 that would otherwise be applicable to such units (e.g., boilers, process heaters and cement kilns). Cement kilns combusting solid waste are waste-burning kilns subject to CISWI, not the otherwise applicable Portland Cement NESHAP. Following promulgation of the 2011 CISWI rule, the EPA again analyzed the materials being combusted in the entire national inventory of Portland cement kilns in light of the revisions to the NHSM rule, and made revisions to the CISWI waste-burning kiln inventory. When kilns were added to the inventory and their emissions data considered, the resulting NSPS and EG PM emission limits proposed in the December 2011 reconsideration were less stringent than those established in the March 2011 CISWI final rule.

Following the December 2011 reconsideration proposal, the EPA learned that one of the kilns in the CISWI inventory was no longer burning waste, and another kiln that was not thought to be burning waste materials was doing so. The CISWI waste-burning kiln inventory was revised during the period between proposal and final to reflect these changes, and the database updated to include emissions data for the newly identified unit, as well as some additional test reports obtained for units within the inventory. The EPA calculated the maximum achievable control technology (MACT) floors after making the appropriate revisions to the inventory and the new NSPS and EG PM emission limits were more stringent than those proposed in the December 2011 reconsideration proposal. Table 1 of this preamble tracks the progression of the waste-burning kiln PM limits from the March 2011 final rule through the February 2013 final rule.

Throughout the CISWI rulemaking process from March 2011 through February 2013, the EPA used the same calculation methodology (i.e., the upper prediction limit calculated from a population of individual test runs) to establish the emission limits for waste-burning kilns. However, the data set used in these calculations has changed and grown over this period of time as the agency has revised the CISWI inventory based on information submitted to the agency by the regulated

<sup>2</sup> See the "2013 revision of the Part 75 Emissions Policy Manual" accessed August 18, 2015 at <http://www.epa.gov/airmarkets/documents/monitoring/Final-Part75-Policy-Manual-2013-revised-08-27-13.pdf>.

community and new data are submitted. As a result, a petitioner has suggested that the current PM emission data set for waste-burning kilns is robust enough to warrant using 3-run emission test averages as the data population rather than the individual test runs. According to the commenter, using this approach to calculate emission limits would result in PM emission limits that are different than those of the February 2013 CISWI final rule.

In the context of MACT analyses, as the EPA noted in the January 21, 2015 proposal, emission test averages or individual test run data can be used to determine emissions variability of best performers. We also noted that we typically use individual test runs, but for categories with data from 15<sup>3</sup> or more sources, which would provide at least 45 test runs, we may choose to use test averages. In these larger data sets, the use of test averages are likely to be sufficiently representative of long term performance and variability without the need for use of the individual test runs.

In the January 21, 2015 proposal, the EPA solicited comment on the data set used in the February 2013 final rule, as well as whether this data set warrants a different calculation approach due to its size or other factors. See the memoranda titled "Potential Emission Limits Calculation Analyses for Waste-burning Kilns and Coal ERUs," "Approach for Applying the Upper Prediction Limit to Limited Data Sets," and "Use of the Upper Prediction Limit for Calculating MACT Floors" in the CISWI docket for more details.

*Comment:* Two commenters supported the use of emission test averages to determine emission standards. One commenter strongly believed that use of test averages is the only valid way to conduct calculations of upper predictive limit (UPL) or other variability analyses because only test averages, and not individual test runs, are statistically independent from one another, as the UPL calculation requires. Both commenters argued that it is crucial that the UPL calculation reflect the actual variability of compliance test results for the best performing kilns that set the floors, and stated that this goal is best accomplished by using stack test results (which are the average of three consecutive test runs) in the UPL calculation, rather than using test runs

<sup>3</sup> The 15 test average number discussed in the January 21, 2015 proposal was not a "bright line" value used to establish a possible threshold for when test runs versus test averages may be selected. Rather, this number was an illustrative number that was being discussed as an example in internal EPA discussions at the time the proposal was being written.

as individual data points. One commenter noted that the data set for PM emissions from waste-burning kilns is among the largest for any source category or pollutant in the CISWI rule, consisting of 24 stack tests (equivalent to 72 individual test runs) for the pool of three best performers.

One commenter described control measures that Portland Cement NESHAP and waste-burning kilns will need to take to meet the 13.5 mg/dscm limit for existing waste-burning kilns that was discussed, noting that baghouse equipment will still need to be improved at many kilns to meet this limit. The commenter also pointed out that the performance of a baghouse on a kiln is comparable whether it is a Portland Cement NESHAP kiln or a CISWI kiln. The commenter went on to use this discussion and data from the Portland Cement NESHAP analyses to support the 13.5 mg/dscm limit (which equates to 0.075 lb/ton clinker on a production basis, as compared to the existing kiln PM limit of 0.07 lb/ton clinker in the Portland Cement NESHAP) and to demonstrate that the current beyond-the-floor analysis done for the 2013 CISWI final rule is still applicable despite the new PM emission limit.

*Response:* We agree that the data set for PM for existing waste-burning kilns is sufficiently large to support using stack test averages, as some commenters have supported. For new sources, the EPA realizes that there is a smaller number of data points available when test averages are considered since only the data from the best-performing source are included in the calculation.<sup>4</sup> However, as the EPA has intended within each of the CISWI subcategories, a consistent approach to the emission limit calculation is used for existing and new sources within a subcategory (e.g., upper limit for small remote, UPL for waste-burning kilns). That is, in the case of PM for waste-burning kilns, the UPL using test averages is being used to calculate both existing and new source emission limits.

We also note that, for this particular data set, there are distinct advantages to using this approach. One advantage is that there is a significant amount of test data for the best-performing source. These runs reflect various fuel and waste material firing conditions for the best-performing unit. By splitting the data for the best-performing source into sets of three according to the operational condition (waste or non-waste), each of

<sup>4</sup> Although this data set is smaller than that for existing sources, the EPA does not consider the new source data set to be a small or limited data set.

the resulting averages is more representative of the fuel, waste, and operational variability demonstrated by the other 3-run test averages found in the data set for this source and for the other existing source best performers. In other words, the time periods—and variability in process inputs and operations these periods represent—are approximately equal for each data point in the average data set for existing and new sources. This approach also has the added benefit of a slightly larger time period of operations being represented by the data, since there is one additional average that can be included in the data pool (i.e., no test run data are available, but the average is).

We also reviewed the information submitted by the commenters on the costs and emission improvement requirements existing kilns will need to undertake to meet the revised emission limits, as well as our own assessment of control improvements needed, and agree with the assessment that beyond-the-floor emission standards for waste-burning kiln PM limits are unwarranted. In our analysis, the same kilns that would need improvements for the 2013 PM limits still need to add these improvements to meet the 13.5 mg/dscm standards (as well as the CISWI limits for Cd and Pb, which are not being revised but are also controlled by PM control devices). The technology most likely being used to meet the standards would be fabric filters (baghouses), which is a physical control technology. Information supplied by the industry indicate that many cement kilns will require highly efficient fabric filters to meet the 13.5 mg/dscm standards. Fabric filters do not have a variable component, such as sorbent injection rates, that can be varied easily once the system is designed and the filter media specified. Therefore, unlike other control technologies, the PM removal efficiency of fabric filters does not depend on other factors in the process and control device's performance will essentially be the same regardless of other process inputs. Therefore, the EPA is finalizing the 13.5 mg/dscm and 4.9 mg/dscm emission limits discussed at proposal for existing and new waste-burning kilns, respectively, based on the analysis of emission test average data.

The calculated PM emission limits using the test averages are presented in Table 1 of this preamble for comparison. The calculations used to support the 2015 emission limit values, analyses of impacts and discussion of beyond-the-floor considerations are available in the "Revised Emission Limits and Impacts Analyses for Waste-burning Kilns and

Coal ERUs” memorandum in the docket to this rulemaking.

TABLE 1—WASTE-BURNING KILN PM EMISSION LIMITS FROM MARCH 2011 FINAL RULE THROUGH 2015 FINAL RECONSIDERATION

Source type (units)	March 2011 final rule	December 2011 proposed rule	February 2013 final rule	2015 Final rule test average-based limits <sup>2</sup>
New Sources (mg/dscm) <sup>1</sup> .....	2.5	8.9	2.2	4.9
Existing Sources (mg/dscm) <sup>1</sup> .....	6.2	9.2	4.6	13.5

<sup>1</sup> Corrected to 7 percent oxygen (O<sub>2</sub>).

<sup>2</sup> These final limits are the same as those discussed in the January 21, 2015 proposal.

*Comment:* One commenter disagreed with the proposed approach of using stack test average data, arguing that because the EPA’s standards are already set at the floor, and the floor is the minimum stringency permitted by the CAA, the EPA’s proposed change is unlawful at Chevron step one.<sup>5</sup> The commenter further argued that the EPA does not give any statutory reasons for its proposed change, and therefore its proposal is unreasonable at Chevron step two. *NRDC v. EPA*, No. 12–1321, slip op. at 23 (D.C. Cir. Dec. 23, 2014) (“EPA must ‘ground its reasons for action or inaction in the statute.’”) (quoting *Util. Air Regulatory Grp. v. EPA*, 134 S. Ct. 2427, 2441 (2014)). The commenter contended that the only reason the EPA gives in support of this change is that the data set for kilns is relatively large and so switching to test averages instead of individual test runs “is expected to make very little difference.” The commenter concluded that the EPA’s proposed change illustrates that the UPL approach is unlawful and arbitrary because it does not yield reasonable estimates of the “average emission limitation achieved” by the best performing units. An industry commenter asserted that the stack test averages yield reasonable estimates of the average emission limitation achieved by the best performing units, and referred to their original comment submittal to the proposed rule as support. The commenter then repeated that the EPA should use stack test averages in the UPL calculation whenever there are sufficient data to support their use. The

commenter concluded that the use of test runs can be justified only when the limited availability of emissions data demands the use of test runs; this is not the case in the CISWI PM limit for kilns.

*Response:* As discussed earlier, the EPA incorporated considerable new data and moved kilns from the NESHAP to CISWI between the proposed and final CISWI reconsideration concluded in 2013. The inclusion of additional sources and data lead to more stringent standards and the public was not provided an opportunity to comment on those limits and the manner of their calculation. For this reason, parties petitioned EPA to reconsider those limits consistent with CAA section 307(d)(7)(B), and the EPA granted reconsideration consistent with the statute to provide the public an opportunity to comment. The EPA maintains that its actions in response to the changed circumstances (*i.e.*, new data and sources) and the petitions for reconsideration are consistent with the statute and, for this reason, we reject the commenter’s argument that EPA has somehow violated the standard setting provisions of section 112.

Further, we have determined that the data set for existing waste-burning kilns for PM is sufficient to address longer-term performance and variability among the best-performing sources and justifies the use of test average data. While the data set for new waste-burning kilns is smaller in count than that of the existing sources, it is not considered a small data set, and the EPA has concerns about not treating variability consistently between existing and new source emission limits within the same subcategory.

With respect to the commenter’s arguments about the UPL calculation methodology, the EPA did not open the UPL calculation methodology for reconsideration, so we are not responding to the commenter’s arguments on this issue.

*C. FVF for Coal-Burning Energy Recovery Units*

*Background:* In the January 21, 2015, proposal, the EPA requested comments and supporting data regarding the need to establish an FVF for the ERU solids (coal) subcategory. In particular, the EPA requested comments on using stack test data from coal-only periods of operation in our emission limit calculations, and whether the EPA should re-evaluate the NO<sub>x</sub> emission limit by using the additional CEMS data provided for the best-performing unit. The preamble to the 2013 final CISWI rule (78 FR 9112, February 7, 2013) explained the methodology used to establish the final emission limits, which relied almost exclusively on direct emissions measurements. A petitioner requested that EPA reconsider the decision not to incorporate fuel variability into the emission limit calculations for coal-fired ERUs based on new information.

Table 2 of this preamble presents a comparison of the 2013 final rule emission limits for existing coal ERUs and the emission limits calculated using all data available (*i.e.*, waste and coal-only modes of operation), FVF calculation techniques, and the additional CEMS data provided by the petitioner.

<sup>5</sup> *Chevron U.S.A. v. NRDC*, 467 U.S. 837 (1984).

TABLE 2—EXISTING COAL ERU EMISSION LIMITS FROM FEBRUARY 2013 FINAL RULE AND BASED ON FVF PLUS ADDITIONAL CEMS DATA

Pollutant (units)	February 2013 final rule emission limit <sup>1</sup>	Final emission limits using additional data and FVF <sup>1</sup>
Cadmium (Cd) (mg/dscm) .....	0.0095	<sup>2</sup> 0.0017
Hydrogen Chloride (HCl) (ppmv) .....	13	<sup>3</sup> 58
Mercury (Hg) (mg/dscm) .....	0.016	<sup>2</sup> 0.013
Lead (Pb) (mg/dscm) .....	0.14	<sup>3</sup> 0.057
Particulate Matter (PM filterable) (mg/dscm) .....	160	<sup>2</sup> 130
Nitrogen Oxides (NO <sub>x</sub> ) (ppmv) .....	340	<sup>2</sup> 460
Sulfur Dioxide (SO <sub>2</sub> ) (ppmv) .....	650	850

<sup>1</sup> All emission limits are expressed as concentrations corrected to 7 percent O<sub>2</sub>.

<sup>2</sup> Unable to calculate FVF, final emission limit reflects use of additional data for coal-only mode of operation.

<sup>3</sup> Based on maximum ratio in data set to calculate FVF for final emission limit. If average ratios were used instead, HCl emission limit would be 19 (parts per million by volume) ppmv and Pb would be 0.047 mg/dscm.

*Comment:* Several commenters supported the revision of these emission limits, claiming that the EPA should account for all sources of emissions variability. Commenters argued that adjustments for fuel variability should be based on worst case conditions so that the floors represent the emission limitations that the best performers can achieve under the worst foreseeable circumstances. They maintained that emissions test data only reflect the pollutant content of a unit's inputs at the time of emissions testing, noting that fuel and solid waste composition vary over time. As an example, commenters referenced HCl data submitted for the top performer, noting that if the HCl limit for existing units remains at 13 ppmv (from the 2013 final CISWI rule), the best performing unit would fail to meet the limit consistently. The commenters further expressed their support for basing the FVF on the maximum ratio of non-paired fuel data with paired fuel data (yielding a limit of 58 ppmv) as opposed to the average ratio (yielding a limit of 19 ppmv), because the HCl data showed the average-based limit was also exceeded several times over an 8-year period. In order to make the HCl limit achievable in practice, the commenters concluded that the EPA must set the final HCl limit to 58 ppmv.

One commenter pointed out that the consideration of fuel variability is of particular importance because a CISWI unit remains a CISWI unit until it ceases to burn waste for at least 6 months. The commenter explained that estimating emission levels achieved when a unit was burning waste and coal does not reflect the level achieved when combusting only coal. Commenters also called attention to the boiler and process heater standards, which account for fuel supply variability, and contended that the EPA should do the same for CIWSI because ERUs would be

subject to the boiler standards if they did not combust waste in addition to fossil fuels.

One commenter indicated that the EPA had not properly addressed fuel variability for the SO<sub>2</sub> emission limit. According to the commenter, previously submitted data showed that the 2013 final limit of 650 ppmvd would not be high enough to allow the top performer to comply every day under all operating conditions. In developing the potential limits presented in the proposed reconsideration, the EPA did not develop a FVF for SO<sub>2</sub> because only one fuel data point for sulfur was available to be paired with SO<sub>2</sub> emissions data. The commenter explained that even though only one date from the fuel data matched up with the week of SO<sub>2</sub> CEMS data, the lag time between the fuel sample date and actual combustion in the boiler is typically 4–9 days, so portions of both the August 14 and August 21, 2009, coal shipments would have been burned during the CEMS period from August 23 through August 30, 2009. Therefore, the commenter explained, sulfur data from these two shipments could be paired with the CEMS data, which would make it appropriate to develop a FVF for SO<sub>2</sub>, similar to what was done for HCl.

*Response:* The EPA is finalizing the emission limits for Cd, HCl, Hg, Pb, PM, and NO<sub>x</sub> that incorporate a FVF and coal-only mode of operation data and were discussed in the January 21, 2015 proposal. See 80 FR at 3023. In addition, the EPA has determined that we have sufficient data to incorporate a FVF into the SO<sub>2</sub> limit in the same manner as the standards for the other section 129 pollutants above.

At proposal, the agency explained our rationale for considering emission limits that incorporate a FVF for fuel-dependent pollutants (*i.e.*, HCl, Pb, Cd, Hg, and SO<sub>2</sub>) [See 80 FR at 3022] and presented the methodology [See Memo

titled “Potential Emission Limits Calculations Analyses for Waste-burning Kilns and Coal ERUs, December 12, 2014] we would use to do so. We also presented the available data. In addition, for Cd, HCl, Hg, Pb, PM and NO<sub>x</sub>, the EPA identified the emission limits that incorporate a FVF and were derived from that data and using the proposed methodology. The proposal did not identify a specific SO<sub>2</sub> emission limit that incorporated a FVF because, as explained in the proposal, at that time, the EPA did not believe the data from the best performing units included the information necessary to calculate a FVF for SO<sub>2</sub>. See 80 FR at 3022; see also Memo titled “Potential Emission Limits Calculations Analyses for Waste-burning Kilns and Coal ERUs, December 12, 2014. The proposal, however, made clear that the rationale for deciding to incorporate a FVF into the emission limits for coal-fired ERUs applied to all fuel-dependent pollutants, including SO<sub>2</sub>, and the agency provided the methodology for incorporated a FVF. The comments received demonstrated that the available SO<sub>2</sub> data from the best performing units—the data in the docket at the time of proposal—does in fact include the information required to establish a fuel variability factor. Specifically, the EPA confirms that the data set includes sufficient paired SO<sub>2</sub> data to evaluate the need for a FVF. Thus, all information necessary to address whether a FVF should be incorporated into the SO<sub>2</sub> standard, and to identify the specific SO<sub>2</sub> emission limit incorporating a FVF was available in the docket at the time of proposal. Thus, in this final rule, the EPA has re-evaluated the fuel sulfur data with paired SO<sub>2</sub> data and is incorporating a FVF in the floor calculations for SO<sub>2</sub> using the same methodology that was discussed in the proposal. The resulting SO<sub>2</sub> limit for existing and new coal ERUs is 850 ppmvd.

*Comment:* One commenter did not support the incorporation of FVFs in determining emission limits, arguing that increasing the floors to account for variability would be unlawful and arbitrary because the UPL methodology used to develop the floors already accounts for emissions variability. According to the commenter, the floors should not be increased further because CAA section 129 directs that standards should be no less stringent than the average emissions achieved by the best performing units. In other words, the commenter explained, a standard must reflect a reasonable estimate of the actual performance of the best units.

The commenter further noted that even if it were lawful to incorporate a FVF at all, the FVF should be based on the average ratio, as opposed to the maximum ratio, because the maximum ratio does not yield a reasonable estimate of the average emissions limitation achieved by the best performing sources, yielding floors less stringent than the statute permits.

*Response:* The EPA disagrees with the argument that incorporating a FVF in these standards overaccounts for variability. Fuel data provided for the top performing units show that performance for coal-burning ERUs, based solely on the short-term stack test data available for these units, does not adequately reflect the sustained performance and different fuel inputs that are used by the best performing source upon which the standards were based. As stated in response to similar comments submitted on the Boiler NESHAP (See EPA-HQ-OAR-2002-0058-3511, excerpt 15, page 111), and consistent with the DC Circuit Court ruling, the EPA is mindful that MACT floors need to reflect achieved performance of the best-performing units, that HAP (or pollutant, for CAA section 129 rules such as CISWI) content of process inputs (raw materials and fuels) should be accounted for in ascertaining the sources' performance as necessary, and that the EPA cannot consider costs in ascertaining the level of the MACT floor. See, e.g., *Brick MACT*, 479 F. 3d at 880-81, 882-83; *NRDC v. EPA*, 489 F. 3d 1364, 1376 (D.C. Cir. 2007) ("Plywood MACT"); see also *Cement Kiln Recycling Coalition v. EPA*, 255 F. 3d 855, 861-62 (D.C. Cir. 2001) ("achievability" requirement of CAA section 112 (d)(2) cannot override the requirement that floors be calculated on the basis of what best performers actually achieved). The EPA is also mindful of the need to account for sources' variability (both due to control device performance and variability in inputs) in assessing sources'

performance when developing technology-based standards. See, e.g., *Mossville Environmental Action Now v. EPA*, 370 F. 3d 1232, 1242 (D.C. Cir. 2004); *National Lime I*, 627 F. 2d 416, 433-34 (D.C. Cir. 1980). In most cases, the UPL sufficiently accounts for both control device performance and input variability. However, in this case, a review of the data for the best-performing coal-burning ERUs indicated that short-term stack test data alone did not fully account for longer term emissions performance in this case. While fuels combusted within a short term 3-hour test would be expected to be fairly consistent in their contaminant levels, multi-year fuel input data for the best-performing unit show that Hg, Cl, Pb, and sulfur levels can vary significantly between the times the best performing unit is combusting a combination of waste and traditional fuel and the times it is combusting traditional fuels alone, and that there is variability in the pollutant content of the traditional fuel alone as well. In light of this, the EPA believes it is reasonable to incorporate a FVF for this subcategory of CISWI units to better reflect the performance of the best performing coal-burning ERUs.

Regarding the commenter's assertions that the average ratio should be used instead of the maximum ratio in calculating the FVF, we note that, unlike situations present in the Boiler NESHAP, the best-performing units in the coal ERU subcategory (all located at the same facility) are not burning a variety of fuels. These CISWI ERU units burn coal, and periodically an industrial waste generated at the facility. Therefore, there is one fuel and one waste that is input that will influence emissions. This is not the case for the boiler best-performers in the Boiler NESHAP solid fuel subcategory, as these consisted of a "mix of biomass, coal and other solid fossil fuel" data (See EPA-HQ-OAR-2002-0058-3836, August 2012). In the boiler rulemaking, the EPA was concerned that this heterogeneous mix of best performer fuel inputs and the use of the maximum ratio would overestimate fuel variability. However, for the CISWI coal ERUs, we are dealing with a single fuel type (coal), and the same concern does not apply. Since CISWI applicability extends for a period beyond the waste-combustion periods, variability in this one fuel influences emissions for a significant portion of the best-performers' operations. Therefore, we have determined that the maximum ratio is appropriate in this case to fully account for the best-performer's variability in fuel inputs.

The FVF accounts for fuel variability between sources using long-term fuel measurement data that represent inherent natural variations in fuel usage at the best performing unit over time. The FVF is used in conjunction with the 99 percent UPL to characterize long-term variability due to technological controls and fuel characteristics. The results are MACT floors that reasonably estimate the performance over time of the best performing sources (there are three identical units at one facility that are best performers for this subcategory of unit, with only one additional unit that may be in this subcategory). These calculations are described in more detail in the "Revised Emission Limits and Impacts Analyses for Waste-burning Kilns and Coal ERUs" memorandum found in the docket to this rulemaking.

For these reasons, the EPA is adopting the revised emission limits for coal ERUs discussed in the January 21, 2015, proposal, and the agency is also incorporating a FVF into the SO<sub>2</sub> limit as discussed above.

#### D. Definition of "Kiln"

*Background:* In the January 21, 2015, notice, the EPA requested comment on its proposal to revise the definition of "kiln" and proposal to add definitions of "in-line raw mill" and "in-line coal mill" to further clarify the boundaries of the waste-burning kiln. Because the in-line raw mill and in-line coal mill are part of the kiln, the kiln emission limits also apply to the exhaust of the in-line raw mill and in-line coal mill. For more background on this issue, the EPA discussed at length in the preamble to the proposed Portland Cement NESHAP a potential regulatory regime to cover situations where a portion of the kiln exhaust is ducted to the coal mill. See 77 FR 42383-85; see also the regulatory text at 77 FR 42398, 42402-06, 42408-09.

For waste-burning kilns, the EPA proposed language in the definition of "kiln" to make it consistent with that of the Portland Cement NESHAP. The terms "in-line raw mill" and "in-line coal mill" were proposed to be included in the definition, and, therefore, were proposed to be added to the definitions within the CISWI rule.

In addition to the proposed definitional amendments in the January 21, 2015, notice, the EPA proposed a compliance demonstration and ongoing monitoring method for waste-burning kilns that combine emission streams from the in-line raw mill and in-line coal mill and exhaust through multiple stacks. The EPA is finalizing the proposed approach with some minor revisions to address comments as

discussed below. The final rule will allow sources to measure pollutant concentrations and flows from each of the stacks (*i.e.*, kiln, alkali bypass, and in-line coal mill, as applicable) and calculate a flow-weighted average kiln stack concentration that must be met in order to be in compliance with the CISWI waste-burning kiln emission limits. These provisions are modeled upon similar provisions and equations found in the Portland Cement NESHAP, and should streamline compliance demonstrations for waste-burning kilns that combine streams prior to discharge to the atmosphere through one or more stacks. The proposed calculation method and measurement location options are found in 40 CFR 60.2145 and 40 CFR 60.2710. The EPA requested comment on the definitional and calculation method changes for demonstrating compliance for waste-burning kilns that combine streams prior to discharge to the atmosphere through one or more stacks.

*Comment:* Although there were no specific comments on the revised definition of “kiln” or on the addition of the definitions of “in-line raw mill” and “in-line coal mill,” one commenter expressed the need to change monitoring and compliance requirements for alkali bypass and/or in-line coal mill to be consistent with the Portland Cement NESHAP. The commenter contended the use of CEMS and the PM CPMS for either an alkali bypass or an in-line coal mill is unnecessary, as they represent a relatively minor part of the overall kiln emissions and their emissions will vary directionally with the main kiln stack concentrations. Therefore, the commenter suggested that monitoring the main kiln stack alone can provide an indication of overall emissions and compliance. The commenter stated that the appropriate monitoring and compliance requirements have already been addressed in the Portland Cement NESHAP rule and requested that the EPA adopt a similar approach for the CISWI standards. The commenter also suggested that the EPA clarify the level of testing and monitoring that applies to either an alkali by-pass or an in-line coal mill.

*Response:* To provide additional consistency between CISWI and the Portland Cement NESHAP, the EPA is adding clarifying language in the final rule that makes the monitoring requirements for waste-burning kilns consistent with those in the Portland Cement NESHAP. Specifically, we are not requiring that CEMS or PM CPMS need to be installed on separate alkali bypass or in-line coal mill stacks.

Instead, as is the case with the Portland Cement NESHAP, the results of the initial and subsequent performance test for the alkali bypass and in-line coal mill stacks can be used to determine the combined emissions to demonstrate compliance with the relevant emissions limit. However, unlike the Portland Cement NESHAP, the performance test must be conducted on an annual basis (between 11 and 13 calendar months following the previous performance test) to keep the testing schedule for these stacks consistent with the CISWI rule’s annual performance testing requirements.

## V. Technical Corrections and Clarifications

In the January 21, 2015, notice, the EPA proposed to correct minor typographical errors and clarify provisions of the final rule that may have been unclear. The EPA is finalizing these corrections, which are summarized in this section of the preamble. There were some comments received on these clarifications. These comments, and responses to them, are found in the “2013 CISWI Rule Reconsideration Response to Comments.”

### A. 2000 CISWI New Source Applicability Clarification for Incinerators and Air Curtain Incinerators

Following promulgation of the February 2013 CISWI final rule, the EPA received questions regarding the continued applicability of the 2000 CISWI NSPS for units that are subject to the 2000 CISWI NSPS as they are transitioned from the 2000 NSPS to the February 2013 EG with which they will eventually be required to comply. The 2000 CISWI NSPS are the same as the 2000 CISWI EG and limited in applicability to the incinerator subcategory and air curtain incinerators so only these types of CISWI units being regulated in the February 2013 CISWI final rule are affected by this applicability issue. The EPA intended, consistent with the statute and our stated intent (see 76 FR 15711, March 21, 2011), to continue to regulate these units as “new” sources under the 2000 NSPS, and then regulate them as “existing” sources under the 2013 EG once these units were covered under an approved state plan or federal plan that implements the February 2013 CISWI final EG. The language in the February 7, 2013, NSPS at 40 CFR 60.2105 and the title of Table 1 to 40 CFR part 60, subpart CCCC make the EPA’s intent to do so evident. However, the applicability section in 40 CFR 60.2015

omitted the applicability provisions for incinerators and air curtain incinerators that are subject to the 2000 CISWI NSPS. In this final rule, the EPA is finalizing proposed additional language in 40 CFR 60.2015(a) and 40 CFR 60.2105(b) that clarifies that these incinerators and air curtain incinerators remain “new” units regulated under the 2000 NSPS until such time that an approved state plan or federal plan implements the February 2013 EG for those units, at which time such units will be subject to the 2013 EG to the extent those limits are more stringent than the 2000 CISWI NSPS limits, which will continue to apply if they are more stringent.

### B. Typographical Errors and Corrections

The following items are typographical errors in the final rule that we are correcting in this final action:

- References in 40 CFR 60.2020(e), 60.2020(f), 60.2555(e), and 60.2555(f) were changed from “. . . paragraphs (e)(1) through (3) . . .” to “. . . paragraphs (e)(1) through (4) . . .”.
- Restructured 40 CFR 60.2060 to add paragraph (b) that clarifies waste management plan submittal timeline for CISWI units that commence reconstruction or modification after August 7, 2013.
- References in 40 CFR 60.2020(i) and 60.2245 were revised to include 40 CFR 60.2242 in addition to 40 CFR 60.2245 through 60.2260 (*i.e.*, clarifies that air curtain incinerators burning wood waste, clean lumber, and/or yard waste must obtain title V permits).
- References in 40 CFR 60.2555(i) and 60.2810 were revised to include 40 CFR 60.2805 in addition to 40 CFR 60.2810 through 60.2870 (*i.e.*, clarifies that air curtain incinerators burning wood waste, clean lumber, and/or yard waste must obtain title V permits).
- References in 40 CFR 60.2110(i)(2)(i)(D) and 40 CFR 60.2675(i)(2)(i)(D) were changed from “. . . paragraphs (i)(2)(i) through (iv) . . .” to “. . . paragraphs (i)(2)(i)(A) through (i)(2)(i)(C) . . .”.
- Two references in the definitions of terms for Equation 3 in 40 CFR 60.2110(i)(2)(iv) were revised. For the ‘z’ term, “(2)(a)” was corrected to “(2)(i)”, and for the ‘R’ term, “Equation 3” was corrected to “Equation 2”.
- Two references in the definitions of terms for Equation 3 in 40 CFR 60.2675(i)(2)(iv) were revised. For the ‘z’ term, “(2)(a)” was corrected to “(2)(i)”, and for the ‘R’ term, “Equation 3” was corrected to “Equation 2”.
- The language in 40 CFR 60.2140(c) and 60.2705(c) were revised to include the phrase “commence or recommence

combusting” to be parallel to the same terminology in 40 CFR 60.2140(b) and 60.2705(b), respectively.

- Extra spaces were removed from 40 CFR 60.2145(v) and 60.2710(v).

- The reference in 40 CFR 60.2145(w)(1) was changed from “§ 60.2675” to “§ 60.2140”.

- The references in 40 CFR 60.2145(x)(1) were changed from “. . . § 60.2145(l) and (x)(1)(i) through (iii) . . .” to “. . . paragraphs (l) and (x)(1)(i) through (x)(1)(iii) . . .”

- The references in 40 CFR 60.2710(x)(1) were changed from “. . . § 60.2710(l) and (x)(1)(i) through (iii) . . .” to “. . . paragraphs (l) and (x)(1)(i) through (x)(1)(iii) . . .”

- Language in 40 CFR 60.2145(x)(1)(iii), 60.2165(r)(1)(iii), 60.2710(x)(1)(iii) and 60.2730(r)(1)(iii) was revised to clarify the PM continuous parameter monitoring system (CPMS) detection limit. The phrase “of no greater than” was changed to “increments no greater than”.

- Provisions for PM CPMS in both subparts were revised to also clarify the output signals from digital monitoring devices and remove “lb/Mmbtu” typographical errors.

- The reference in 40 CFR 60.2165(q)(1) was changed from “§ 60.2675” to “§ 60.2140”.

- Text in 40 CFR 60.2165(q)(3) was corrected from “. . . paragraph (q)(4) or this section . . .” to “. . . paragraph (q)(4) of this section . . .”.

- The title of 40 CFR part 60, subpart CCCC Table 1 was revised to clarify that these emission limits apply to incinerators that were subject to the 2000 CISWI rule provisions.

- The dates in paragraphs (a)(1) and (2) of 40 CFR 60.2535 from the 2000 CISWI rule were omitted in the current CFR version of the rule, and have been reinserted.

- Added text in 40 CFR 60.2525(b) and 60.2535(b) to clarify applicability for incinerators and air curtain incinerators that were reconstructed or modified on or after June 1, 2001, but no later than August 7, 2013.

- Revised the language of 40 CFR 60.2550(b) to reflect the August 7, 2013 date for purposes of applicability with 40 CFR part 60, subpart CCCC.

- The text “over 10 MMBtu/hr but less than 250 MMBtu/hr annual average heat input rates” was added to 40 CFR 60.2730(m) for clarification and consistency.

- The definition of chemical recovery unit in 40 CFR 60.2265 was revised to be consistent with the definition provided in 40 CFR 60.2875. The following text was added: “A chemical recovery unit is not an incinerator, a

waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.”

- Clarifying language was added to the HCl row of 40 CFR part 60, subpart DDDD Table 8. Compliance method text was changed from “. . . if a wet scrubber is not used” to “. . . if a wet scrubber or dry scrubber is not used.”

- Text in 40 CFR 60.2165(o) was corrected from “. . . you must use a continuous automated sampling system . . .” to “. . . you may substitute use of a continuous automated sampling system for the carbon monoxide annual performance test.”

- Revise the definition of “Oxygen trim system” to include draft controller and to clarify that it is a system that maintains the desired excess air level over the operating load range.

- Revise the definition of “Reconstruction” in both subparts to reflect the correct criterion that reconstruction begins on or after August 7, 2013.

- Renumbered equations in 40 CFR part 60, subpart DDDD to be in sequence within the subpart instead of being a continuation with 40 CFR part 60, subpart CCCC.

- Revised paragraphs 40 CFR 60.2030(c), 60.2210(h), 60.2220(d), 60.2235, 60.2770(h), 60.2780(d) and 60.2795 to reflect the most recent electronic reporting guidance available and to further clarify reporting requirements.

- Revised paragraphs 40 CFR 60.2145(j)(1) and 60.2710(j)(1) to reflect the most recent guidance available for HCl CEMS installed and certified in accordance to Performance Specification 15 or Performance Specification 18.

- Table footnotes were converted from alphabetical to numeric format.

- Deleted inadvertent footnote references to the following: Dioxin/furan TEQ and TMB rows of 40 CFR part 60, subpart CCCC Table 8; Dioxin/furan TMB row and Pb row of 40 CFR part 60, subpart DDDD Table 7; Dioxin/furan row of 40 CFR part 60, subpart DDDD Table 8; and dioxin/furan row of 40 CFR part 60, subpart DDDD Table 9.

### C. Clarifications

Since publication of the February 7, 2013, final CISWI rule, the EPA has received stakeholder questions and requests for clarification on certain rule provisions. We are not finalizing any regulatory language changes for the following items, but are providing some clarification to these questions. Furthermore, comments received on these clarifications and responses to these comments are found in the

“Response to Comments on the 2015 CISWI Reconsideration” document found in the docket:

- Mass balance as operating limits for units without certain control devices— A stakeholder has asked for clarification on whether a mass balance could be used as an operating parameter, and whether this must be measured as a 30-day rolling average instead of taking a monthly sample. Furthermore, the stakeholder also asked whether the material balance allows them to waive annual stack testing. The EPA clarifies that mass balance operating parameters do not replace annual stack testing. Stack testing and operating parameters work in tandem to ensure ongoing compliance with the standards. We do, however, accept that mass balance could be an allowable operating parameter in cases where no control device is needed to meet the pollutant’s specific emission limit applicable to the unit, provided the petition for the operating parameter limits meets the requirements specified in 40 CFR 60.2115 and 40 CFR 60.2680. We also point out that these requirements also allow any source to request a different averaging time that is appropriate for the source and operating parameter.

- Clarification on who the “EPA Administrator” is and whom to contact for requests for averaging times, qualifying facility notifications, etc. We have received questions on how to contact the Administrator to submit notifications, reports and requests. The contact information is given in the General Provisions, under 40 CFR 60.4, and has addresses listed by EPA Regional Offices.

### VI. Environmental, Energy and Economic Impacts

This action finalizes the proposed provisions and makes technical and clarifying corrections, but does not cause substantive changes to the impacts on the environment, energy generation and usage, and economic factors for affected sources from the February 7, 2013, final CISWI rule (78 FR 9112). The number of sources requiring improved emission control performance is the same as estimated in the final 2013 rule. While the emission limits have been relaxed slightly for PM in the waste-burning kilns, the assumed controls required to meet the final standards are still the same as those estimated for the final 2013 rule. That is, waste-burning kilns that would require additional controls to meet the final 2013 rule’s PM and metals emission limits will still require those control improvements to meet the limits being finalized in this action. The main



difference is an increased margin of compliance for these units, as well as a PM limit that is very consistent with the non-waste burning (Portland Cement NESHAP) PM emission limits, thereby streamlining compliance. For the coal-fired ERU subcategory, certain emission limits are relaxed while others have been made more stringent. The net result in emissions reductions are negligible, however, and there are no changes in the control cost estimates for units in this subcategory. As with the waste-burning kilns, the main difference for the coal ERUs is that there is a somewhat greater margin of compliance available in the standards being finalized, and thus, ensuring that the best performing units may be able to demonstrate sustained compliance with the MACT standards in multiple modes of operation (waste and non-waste modes).

Taken together, the revised emission limits being finalized in this action could result in allowable emission estimates, primarily in PM, that are greater than those assumed for the 2013 final rule by about 297 tpy. In other words, there could potentially be 297 fewer tpy of PM emission reductions as a result of this final rule when compared to the 2013 final rule's estimated emission reductions. We have estimated these emission impacts in the memorandum "Revised Emission Limits and Impacts Analyses for Waste-burning Kilns and Coal ERUs" available in the docket. We have not revised the regulatory impacts assessment prepared for the 2013 final rule since the expected emissions control costs are unchanged and the change in estimated emission reductions are relatively minor when compared to the 34,771 tpy overall emission reductions estimated for the February 7, 2013, final rule (See 78 FR 9132).

## VII. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at <http://www2.epa.gov/laws-regulations/laws-and-executive-orders>.

### A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and was, therefore, not submitted to the Office of Management and Budget (OMB) for review.

### B. Paperwork Reduction Act (PRA)

This action does not impose any new information collection burden under the PRA. OMB has previously approved the

information collection activities contained in the existing regulations (40 CFR part 60, subpart CCCC and 40 CFR part 60, subpart DDDD) and has assigned OMB control number 2060-0664 for subpart CCCC and OMB control number 2060-0662 for subpart DDDD. This action is believed to result in no changes to the information collection requirements of the February 2013 final CISWI rule, so that the information collection estimate of project cost and hour burden from the final CISWI rule have not been revised.

### C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the impact of concern is any significant adverse economic impact on small entities. An agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, has no net burden, or otherwise has a positive economic effect on the small entities subject to the rule. This final rule will not impose any new requirements on any entities because it does not impose any additional regulatory requirements relative to those specified in the February 2013 final CISWI rule. The February 2013 final CISWI rule was certified as not having a significant economic impact on a substantial number of small entities. We have therefore concluded that this action will have no net regulatory burden for all directly regulated small entities.

### D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of \$100 million or more as described in UMRA, 2 U.S.C. 1531-1538, and does not significantly affect small governments. The action imposes no enforceable duty on any state, local, or tribal governments or the private sector.

### E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

### F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications, as specified in Executive Order 13175. The EPA is not aware of any CISWI in Indian country or owned or operated by Indian tribal governments. The CISWI aspects of this rule may, however, invoke minor indirect tribal implications to the extent that entities generating solid wastes on tribal lands could be affected. Thus, Executive Order 13175 does not apply to this action.

### G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

The EPA interprets Executive Order 13045 as applying to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of "covered regulatory action" in section 2-202 of the Executive Order. This action is not subject to Executive Order 13045 because it does not concern an environmental health risk or safety risk.

### H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 because it is not a significant regulatory action under Executive Order 12866.

### I. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR Part 51

This action does not involve technical standards.

This action is not finalizing any new incorporation by reference material, so therefore this action is not making any amendments to the incorporations by reference found in 40 CFR 60.17. The incorporation by reference of this document was already approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51 for § 60.14, effective February 7, 2013. The EPA has made, and will continue to make, these documents generally available electronically through [www.regulations.gov](http://www.regulations.gov) and/or in hard copy at the appropriate EPA office (see the ADDRESSES section of this preamble for more information).



*J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations*

The EPA believes the human health or environmental risk addressed by this action will *not* have potential disproportionately high and adverse human health or environmental effects on minority, low-income, or indigenous populations. It does not affect the level of protection provided to human health or the environment. The final CISWI rule will reduce emissions of all the listed toxics emitted from this source, thereby helping to further ensure against any disproportionately high and adverse human health or environmental effects on minority, low-income, or indigenous populations.

*K. Congressional Review Act (CRA)*

This action is subject to the CRA, and the EPA will submit a rule report to House of Congress and to the Comptroller General of the United States. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

**List of Subjects in 40 CFR Part 60**

Environmental protection, Administrative practice and procedure, Air pollution control, Hazardous substances, Incorporation by reference.

Dated: May 5, 2016.

**Gina McCarthy,**  
*Administrator.*

For the reasons stated in the preamble, the Environmental Protection Agency is amending title 40, chapter I, of the Code of Federal Regulations as follows:

**PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES**

■ 1. The authority citation for part 60 continues to read as follows:

**Authority:** 42 U.S.C. 7401, *et seq.*

■ 2. Part 60 is amended by revising subpart CCCC to read as follows:

**Subpart CCCC—Standards of Performance for Commercial and Industrial Solid Waste Incineration Units**

Sec.

**Introduction**

60.2000 What does this subpart do?  
60.2005 When does this subpart become effective?

**Applicability**

60.2010 Does this subpart apply to my incineration unit?  
60.2015 What is a new incineration unit?

60.2020 What combustion units are exempt from this subpart?  
60.2030 Who implements and enforces this subpart?  
60.2035 How are these new source performance standards structured?  
60.2040 Do all eleven components of these new source performance standards apply at the same time?

**Preconstruction Siting Analysis**

60.2045 Who must prepare a siting analysis?  
60.2050 What is a siting analysis?

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## Subpart CCCC—Standards of Performance for Commercial and Industrial Solid Waste Incineration Units

### Introduction

#### **§ 60.2000 What does this subpart do?**

This subpart establishes new source performance standards for commercial and industrial solid waste incineration (CISWI) units.

#### **§ 60.2005 When does this subpart become effective?**

This subpart takes effect on August 7, 2013. Some of the requirements in this subpart apply to planning the CISWI unit (*i.e.*, the preconstruction requirements in §§ 60.2045 and 60.2050). Other requirements such as the emission limitations and operating limits apply after the CISWI unit begins operation.

### Applicability

#### **§ 60.2010 Does this subpart apply to my incineration unit?**

Yes, if your incineration unit meets all the requirements specified in

paragraphs (a) through (c) of this section:

(a) Your incineration unit is a new incineration unit as defined in § 60.2015;

(b) Your incineration unit is a CISWI unit as defined in § 60.2265; and

(c) Your incineration unit is not exempt under § 60.2020.

#### **§ 60.2015 What is a new incineration unit?**

(a) A new incineration unit is an incineration unit that meets any of the criteria specified in paragraphs (a)(1) through (3) of this section:

(1) A CISWI unit that commenced construction after June 4, 2010;

(2) A CISWI unit that commenced reconstruction or modification after August 7, 2013; and

(3) Incinerators and air curtain incinerators, as defined in this subpart, that commenced construction after November 30, 1999, but no later than June 4, 2010, or that commenced reconstruction or modification on or after June 1, 2001, but no later than August 7, 2013, are considered new incineration units and remain subject to the applicable requirements of this subpart until the units become subject to the requirements of an approved state plan or federal plan that implements subpart DDDD of this part (Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units).

(b) This subpart does not affect your CISWI unit if you make physical or operational changes to your incineration unit primarily to comply with subpart DDDD of this part (Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units). Such changes do not qualify as reconstruction or modification under this subpart.

#### **§ 60.2020 What combustion units are exempt from this subpart?**

This subpart exempts the types of units described in paragraphs (a), (c) through (i), and (n) of this section, but some units are required to provide notifications. Air curtain incinerators are exempt from the requirements in this subpart except for the provisions in §§ 60.2242, 60.2250, and 60.2260.

(a) *Pathological waste incineration units.* Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste as defined in § 60.2265 are not subject to this subpart if you meet the two requirements specified in paragraphs (a)(1) and (2) of this section:

(1) Notify the Administrator that the unit meets these criteria; and

(2) Keep records on a calendar quarter basis of the weight of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste burned, and the weight of all other fuels and wastes burned in the unit.

(b) [Reserved]

(c) *Municipal waste combustion units.* Incineration units that are subject to subpart Ea of this part (Standards of Performance for Municipal Waste Combustors); subpart Eb of this part (Standards of Performance for Large Municipal Waste Combustors); subpart Cb of this part (Emission Guidelines and Compliance Time for Large Municipal Combustors); subpart AAAA of this part (Standards of Performance for Small Municipal Waste Combustion Units); or subpart BBBB of this part (Emission Guidelines for Small Municipal Waste Combustion Units).

(d) *Medical waste incineration units.* Incineration units regulated under subpart Ec of this part (Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996) or subpart Ce of this part (Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators).

(e) *Small power production facilities.* Units that meet the three requirements specified in paragraphs (e)(1) through (4) of this section:

(1) The unit qualifies as a small power-production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C));

(2) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity;

(3) You submit documentation to the Administrator notifying the EPA that the qualifying small power production facility is combusting homogenous waste; and

(4) You maintain the records specified in § 60.2175(w).

(f) *Cogeneration facilities.* Units that meet the three requirements specified in paragraphs (f)(1) through (4) of this section:

(1) The unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B));

(2) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity and steam or other forms of energy used for industrial, commercial, heating, or cooling purposes;

(3) You submit documentation to the Administrator notifying the Agency that

the qualifying cogeneration facility is combusting homogenous waste; and

(4) You maintain the records specified in § 60.2175(x).

(g) *Hazardous waste combustion units.* Units for which you are required to get a permit under section 3005 of the Solid Waste Disposal Act.

(h) *Materials recovery units.* Units that combust waste for the primary purpose of recovering metals, such as primary and secondary smelters.

(i) *Air curtain incinerators.* Air curtain incinerators that burn only the materials listed in paragraphs (i)(1) through (3) of this section are only required to meet the requirements under § 60.2242 and under "Air Curtain Incinerators" (§§ 60.2245 through 60.2260):

(1) 100 percent wood waste;

(2) 100 percent clean lumber; and

(3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

(j)–(l) [Reserved]

(m) *Sewage treatment plants.* Incineration units regulated under subpart O of this part (Standards of Performance for Sewage Treatment Plants).

(n) *Sewage sludge incineration units.* Incineration units combusting sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter that are subject to subpart LLLL of this part (Standards of Performance for New Sewage Sludge Incineration Units) or subpart MMMM of this part (Emission Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units).

(o) *Other solid waste incineration units.* Incineration units that are subject to subpart EEEE of this part (Standards of Performance for Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006) or subpart FFFF of this part (Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units That Commenced Construction On or Before December 9, 2004).

#### **§ 60.2030 Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority such as your state, local, or tribal agency. If the EPA Administrator has delegated authority to your state, local, or tribal agency, then that agency (as well as EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional

Office to find out if this subpart is delegated to your state, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency.

(c) The authorities that will not be delegated to state, local, or tribal agencies are specified in paragraphs (c)(1) through (4) and (c)(6) through (11) of this section:

(1) Approval of alternatives to the emission limitations in table 1 of this subpart and operating limits established under § 60.2110;

(2) Approval of major alternatives to test methods;

(3) Approval of major alternatives to monitoring;

(4) Approval of major alternatives to recordkeeping and reporting;

(5) [Reserved]

(6) The requirements in § 60.2115;

(7) The requirements in

§ 60.2100(b)(2);

(8) Approval of alternative opacity emission limits in § 60.2105 under § 60.11(e)(6) through (8);

(9) Performance test and data reduction waivers under § 60.2125(j), § 60.8(b)(4) and (5);

(10) Determination of whether a qualifying small power production facility or cogeneration facility under § 60.2020(e) or (f) is combusting homogenous waste; and

(11) Approval of an alternative to any electronic reporting to the EPA required by this subpart.

#### **§ 60.2035 How are these new source performance standards structured?**

These new source performance standards contain the eleven major components listed in paragraphs (a) through (k) of this section:

(a) Preconstruction siting analysis;

(b) Waste management plan;

(c) Operator training and qualification;

(d) Emission limitations and operating limits;

(e) Performance testing;

(f) Initial compliance requirements;

(g) Continuous compliance

requirements;

(h) Monitoring;

(i) Recordkeeping and reporting;

(j) Definitions; and

(k) Tables.

#### **§ 60.2040 Do all eleven components of these new source performance standards apply at the same time?**

No. You must meet the preconstruction siting analysis and

waste management plan requirements before you commence construction of the CISWI unit. The operator training and qualification, emission limitations, operating limits, performance testing and compliance, monitoring, and most recordkeeping and reporting requirements are met after the CISWI unit begins operation.

#### **Preconstruction Siting Analysis**

##### **§ 60.2045 Who must prepare a siting analysis?**

(a) You must prepare a siting analysis if you plan to commence construction of an incinerator after December 1, 2000.

(b) You must prepare a siting analysis for CISWI units that commenced construction after June 4, 2010, or that commenced reconstruction or modification after August 7, 2013.

(c) You must prepare a siting analysis if you are required to submit an initial application for a construction permit under 40 CFR part 51, subpart I, or 40 CFR part 52, as applicable, for the reconstruction or modification of your CISWI unit.

##### **§ 60.2050 What is a siting analysis?**

(a) The siting analysis must consider air pollution control alternatives that minimize, on a site-specific basis, to the maximum extent practicable, potential risks to public health or the environment. In considering such alternatives, the analysis may consider costs, energy impacts, nonair environmental impacts, or any other factors related to the practicability of the alternatives.

(b) Analyses of your CISWI unit's impacts that are prepared to comply with state, local, or other federal regulatory requirements may be used to satisfy the requirements of this section, provided they include the consideration of air pollution control alternatives specified in paragraph (a) of this section.

(c) You must complete and submit the siting requirements of this section as required under § 60.2190(c) prior to commencing construction.

#### **Waste Management Plan**

##### **§ 60.2055 What is a waste management plan?**

A waste management plan is a written plan that identifies both the feasibility and the methods used to reduce or separate certain components of solid waste from the waste stream in order to reduce or eliminate toxic emissions from incinerated waste.

**§ 60.2060 When must I submit my waste management plan?**

(a) You must submit a waste management plan prior to commencing construction.

(b) For CISWI units that commence reconstruction or modification after August 7, 2013, you must submit a waste management plan prior to the commencement of modification or reconstruction.

**§ 60.2065 What should I include in my waste management plan?**

A waste management plan must include consideration of the reduction or separation of waste-stream elements such as paper, cardboard, plastics, glass, batteries, or metals; or the use of recyclable materials. The plan must identify any additional waste management measures and implement those measures the source considers practical and feasible, considering the effectiveness of waste management measures already in place, the costs of additional measures, the emissions reductions expected to be achieved, and any other environmental or energy impacts they might have.

**Operator Training and Qualification****§ 60.2070 What are the operator training and qualification requirements?**

(a) No CISWI unit can be operated unless a fully trained and qualified CISWI unit operator is accessible, either at the facility or can be at the facility within 1 hour. The trained and qualified CISWI unit operator may operate the CISWI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified CISWI unit operators are temporarily not accessible, you must follow the procedures in § 60.2100.

(b) Operator training and qualification must be obtained through a state-approved program or by completing the requirements included in paragraph (c) of this section.

(c) Training must be obtained by completing an incinerator operator training course that includes, at a minimum, the three elements described in paragraphs (c)(1) through (3) of this section:

(1) Training on the eleven subjects listed in paragraphs (c)(1)(i) through (xi) of this section;

(i) Environmental concerns, including types of emissions;

(ii) Basic combustion principles, including products of combustion;

(iii) Operation of the specific type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures;

(iv) Combustion controls and monitoring;

(v) Operation of air pollution control equipment and factors affecting performance (if applicable);

(vi) Inspection and maintenance of the incinerator and air pollution control devices;

(vii) Actions to prevent and correct malfunctions or to prevent conditions that may lead to malfunctions;

(viii) Bottom and fly ash characteristics and handling procedures;

(ix) Applicable federal, state, and local regulations, including Occupational Safety and Health Administration workplace standards;

(x) Pollution prevention; and

(xi) Waste management practices.

(2) An examination designed and administered by the instructor.

(3) Written material covering the training course topics that may serve as reference material following completion of the course.

**§ 60.2075 When must the operator training course be completed?**

The operator training course must be completed by the later of the three dates specified in paragraphs (a) through (c) of this section:

(a) Six months after your CISWI unit startup;

(b) December 3, 2001; and

(c) The date before an employee assumes responsibility for operating the CISWI unit or assumes responsibility for supervising the operation of the CISWI unit.

**§ 60.2080 How do I obtain my operator qualification?**

(a) You must obtain operator qualification by completing a training course that satisfies the criteria under § 60.2070(b).

(b) Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under § 60.2070(c)(2).

**§ 60.2085 How do I maintain my operator qualification?**

To maintain qualification, you must complete an annual review or refresher course covering, at a minimum, the five topics described in paragraphs (a) through (e) of this section:

(a) Update of regulations;

(b) Incinerator operation, including startup and shutdown procedures, waste charging, and ash handling;

(c) Inspection and maintenance;

(d) Prevention and correction of malfunctions or conditions that may lead to malfunction; and

(e) Discussion of operating problems encountered by attendees.

**§ 60.2090 How do I renew my lapsed operator qualification?**

You must renew a lapsed operator qualification by one of the two methods specified in paragraphs (a) and (b) of this section:

(a) For a lapse of less than 3 years, you must complete a standard annual refresher course described in § 60.2085; and

(b) For a lapse of 3 years or more, you must repeat the initial qualification requirements in § 60.2080(a).

**§ 60.2095 What site-specific documentation is required?**

(a) Documentation must be available at the facility and readily accessible for all CISWI unit operators that addresses the ten topics described in paragraphs (a)(1) through (10) of this section. You must maintain this information and the training records required by paragraph (c) of this section in a manner that they can be readily accessed and are suitable for inspection upon request:

(1) Summary of the applicable standards under this subpart;

(2) Procedures for receiving, handling, and charging waste;

(3) Incinerator startup, shutdown, and malfunction procedures;

(4) Procedures for maintaining proper combustion air supply levels;

(5) Procedures for operating the incinerator and associated air pollution control systems within the standards established under this subpart;

(6) Monitoring procedures for demonstrating compliance with the incinerator operating limits;

(7) Reporting and recordkeeping procedures;

(8) The waste management plan required under §§ 60.2055 through 60.2065;

(9) Procedures for handling ash; and

(10) A list of the wastes burned during the performance test.

(b) You must establish a program for reviewing the information listed in paragraph (a) of this section with each incinerator operator:

(1) The initial review of the information listed in paragraph (a) of this section must be conducted within 6 months after the effective date of this subpart or prior to an employee's assumption of responsibilities for operation of the CISWI unit, whichever date is later; and

(2) Subsequent annual reviews of the information listed in paragraph (a) of this section must be conducted not later than 12 months following the previous review.

(c) You must also maintain the information specified in paragraphs (c)(1) through (3) of this section:

(1) Records showing the names of CISWI unit operators who have completed review of the information in § 60.2095(a) as required by § 60.2095(b), including the date of the initial review and all subsequent annual reviews;

(2) Records showing the names of the CISWI operators who have completed the operator training requirements under § 60.2070, met the criteria for qualification under § 60.2080, and maintained or renewed their qualification under § 60.2085 or § 60.2090. Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications; and

(3) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

**§ 60.2100 What if all the qualified operators are temporarily not accessible?**

If all qualified operators are temporarily not accessible (*i.e.*, not at the facility and not able to be at the facility within 1 hour), you must meet one of the two criteria specified in paragraphs (a) and (b) of this section, depending on the length of time that a qualified operator is not accessible:

(a) When all qualified operators are not accessible for more than 8 hours, but less than 2 weeks, the CISWI unit may be operated by other plant personnel familiar with the operation of the CISWI unit who have completed a review of the information specified in § 60.2095(a) within the past 12 months. However, you must record the period when all qualified operators were not accessible and include this deviation in the annual report as specified under § 60.2210; and

(b) When all qualified operators are not accessible for 2 weeks or more, you must take the two actions that are described in paragraphs (b)(1) and (2) of this section:

(1) Notify the Administrator of this deviation in writing within 10 days. In the notice, state what caused this deviation, what you are doing to ensure that a qualified operator is accessible, and when you anticipate that a qualified operator will be accessible; and

(2) Submit a status report to the Administrator every 4 weeks outlining what you are doing to ensure that a qualified operator is accessible, stating when you anticipate that a qualified operator will be accessible and requesting approval from the Administrator to continue operation of the CISWI unit. You must submit the first status report 4 weeks after you notify the Administrator of the

deviation under paragraph (b)(1) of this section. If the Administrator notifies you that your request to continue operation of the CISWI unit is disapproved, the CISWI unit may continue operation for 90 days, then must cease operation. Operation of the unit may resume if you meet the two requirements in paragraphs (b)(2)(i) and (ii) of this section:

(i) A qualified operator is accessible as required under § 60.2070(a); and

(ii) You notify the Administrator that a qualified operator is accessible and that you are resuming operation.

**Emission Limitations and Operating Limits**

**§ 60.2105 What emission limitations must I meet and by when?**

(a) You must meet the emission limitations for each CISWI unit, including bypass stack or vent, specified in table 1 of this subpart or tables 5 through 8 of this subpart by the applicable date in § 60.2140. You must be in compliance with the emission limitations of this subpart that apply to you at all times.

(b) An incinerator or air curtain incinerator that commenced construction after November 30, 1999, but no later than June 4, 2010, or that commenced reconstruction or modification on or after June 1, 2001 but no later than August 7, 2013, must continue to meet the emission limits in table 1 of this subpart for units in the incinerator subcategory and § 60.2250 for air curtain incinerators until the units become subject to the requirements of an approved state plan or federal plan that implements subpart DDDD of this part (Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units).

**§ 60.2110 What operating limits must I meet and by when?**

(a) If you use a wet scrubber(s) to comply with the emission limitations, you must establish operating limits for up to four operating parameters (as specified in table 2 of this subpart) as described in paragraphs (a)(1) through (4) of this section during the initial performance test:

(1) Maximum charge rate, calculated using one of the two different procedures in paragraph (a)(1)(i) or (ii) of this section, as appropriate:

(i) For continuous and intermittent units, maximum charge rate is 110 percent of the average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations; and

(ii) For batch units, maximum charge rate is 110 percent of the daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(2) Minimum pressure drop across the wet particulate matter scrubber, which is calculated as the lowest 1-hour average pressure drop across the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations; or minimum amperage to the wet scrubber, which is calculated as the lowest 1-hour average amperage to the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations;

(3) Minimum scrubber liquid flow rate, which is calculated as the lowest 1-hour average liquid flow rate at the inlet to the wet acid gas or particulate matter scrubber measured during the most recent performance test demonstrating compliance with all applicable emission limitations; and

(4) Minimum scrubber liquor pH, which is calculated as the lowest 1-hour average liquor pH at the inlet to the wet acid gas scrubber measured during the most recent performance test demonstrating compliance with the HCl emission limitation.

(b) You must meet the operating limits established during the initial performance test 60 days after your CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after its initial startup.

(c) If you use a fabric filter to comply with the emission limitations and you do not use a PM CPMS for monitoring PM compliance, you must operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by you to initiate corrective action.

(d) If you use an electrostatic precipitator to comply with the emission limitations and you do not use a PM CPMS for monitoring PM compliance, you must measure the (secondary) voltage and amperage of the electrostatic precipitator collection plates during the particulate matter performance test. Calculate the average

electric power value (secondary voltage  $\times$  secondary current = secondary electric power) for each test run. The operating limit for the electrostatic precipitator is calculated as the lowest 1-hour average secondary electric power measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.

(e) If you use activated carbon sorbent injection to comply with the emission limitations, you must measure the sorbent flow rate during the performance testing. The operating limit for the carbon sorbent injection is calculated as the lowest 1-hour average sorbent flow rate measured during the most recent performance test demonstrating compliance with the mercury emission limitations. For energy recovery units, when your unit operates at lower loads, multiply your sorbent injection rate by the load fraction, as defined in this subpart, to determine the required injection rate (e.g., for 50 percent load, multiply the injection rate operating limit by 0.5).

(f) If you use selective noncatalytic reduction to comply with the emission limitations, you must measure the charge rate, the secondary chamber temperature (if applicable to your CISWI unit), and the reagent flow rate during the nitrogen oxides performance testing. The operating limits for the selective noncatalytic reduction are calculated as the highest 1-hour average charge rate, lower secondary chamber temperature, and lowest reagent flow rate measured during the most recent performance test demonstrating compliance with the nitrogen oxides emission limitations.

(g) If you use a dry scrubber to comply with the emission limitations, you must measure the injection rate of each sorbent during the performance testing. The operating limit for the injection rate of each sorbent is calculated as the lowest 1-hour average injection rate or each sorbent measured during the most recent performance test demonstrating compliance with the hydrogen chloride emission limitations. For energy recovery units, when your unit operates at lower loads, multiply your sorbent

injection rate by the load fraction, as defined in this subpart, to determine the required injection rate (e.g., for 50 percent load, multiply the injection rate operating limit by 0.5).

(h) If you do not use a wet scrubber, electrostatic precipitator, or fabric filter to comply with the emission limitations, and if you do not determine compliance with your particulate matter emission limitation with either a particulate matter CEMS or a particulate matter CPMS, you must maintain opacity to less than or equal to 10 percent opacity (1-hour block average).

(i) If you use a PM CPMS to demonstrate compliance, you must establish your PM CPMS operating limit and determine compliance with it according to paragraphs (i)(1) through (5) of this section:

(1) Determine your operating limit as the average PM CPMS output value recorded during the performance test or at a PM CPMS output value corresponding to 75 percent of the emission limit if your PM performance test demonstrates compliance below 75 percent of the emission limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test:

(i) Your PM CPMS must provide a 4–20 milliamp output, or digital equivalent, and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps;

(ii) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to at least two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit; and

(iii) During the initial performance test or any such subsequent

performance test that demonstrates compliance with the PM limit, record and average all milliamp output values, or their digital equivalent, from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs).

(2) If the average of your three PM performance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS output values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in (i)(1) through (5) of this section:

(i) Determine your instrument zero output with one of the following procedures:

(A) Zero point data for *in-situ* instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench;

(B) Zero point data for extractive instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air;

(C) The zero point can also be established obtained by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept; and

(D) If none of the steps in paragraphs (i)(2)(i)(A) through (C) of this section are possible, you must use a zero output value provided by the manufacturer.

(ii) Determine your PM CPMS instrument average in milliamps, or the digital equivalent, and the average of your corresponding three PM compliance test runs, using equation 1:

$$\bar{x} = \frac{1}{n} \sum_{i=1}^n X_i, \bar{y} = \frac{1}{n} \sum_{i=1}^n Y_i$$

(Eq. 1)

Where:

$X_i$  = the PM CPMS output data points for the three runs constituting the performance test,

$Y_i$  = the PM concentration value for the three runs constituting the performance test, and  
n = the number of data points.

(iii) With your instrument zero expressed in milliamps, or the digital

equivalent, your three run average PM CPMS milliamp value, or its digital equivalent, and your three run average PM concentration from your three compliance tests, determine a

relationship of mg/dscm per milliamp or digital signal equivalent with equation 2:

$$R = \frac{Y_1}{(X_1 - z)} \tag{Eq. 2}$$

Where:

R = the relative mg/dscm per milliamp or digital equivalent for your PM CPMS,

Y<sub>1</sub> = the three run average mg/dscm PM concentration,

X<sub>1</sub> = the three run average milliamp or digital signal output from you PM CPMS, and

z = the milliamp or digital signal equivalent of your instrument zero determined from paragraph (2)(i) of this section.

(iv) Determine your source specific 30-day rolling average operating limit using the mg/dscm per milliamp or

digital value from equation 2 in equation 3, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit:

$$O_i = z + \frac{0.75(L)}{R} \tag{Eq. 3}$$

Where:

O<sub>i</sub> = the operating limit for your PM CPMS on a 30-day rolling average, in milliamps or their digital signal equivalent,

L = your source emission limit expressed in mg/dscm,

z = your instrument zero in milliamps or the digital equivalent, determined from paragraph (2)(i) of this section, and

R = the relative mg/dscm per milliamp or digital signal output equivalent for your PM CPMS, from equation 2.

(3) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your operating limit by averaging the PM CPMS milliamp or

digital signal output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using equation 4 and you must submit all compliance test and PM CPMS data according to the reporting requirements in paragraph (i)(5) of this section:

$$O_a = \frac{1}{n} \sum_{i=1}^n X_i \tag{Eq. 4}$$

Where:

X<sub>i</sub> = the PM CPMS data points for all runs i,

n = the number of data points, and

O<sub>n</sub> = your site specific operating limit, in milliamps or digital signal equivalent.

(4) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (e.g., milliamps or digital signal bits, PM concentration, raw data signal) on a 30-day rolling average basis.

(5) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g., beta attenuation), span of the instruments primary analytical range, milliamp or digital signal value equivalent to the instrument zero output, technique by which this zero value was determined, and the average

milliamp or digital signals corresponding to each PM compliance test run.

**§ 60.2115 What if I do not use a wet scrubber, fabric filter, activated carbon injection, selective noncatalytic reduction, an electrostatic precipitator, or a dry scrubber to comply with the emission limitations?**

If you use an air pollution control device other than a wet scrubber, activated carbon injection, selective noncatalytic reduction, fabric filter, an electrostatic precipitator, or a dry scrubber or limit emissions in some other manner, including material balances, to comply with the emission limitations under § 60.2105, you must petition the EPA Administrator for specific operating limits to be established during the initial performance test and continuously monitored thereafter. You must submit the petition at least sixty days before the performance test is scheduled to begin. Your petition must include the five items listed in paragraphs (a) through (e) of this section:

- (a) Identification of the specific parameters you propose to use as additional operating limits;
- (b) A discussion of the relationship between these parameters and emissions

of regulated pollutants, identifying how emissions of regulated pollutants change with changes in these parameters and how limits on these parameters will serve to limit emissions of regulated pollutants;

(c) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the operating limits on these parameters;

(d) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(e) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

**Performance Testing**

**§ 60.2125 How do I conduct the initial and annual performance test?**

(a) All performance tests must consist of a minimum of three test runs conducted under conditions representative of normal operations.

(b) You must document that the waste burned during the performance test is representative of the waste burned under normal operating conditions by

maintaining a log of the quantity of waste burned (as required in § 60.2175(b)(1)) and the types of waste burned during the performance test.

(c) All performance tests must be conducted using the minimum run duration specified in table 1 of this

subpart or tables 5 through 8 of this subpart.

(d) Method 1 of appendix A of this part must be used to select the sampling location and number of traverse points.

(e) Method 3A or 3B of appendix A of this part must be used for gas composition analysis, including

measurement of oxygen concentration. Method 3A or 3B of appendix A of this part must be used simultaneously with each method.

(f) All pollutant concentrations, except for opacity, must be adjusted to 7 percent oxygen using equation 5 of this section:

$$C_{adj} = C_{meas} (20.9 - 7) / (20.9 - \%O_2) \quad (\text{Eq. 5})$$

Where:

$C_{adj}$  = pollutant concentration adjusted to 7 percent oxygen;

$C_{meas}$  = pollutant concentration measured on a dry basis;

(20.9–7) = 20.9 percent oxygen–7 percent oxygen (defined oxygen correction basis);

20.9 = oxygen concentration in air, percent; and

$\%O_2$  = oxygen concentration measured on a dry basis, percent.

(g) You must determine dioxins/furans toxic equivalency by following the procedures in paragraphs (g)(1) through (4) of this section:

(1) Measure the concentration of each dioxin/furan tetra-through octa-chlorinated isomer emitted using EPA Method 23 at 40 CFR part 60, appendix A–7;

(2) Quantify isomers meeting identification criteria 2, 3, 4, and 5 in Section 5.3.2.5 of Method 23, regardless of whether the isomers meet identification criteria 1 and 7. You must quantify the isomers per Section 9.0 of Method 23. (Note: You may reanalyze the sample aliquot or split to reduce the number of isomers not meeting identification criteria 1 or 7 of Section 5.3.2.5.);

(3) For each dioxin/furan (tetra-through octa-chlorinated) isomer measured in accordance with paragraphs (g)(1) and (2) of this section, multiply the isomer concentration by its corresponding toxic equivalency factor specified in table 3 of this subpart; and

(4) Sum the products calculated in accordance with paragraph (g)(3) of this section to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

(h) Method 22 at 40 CFR part 60, appendix A–7 of this part must be used to determine compliance with the fugitive ash emission limit in table 1 of this subpart or tables 5 through 8 of this subpart.

(i) If you have an applicable opacity operating limit, you must determine compliance with the opacity limit using Method 9 at 40 CFR part 60, appendix A–4, based on three 1-hour blocks consisting of ten 6-minute average opacity values, unless you are required

to install a continuous opacity monitoring system, consistent with §§ 60.2145 and 60.2165.

(j) You must determine dioxins/furans total mass basis by following the procedures in paragraphs (j)(1) through (3) of this section:

(1) Measure the concentration of each dioxin/furan tetra-through octa-chlorinated isomer emitted using EPA Method 23 at 40 CFR part 60, appendix A–7;

(2) Quantify isomers meeting identification criteria 2, 3, 4, and 5 in Section 5.3.2.5 of Method 23, regardless of whether the isomers meet identification criteria 1 and 7. You must quantify the isomers per Section 9.0 of Method 23. (Note: You may reanalyze the sample aliquot or split to reduce the number of isomers not meeting identification criteria 1 or 7 of Section 5.3.2.5.); and

(3) Sum the quantities measured in accordance with paragraphs (j)(1) and (2) of this section to obtain the total concentration of dioxins/furans emitted in terms of total mass basis.

#### **§ 60.2130 How are the performance test data used?**

You use results of performance tests to demonstrate compliance with the emission limitations in table 1 of this subpart or tables 5 through 8 of this subpart.

#### **Initial Compliance Requirements**

##### **§ 60.2135 How do I demonstrate initial compliance with the emission limitations and establish the operating limits?**

You must conduct a performance test, as required under §§ 60.2125 and 60.2105 to determine compliance with the emission limitations in table 1 of this subpart or tables 5 through 8 of this subpart, to establish compliance with any opacity operating limit in § 60.2110, to establish the kiln-specific emission limit in § 60.2145(y), as applicable, and to establish operating limits using the procedures in §§ 60.2110 or 60.2115. The performance test must be conducted using the test methods listed in table 1 of this subpart or tables 5 through 8 of this subpart and the

procedures in § 60.2125. The use of the bypass stack during a performance test shall invalidate the performance test. You must conduct a performance evaluation of each continuous monitoring system within 60 days of installation of the monitoring system.

##### **§ 60.2140 By what date must I conduct the initial performance test?**

(a) The initial performance test must be conducted within 60 days after your CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after its initial startup.

(b) If you commence or recommence combusting a solid waste at an existing combustion unit at any commercial or industrial facility, and you conducted a test consistent with the provisions of this subpart while combusting the solid waste within the 6 months preceding the reintroduction of that solid waste in the combustion chamber, you do not need to retest until 6 months from the date you reintroduce that solid waste.

(c) If you commence or recommence combusting a solid waste at an existing combustion unit at any commercial or industrial facility and you have not conducted a performance test consistent with the provisions of this subpart while combusting the solid waste within the 6 months preceding the reintroduction of that solid waste in the combustion chamber, you must conduct a performance test within 60 days from the date you reintroduce that solid waste.

##### **§ 60.2141 By what date must I conduct the initial air pollution control device inspection?**

(a) The initial air pollution control device inspection must be conducted within 60 days after installation of the control device and the associated CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after the device's initial startup.

(b) Within 10 operating days following an air pollution control device inspection, all necessary repairs must be completed unless the owner or operator obtains written approval from the state agency establishing a date whereby all



necessary repairs of the designated facility must be completed.

### Continuous Compliance Requirements

#### § 60.2145 How do I demonstrate continuous compliance with the emission limitations and the operating limits?

(a) *Compliance with standards.* (1) The emission standards and operating requirements set forth in this subpart apply at all times;

(2) If you cease combusting solid waste, you may opt to remain subject to the provisions of this subpart. Consistent with the definition of CISWI unit, you are subject to the requirements of this subpart at least 6 months following the last date of solid waste combustion. Solid waste combustion is ceased when solid waste is not in the combustion chamber (*i.e.*, the solid waste feed to the combustor has been cut off for a period of time not less than the solid waste residence time);

(3) If you cease combusting solid waste, you must be in compliance with any newly applicable standards on the effective date of the waste-to-fuel switch. The effective date of the waste-to-fuel switch is a date selected by you, that must be at least 6 months from the date that you ceased combusting solid waste, consistent with § 60.2145(a)(2). Your source must remain in compliance with this subpart until the effective date of the waste-to-fuel switch;

(4) If you own or operate an existing commercial or industrial combustion unit that combusted a fuel or non-waste material, and you commence or recommence combustion of solid waste, you are subject to the provisions of this subpart as of the first day you introduce or reintroduce solid waste to the combustion chamber, and this date constitutes the effective date of the fuel-to-waste switch. You must complete all initial compliance demonstrations for any section 112 standards that are applicable to your facility before you commence or recommence combustion of solid waste. You must provide 30 days prior notice of the effective date of the waste-to-fuel switch. The notification must identify:

(i) The name of the owner or operator of the CISWI unit, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

(ii) The currently applicable subcategory under this subpart, and any 40 CFR part 63 subpart and subcategory that will be applicable after you cease combusting solid waste;

(iii) The fuel(s), non-waste material(s) and solid waste(s) the CISWI unit is currently combusting and has combusted over the past 6 months, and

the fuel(s) or non-waste materials the unit will commence combusting;

(iv) The date on which you became subject to the currently applicable emission limits; and

(v) The date upon which you will cease combusting solid waste, and the date (if different) that you intend for any new requirements to become applicable (*i.e.*, the effective date of the waste-to-fuel switch), consistent with paragraphs (a)(2) and (3) of this section.

(5) All air pollution control equipment necessary for compliance with any newly applicable emissions limits which apply as a result of the cessation or commencement or recommencement of combusting solid waste must be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch.

(6) All monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of combusting solid waste must be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch. All calibration and drift checks must be performed as of the effective date of the waste-to-fuel, or fuel-to-waste switch. Relative accuracy tests must be performed as of the performance test deadline for PM CEMS (if PM CEMS are elected to demonstrate continuous compliance with the particulate matter emission limits). Relative accuracy testing for other CEMS need not be repeated if that testing was previously performed consistent with Clean Air Act section 112 monitoring requirements or monitoring requirements under this subpart.

(b) You must conduct an annual performance test for the pollutants listed in table 1 of this subpart or tables 5 through 8 of this subpart and opacity for each CISWI unit as required under § 60.2125. The annual performance test must be conducted using the test methods listed in table 1 of this subpart or tables 5 through 8 of this subpart and the procedures in § 60.2125. Annual performance tests are not required if you use CEMS or continuous opacity monitoring systems to determine compliance.

(c) You must continuously monitor the operating parameters specified in § 60.2110 or established under § 60.2115 and as specified in § 60.2170. Use 3-hour block average values to determine compliance (except for baghouse leak detection system alarms) unless a different averaging period is established under § 60.2115 or, for energy recovery units, where the averaging time for each

operating parameter is a 30-day rolling, calculated each hour as the average of the previous 720 operating hours. Operation above the established maximum, below the established minimum, or outside the allowable range of operating limits specified in paragraph (a) of this section constitutes a deviation from your operating limits established under this subpart, except during performance tests conducted to determine compliance with the emission and operating limits or to establish new operating limits. Operating limits are confirmed or reestablished during performance tests.

(d) You must burn only the same types of waste and fuels used to establish subcategory applicability (for energy recovery units) and operating limits during the performance test.

(e) For energy recovery units, incinerators, and small remote units, you must perform an annual visual emissions test for ash handling.

(f) For energy recovery units, you must conduct an annual performance test for opacity (except where particulate matter CEMS or continuous opacity monitoring systems are used) and the pollutants listed in table 6 of this subpart.

(g) You may elect to demonstrate continuous compliance with the carbon monoxide emission limit using a carbon monoxide CEMS according to the following requirements:

(1) You must measure emissions according to § 60.13 to calculate 1-hour arithmetic averages, corrected to 7 percent oxygen. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. You must demonstrate initial compliance with the carbon monoxide emissions limit using a 30-day rolling average of these 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, calculated using equation 19–19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A–7 of this part; and

(2) Operate the carbon monoxide CEMS in accordance with the requirements of performance specification 4A of appendix B of this part and quality assurance procedure 1 of appendix F of this part.

(h) Coal and liquid/gas energy recovery units with average annual heat input rates greater than or equal to 250 MMBtu/hr may elect to demonstrate continuous compliance with the particulate matter emissions limit using a particulate matter CEMS according to the procedures in § 60.2165(n) instead

of the particulate matter continuous parameter monitoring system (CPMS) specified in § 60.2145. Coal and liquid/gas energy recovery units with annual average heat input rates less than 250 MMBtu/hr, incinerators, and small remote incinerators may also elect to demonstrate compliance using a particulate matter CEMS according to the procedures in § 60.2165(n) instead of particulate matter testing with EPA Method 5 at 40 CFR part 60, appendix A-3 and, if applicable, the continuous opacity monitoring requirements in paragraph (i) of this section.

(i) For energy recovery units with annual average heat input rates greater than or equal to 10 MMBtu/hour and less than 250 MMBtu/hr, you must install, operate, certify and maintain a continuous opacity monitoring system (COMS) according to the procedures in § 60.2165.

(j) For waste-burning kilns, you must conduct an annual performance test for cadmium, lead, dioxins/furans and hydrogen chloride as listed in table 7 of this subpart. If you do not use an acid gas wet scrubber or dry scrubber, you must determine compliance with the hydrogen chloride emissions limit according to the requirements in paragraph (j)(1) of this section. You must determine compliance with the mercury emissions limit using a mercury CEMS according to paragraph (j)(2) of this section. You must determine compliance with nitrogen oxides, sulfur dioxide, and carbon monoxide using CEMS. You must determine compliance with particulate matter using CPMS:

(1) If you monitor compliance with the HCl emissions limit by operating an HCl CEMS, you must do so in accordance with Performance Specification 15 (PS 15) of appendix B to 40 CFR part 60, or, PS 18 of appendix B to 40 CFR part 60. You must operate, maintain, and quality assure a HCl CEMS installed and certified under PS 15 according to the quality assurance requirements in Procedure 1 of appendix F to 40 CFR part 60 except that the Relative Accuracy Test Audit requirements of Procedure 1 must be replaced with the validation requirements and criteria of sections 11.1.1 and 12.0 of PS 15. You must operate, maintain and quality assure a HCl CEMS installed and certified under PS 18 according to the quality assurance requirements in Procedure 6 of appendix F to 40 CFR part 60. For any performance specification that you use, you must use Method 321 of appendix A to 40 CFR part 63 as the reference test method for conducting relative accuracy testing. The span value and calibration

requirements in paragraphs (j)(1)(i) and (ii) of this section apply to all HCl CEMS used under this subpart:

(i) You must use a measurement span value for any HCl CEMS of 0–10 ppmv unless the monitor is installed on a kiln without an inline raw mill. Kilns without an inline raw mill may use a higher span value sufficient to quantify all expected emissions concentrations. The HCl CEMS data recorder output range must include the full range of expected HCl concentration values which would include those expected during “mill off” conditions. The corresponding data recorder range shall be documented in the site-specific monitoring plan and associated records;

(ii) In order to quality assure data measured above the span value, you must use one of the three options in paragraphs (j)(1)(ii)(A) through (C) of this section:

(A) Include a second span that encompasses the HCl emission concentrations expected to be encountered during “mill off” conditions. This second span may be rounded to a multiple of 5 ppm of total HCl. The requirements of the appropriate HCl monitor performance specification shall be followed for this second span with the exception that a RATA with the mill off is not required;

(B) Quality assure any data above the span value by proving instrument linearity beyond the span value established in paragraph (j)(1)(i) of this section using the following procedure. Conduct a weekly “above span linearity” calibration challenge of the monitoring system using a reference gas with a certified value greater than your highest expected hourly concentration or greater than 75% of the highest measured hourly concentration. The “above span” reference gas must meet the requirements of the applicable performance specification and must be introduced to the measurement system at the probe. Record and report the results of this procedure as you would for a daily calibration. The “above span linearity” challenge is successful if the value measured by the HCl CEMS falls within 10 percent of the certified value of the reference gas. If the value measured by the HCl CEMS during the above span linearity challenge exceeds 10 percent of the certified value of the reference gas, the monitoring system must be evaluated and repaired and a new “above span linearity” challenge met before returning the HCl CEMS to service, or data above span from the HCl CEMS must be subject to the quality assurance procedures established in (j)(1)(ii)(D) of this section. In this manner values measured by the HCl

CEMS during the above span linearity challenge exceeding  $\pm 20$  percent of the certified value of the reference gas must be normalized using equation 6;

(C) Quality assure any data above the span value established in paragraph (j)(1)(i) of this section using the following procedure. Any time two consecutive one-hour average measured concentration of HCl exceeds the span value you must, within 24 hours before or after, introduce a higher, “above span” HCl reference gas standard to the HCl CEMS. The “above span” reference gas must meet the requirements of the applicable performance specification and target a concentration level between 50 and 150 percent of the highest expected hourly concentration measured during the period of measurements above span, and must be introduced at the probe. While this target represents a desired concentration range that is not always achievable in practice, it is expected that the intent to meet this range is demonstrated by the value of the reference gas. Expected values may include above span calibrations done before or after the above-span measurement period. Record and report the results of this procedure as you would for a daily calibration. The “above span” calibration is successful if the value measured by the HCl CEMS is within 20 percent of the certified value of the reference gas. If the value measured by the HCl CEMS is not within 20 percent of the certified value of the reference gas, then you must normalize the stack gas values measured above span as described in paragraph (j)(1)(ii)(D) of this section. If the “above span” calibration is conducted during the period when measured emissions are above span and there is a failure to collect the one data point in an hour due to the calibration duration, then you must determine the emissions average for that missed hour as the average of hourly averages for the hour preceding the missed hour and the hour following the missed hour. In an hour where an “above span” calibration is being conducted and one or more data points are collected, the emissions average is represented by the average of all valid data points collected in that hour;

(D) In the event that the “above span” calibration is not successful (*i.e.*, the HCl CEMS measured value is not within 20 percent of the certified value of the reference gas), then you must normalize the one-hour average stack gas values measured above the span during the 24-hour period preceding or following the “above span” calibration for reporting based on the HCl CEMS response to the reference gas as shown in equation 6:

$$\frac{\text{Certified reference gas value}}{\text{Measured value of reference gas}} \times \text{Measured stack gas result} \\ = \text{Normalized stack gas result} \quad (\text{Eq. 6})$$

Only one “above span” calibration is needed per 24-hour period.

(2) Compliance with the mercury emissions limit must be determined using a mercury CEMS according to the following requirements:

(i) You must operate a CEMS system in accordance with performance specification 12A of 40 CFR part 60, appendix B or a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR part 60, appendix B. The duration of the performance test must be a calendar month. For each calendar month in which the waste-burning kiln operates, hourly mercury concentration data, and stack gas volumetric flow rate data must be obtained. You must demonstrate compliance with the mercury emissions limit using a 30-day rolling average of these 1-hour mercury concentrations, including CEMS data during startup and shutdown as defined in this subpart, calculated using equation 19–19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A–7 of this part. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content;

(ii) Owners or operators using a mercury CEMS must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A of 40 CFR part 60, appendix B, and quality assurance procedure 6 of 40 CFR part 60, appendix F; and

(iii) The owner or operator of a waste-burning kiln must demonstrate initial compliance by operating a mercury CEMS while the raw mill of the in-line kiln/raw mill is operating under normal conditions and including at least one period when the raw mill is off.

(k) If you use an air pollution control device to meet the emission limitations in this subpart, you must conduct an initial and annual inspection of the air pollution control device. The inspection must include, at a minimum, the following:

(1) Inspect air pollution control device(s) for proper operation; and

(2) Develop a site-specific monitoring plan according to the requirements in paragraph (l) of this section. This

requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under § 60.13(i).

(l) For each continuous monitoring system required in this section, you must develop and submit to the EPA Administrator for approval a site-specific monitoring plan according to the requirements of this paragraph (l) that addresses paragraphs (l)(1)(i) through (vi) of this section:

(1) You must submit this site-specific monitoring plan at least 60 days before your initial performance evaluation of your continuous monitoring system:

(i) Installation of the continuous monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer and the data collection and reduction systems.

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations);

(iv) Ongoing operation and maintenance procedures in accordance with the general requirements of § 60.11(d);

(v) Ongoing data quality assurance procedures in accordance with the general requirements of § 60.13; and

(vi) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 60.7(b), (c), (c)(1), (c)(4), (d), (e), (f), and (g).

(2) You must conduct a performance evaluation of each continuous monitoring system in accordance with your site-specific monitoring plan.

(3) You must operate and maintain the continuous monitoring system in continuous operation according to the site-specific monitoring plan.

(m) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (l) and (m)(1) through (4) of this section:

(1) Install the flow sensor and other necessary equipment in a position that provides a representative flow;

(2) Use a flow sensor with a measurement sensitivity at full scale of no greater than 2 percent;

(3) Minimize the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances; and

(4) Conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(n) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (l) and (n)(1) through (6) of this section:

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., PM scrubber pressure drop);

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion;

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less;

(4) Perform checks at the frequency outlined in your site-specific monitoring plan to ensure pressure measurements are not obstructed (e.g., check for pressure tap plugging daily);

(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually; and

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in your monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(o) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (l) and (o)(1) through (4) of this section:

(1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH;

(2) Ensure the sample is properly mixed and representative of the fluid to be measured;

(3) Conduct a performance evaluation of the pH monitoring system in

accordance with your monitoring plan at least once each process operating day; and

(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than quarterly.

(p) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator, you must meet the requirements in paragraphs (l) and (p)(1) and (2) of this section:

(1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates; and

(2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(q) If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (*e.g.*, weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (l) and (q)(1) and (2) of this section:

(1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate; and

(2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(r) If you elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraphs (l) and (r)(1) through (5) of this section:

(1) Install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute particulate matter loadings for each exhaust stack, roof vent, or compartment (*e.g.*, for a positive pressure fabric filter) of the fabric filter;

(2) Use a bag leak detection system certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less;

(3) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance

provided in EPA-454/R-98-015 (incorporated by reference, *see* § 60.17);

(4) Use a bag leak detection system equipped with a device to continuously record the output signal from the sensor; and

(5) Use a bag leak detection system equipped with a system that will sound an alarm when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located where it is observed readily by plant operating personnel.

(s) For facilities using a CEMS to demonstrate compliance with the sulfur dioxide emission limit, compliance with the sulfur dioxide emission limit may be demonstrated by using the CEMS specified in § 60.2165 to measure sulfur dioxide. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. You must calculate a 30-day rolling average of the 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, calculated using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, Appendix A-7 of this part. The sulfur dioxide CEMS must be operated according to performance specification 2 in appendix B of this part and must follow the procedures and methods specified in paragraph (s) of this section. For sources that have actual inlet emissions less than 100 parts per million dry volume, the relative accuracy criterion for inlet sulfur dioxide CEMS should be no greater than 20 percent of the mean value of the reference method test data in terms of the units of the emission standard, or 5 parts per million dry volume absolute value of the mean difference between the reference method and the CEMS, whichever is greater:

(1) During each relative accuracy test run of the CEMS required by performance specification 2 in appendix B of this part, collect sulfur dioxide and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the CEMS and the test methods specified in paragraphs (s)(1)(i) and (ii) of this section:

(i) For sulfur dioxide, EPA Reference Method 6 or 6C, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, *see* § 60.17) must be used; and

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, *see* § 60.17), must be used.

(2) The span value of the CEMS at the inlet to the sulfur dioxide control device must be 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the unit subject to this subpart. The span value of the CEMS at the outlet of the sulfur dioxide control device must be 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the unit subject to this subpart.

(3) Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with procedure 1 in appendix F of this part.

(t) For facilities using a CEMS to demonstrate continuous compliance with the nitrogen oxides emission limit, compliance with the nitrogen oxides emission limit may be demonstrated by using the CEMS specified in § 60.2165 to measure nitrogen oxides. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. You must calculate a 30-day rolling average of the 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7 of this part. The nitrogen oxides CEMS must be operated according to performance specification 2 in appendix B of this part and must follow the procedures and methods specified in paragraphs (t)(1) through (4) of this section:

(1) During each relative accuracy test run of the CEMS required by performance specification 2 of appendix B of this part, collect nitrogen oxides and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the CEMS and the test methods specified in paragraphs (t)(1)(i) and (ii) of this section:

(i) For nitrogen oxides, EPA Reference Method 7 or 7E at 40 CFR part 60, appendix A-4 must be used; and

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B at 40 CFR part 60, appendix A-3, or as an alternative ANSI/ASME PTC 19-10.1981 (incorporated by reference, *see* § 60.17), as applicable, must be used.

(2) The span value of the continuous emission monitoring system must be 125 percent of the maximum estimated hourly potential nitrogen oxide emissions of the unit.

(3) Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with procedure 1 in appendix F of this part.

(4) The owner or operator of an affected facility may request that

compliance with the nitrogen oxides emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. If carbon dioxide is selected for use in diluent corrections, the relationship between oxygen and carbon dioxide levels must be established during the initial performance test according to the procedures and methods specified in paragraphs (t)(4)(i) through (iv) of this section. This relationship may be re-established during performance compliance tests:

(i) The fuel factor equation in Method 3B must be used to determine the relationship between oxygen and carbon dioxide at a sampling location. Method 3A or 3B, or as an alternative ANSI/ASME PTC 19.10–1981 (incorporated by reference, *see* § 60.17), as applicable, must be used to determine the oxygen concentration at the same location as the carbon dioxide monitor;

(ii) Samples must be taken for at least 30 minutes in each hour;

(iii) Each sample must represent a 1-hour average; and

(iv) A minimum of three runs must be performed.

(u) For facilities using a CEMS to demonstrate continuous compliance with any of the emission limits of this subpart, you must complete the following:

(1) Demonstrate compliance with the appropriate emission limit(s) using a 30-day rolling average of 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, calculated using equation 19–19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A–7 of this part. CEMS data during startup and shutdown, as defined in the subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content; and

(2) Operate all CEMS in accordance with the applicable procedures under appendices B and F of this part.

(v) Use of the bypass stack at any time is an emissions standards deviation for particulate matter, HCl, Pb, Cd, Hg, NO<sub>x</sub>, SO<sub>2</sub>, and dioxin/furans.

(w) For energy recovery units with a design heat input capacity of 100 MMBtu per hour or greater that do not use a carbon monoxide CEMS, you must install, operate, and maintain a oxygen analyzer system as defined in § 60.2265 according to the procedures in paragraphs (w)(1) through (4) of this section:

(1) The oxygen analyzer system must be installed by the initial performance test date specified in § 60.2140;

(2) You must operate the oxygen trim system within compliance with paragraph (w)(3) of this section at all times;

(3) You must maintain the oxygen level such that the 30-day rolling average that is established as the operating limit for oxygen is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test; and

(4) You must calculate and record a 30-day rolling average oxygen concentration using equation 19–19 in section 12.4.1 of EPA Reference Method 19 of Appendix A–7 of this part.

(x) For energy recovery units with annual average heat input rates greater than or equal to 250 MMBtu/hour and waste-burning kilns, you must install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in paragraphs (x)(1) through (8) of this section. For other energy recovery units, you may elect to use PM CPMS operated in accordance with this section. PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (*e.g.*, bag leak detectors, ESP secondary power, PM scrubber pressure):

(1) Install, calibrate, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with paragraphs (l) and (x)(1)(i) through (iii) of this section:

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation detection of the exhaust gas or representative sample. The reportable measurement output from the PM CPMS must be expressed as milliamps or the digital signal equivalent;

(ii) The PM CPMS must have a cycle time (*i.e.*, period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes; and

(iii) The PM CPMS must be capable of detecting and responding to particulate matter concentrations increments no greater than 0.5 mg/actual cubic meter.

(2) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, you must adjust the site-specific operating limit in accordance with the results of the performance test according to the procedures specified in § 60.2110.

(3) Collect PM CPMS hourly average output data for all energy recovery unit or waste-burning kiln operating hours. Express the PM CPMS output as milliamps.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit or waste-burning kiln operating hours data (milliamps or their digital equivalent).

(5) You must collect data using the PM CPMS at all times the energy recovery unit or waste-burning kiln is operating and at the intervals specified in paragraph (x)(1)(ii) of this section, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in your site-specific monitoring plan.

(6) You must use all the data collected during all energy recovery unit or waste-burning kiln operating hours in assessing the compliance with your operating limit except:

(i) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions are not used in calculations (report any such periods in your annual deviation report);

(ii) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or quality control activities conducted during out-of-control periods are not used in calculations (report emissions or operating levels and report any such periods in your annual deviation report);

(iii) Any PM CPMS data recorded during periods of CEMS data during startup and shutdown, as defined in this subpart.

(7) You must record and make available upon request results of PM CPMS system performance audits, as well as the dates and duration of periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return the PM CPMS to operation consistent with your site-specific monitoring plan.

(8) For any deviation of the 30-day rolling average PM CPMS average value from the established operating parameter limit, you must:

(i) Within 48 hours of the deviation, visually inspect the air pollution control device;

(ii) If inspection of the air pollution control device identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value;

(iii) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify. Within 45

days of the deviation, you must re-establish the CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under paragraph (x) of this section; and

(iv) PM CPMS deviations leading to more than four required performance tests in a 12-month process operating

period (rolling monthly) constitute a violation of this subpart.

(y) When there is an alkali bypass and/or an in-line coal mill that exhaust emissions through a separate stack(s), the combined emissions are subject to the emission limits applicable to waste-burning kilns. To determine the kiln-specific emission limit for demonstrating compliance, you must:

(1) Calculate a kiln-specific emission limit using equation 7:

$$C_{ks} = ((\text{Emission limit} \times (Q_{ab} + Q_{cm} + Q_{ks})) - (Q_{ab} \times C_{ab}) - (Q_{cm} \times C_{cm})) / Q_{ks}$$

$C_{ks}$  = Kiln stack concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O<sub>2</sub>.)

$Q_{ab}$  = Alkali bypass flow rate (volume/hr)

$C_{ab}$  = Alkali bypass concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O<sub>2</sub>.)

$Q_{cm}$  = In-line coal mill flow rate (volume/hr)

$C_{cm}$  = In-line coal mill concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O<sub>2</sub>.)

$Q_{ks}$  = Kiln stack flow rate (volume/hr)

(2) Particulate matter concentration must be measured downstream of the in-line coal mill. All other pollutant concentrations must be measured either upstream or downstream of the in-line coal mill; and

(3) For purposes of determining the combined emissions from kilns equipped with an alkali bypass or that exhaust kiln gases to a coal mill that exhausts through a separate stack, instead of installing a CEMS or PM CPMS on the alkali bypass stack or in-line coal mill stack, the results of the initial and subsequent performance test can be used to demonstrate compliance with the relevant emissions limit. A performance test must be conducted on an annual basis (between 11 and 13 calendar months following the previous performance test).

#### **§ 60.2150 By what date must I conduct the annual performance test?**

You must conduct annual performance tests between 11 and 13 months of the previous performance test.

#### **§ 60.2151 By what date must I conduct the annual air pollution control device inspection?**

On an annual basis (no more than 12 months following the previous annual air pollution control device inspection), you must complete the air pollution

control device inspection as described in § 60.2141.

#### **§ 60.2155 May I conduct performance testing less often?**

(a) You must conduct annual performance tests according to the schedule specified in § 60.2150, with the following exceptions:

(1) You may conduct a repeat performance test at any time to establish new values for the operating limits to apply from that point forward, as specified in § 60.2160. The Administrator may request a repeat performance test at any time;

(2) You must repeat the performance test within 60 days of a process change, as defined in § 60.2265;

(3) If the initial or any subsequent performance test for any pollutant in table 1 or tables 5 through 8 of this subpart, as applicable, demonstrates that the emission level for the pollutant is no greater than the emission level specified in paragraph (a)(3)(i) or (a)(3)(ii) of this section, as

(i) For particulate matter, hydrogen chloride, mercury, nitrogen oxides, sulfur dioxide, cadmium, lead and dioxins/furans, the emission level equal to 75 percent of the applicable emission limit in table 1 or tables 5 through 8 of this subpart, as applicable, to this subpart; and

(ii) For fugitive emissions, visible emissions (of combustion ash from the ash conveying system) for 2 percent of the time during each of the three 1-hour observations periods.

(4) If you are conducting less frequent testing for a pollutant as provided in paragraph (a)(3) of this section and a subsequent performance test for the pollutant indicates that your CISWI unit does not meet the emission level specified in paragraph (a)(3)(i) or (a)(3)(ii) of this section, as applicable,

you must conduct annual performance tests for the pollutant according to the schedule specified in paragraph (a) of this section until you qualify for less frequent testing for the pollutant as specified in paragraph (a)(3) of this section.

(b) [Reserved]

#### **§ 60.2160 May I conduct a repeat performance test to establish new operating limits?**

(a) Yes. You may conduct a repeat performance test at any time to establish new values for the operating limits. The Administrator may request a repeat performance test at any time.

(b) You must repeat the performance test if your feed stream is different than the feed streams used during any performance test used to demonstrate compliance.

#### **Monitoring**

#### **§ 60.2165 What monitoring equipment must I install and what parameters must I monitor?**

(a) If you are using a wet scrubber to comply with the emission limitation under § 60.2105, you must install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the value of the operating parameters used to determine compliance with the operating limits listed in table 2 of this subpart. These devices (or methods) must measure and record the values for these operating parameters at the frequencies indicated in table 2 of this subpart at all times except as specified in § 60.2170(a).

(b) If you use a fabric filter to comply with the requirements of this subpart and you do not use a PM CPMS for monitoring PM compliance, you must install, calibrate, maintain, and continuously operate a bag leak

detection system as specified in paragraphs (b)(1) through (8) of this section:

(1) You must install and operate a bag leak detection system for each exhaust stack of the fabric filter;

(2) Each bag leak detection system must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations;

(3) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less;

(4) The bag leak detection system sensor must provide output of relative or absolute particulate matter loadings;

(5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor;

(6) The bag leak detection system must be equipped with an alarm system that will alert automatically an operator when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located where it is observed easily by plant operating personnel;

(7) For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter; and

(8) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(c) If you are using something other than a wet scrubber, activated carbon, selective non-catalytic reduction, an electrostatic precipitator, or a dry scrubber to comply with the emission limitations under § 60.2105, you must install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor compliance with the site-specific operating limits established using the procedures in § 60.2115.

(d) If you use activated carbon injection to comply with the emission limitations in this subpart, you must measure the minimum mercury sorbent flow rate once per hour.

(e) If you use selective noncatalytic reduction to comply with the emission limitations, you must complete the following:

(1) Following the date on which the initial performance test is completed or is required to be completed under § 60.2125, whichever date comes first, ensure that the affected facility does not

operate above the maximum charge rate, or below the minimum secondary chamber temperature (if applicable to your CISWI unit) or the minimum reagent flow rate measured as 3-hour block averages at all times; and

(2) Operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature and below the minimum reagent flow rate simultaneously constitute a violation of the nitrogen oxides emissions limit.

(f) If you use an electrostatic precipitator to comply with the emission limits of this subpart and you do not use a PM CPMS for monitoring PM compliance, you must monitor the secondary power to the electrostatic precipitator collection plates and maintain the 3-hour block averages at or above the operating limits established during the mercury or particulate matter performance test.

(g) For waste-burning kilns not equipped with a wet scrubber or dry scrubber, in place of hydrogen chloride testing with EPA Method 321 at 40 CFR part 63, appendix A, an owner or operator must install, calibrate, maintain, and operate a CEMS for monitoring hydrogen chloride emissions, as specified in § 60.2145(j) of this subpart, discharged to the atmosphere and record the output of the system. To demonstrate continuous compliance with the hydrogen chloride emissions limit for units other than waste-burning kilns not equipped with a wet scrubber or dry scrubber, a facility may substitute use of a hydrogen chloride CEMS for conducting the hydrogen chloride annual performance test, monitoring the minimum hydrogen chloride sorbent flow rate, monitoring the minimum scrubber liquor pH, and monitoring minimum injection rate.

(h) To demonstrate continuous compliance with the particulate matter emissions limit, a facility may substitute use of either a particulate matter CEMS or a particulate matter CPMS for conducting the PM annual performance test and using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure).

(i) To demonstrate continuous compliance with the dioxin/furan emissions limit, a facility may substitute use of a continuous automated sampling system for the dioxin/furan annual performance test. You must record the output of the system and analyze the sample according to EPA Method 23 at 40 CFR part 60, appendix A-7 of this part. This option to use a continuous automated sampling system takes effect on the date a final performance

specification applicable to dioxin/furan from continuous monitors is published in the **Federal Register**. The owner or operator who elects to continuously sample dioxin/furan emissions instead of sampling and testing using EPA Method 23 at 40 CFR part 60, appendix A-7 must install, calibrate, maintain, and operate a continuous automated sampling system and must comply with the requirements specified in § 60.58b(p) and (q). A facility may substitute continuous dioxin/furan monitoring for the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the dioxin/furan emission limit.

(j) To demonstrate continuous compliance with the mercury emissions limit, a facility may substitute use of a continuous automated sampling system for the mercury annual performance test. You must record the output of the system and analyze the sample at set intervals using any suitable determinative technique that can meet performance specification 12B. The owner or operator who elects to continuously sample mercury emissions instead of sampling and testing using EPA Reference Method 29 or 30B at 40 CFR part 60, appendix A-8, ASTM D6784-02 (Reapproved 2008) (incorporated by reference, see § 60.17), or an approved alternative method for measuring mercury emissions, must install, calibrate, maintain, and operate a continuous automated sampling system and must comply with performance specification 12A and quality assurance procedure 5, as well as the requirements specified in § 60.58b(p) and (q). A facility may substitute continuous mercury monitoring for the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the mercury emission limit. Waste-burning kilns must install, calibrate, maintain, and operate a mercury CEMS as specified in § 60.2145(j).

(k) To demonstrate continuous compliance with the nitrogen oxides emissions limit, a facility may substitute use of a CEMS for the nitrogen oxides annual performance test to demonstrate compliance with the nitrogen oxides emissions limits and monitoring the charge rate, secondary chamber temperature, and reagent flow for selective noncatalytic reduction, if applicable:

(1) Install, calibrate, maintain, and operate a CEMS for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 2 of appendix B of this part, the quality assurance



procedure one of appendix F of this part and the procedures under § 60.13 must be followed for installation, evaluation, and operation of the CEMS; and

(2) Following the date that the initial performance test for nitrogen oxides is completed or is required to be completed under § 60.2125, compliance with the emission limit for nitrogen oxides required under § 60.52b(d) must be determined based on the 30-day rolling average of the hourly emission concentrations using CEMS outlet data. The 1-hour arithmetic averages must be expressed in parts per million by volume corrected to 7 percent oxygen (dry basis) and used to calculate the 30-day rolling average concentrations. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages must be calculated using the data points required under § 60.13(e)(2).

(l) To demonstrate continuous compliance with the sulfur dioxide emissions limit, a facility may substitute use of a continuous automated sampling system for the sulfur dioxide annual performance test to demonstrate compliance with the sulfur dioxide emissions limits:

(1) Install, calibrate, maintain, and operate a CEMS for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 2 of appendix B of this part, the quality assurance requirements of procedure one of appendix F of this part and procedures under § 60.13 must be followed for installation, evaluation, and operation of the CEMS; and

(2) Following the date that the initial performance test for sulfur dioxide is completed or is required to be completed under § 60.2125, compliance with the sulfur dioxide emission limit may be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations using CEMS outlet data. The 1-hour arithmetic averages must be expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages must be calculated using the data points required under § 60.13(e)(2).

(m) For energy recovery units over 10 MMBtu/hr but less than 250 MMBtu/hr annual average heat input rates that do not use a wet scrubber, fabric filter with

bag leak detection system, or particulate matter CEMS, you must install, operate, certify, and maintain a continuous opacity monitoring system according to the procedures in paragraphs (m)(1) through (5) of this section by the compliance date specified in § 60.2105. Energy recovery units that use a CEMS to demonstrate initial and continuing compliance according to the procedures in § 60.2165(n) are not required to install a continuous opacity monitoring system and must perform the annual performance tests for the opacity consistent with § 60.2145(f):

(1) Install, operate, and maintain each continuous opacity monitoring system according to performance specification 1 of 40 CFR part 60, appendix B;

(2) Conduct a performance evaluation of each continuous opacity monitoring system according to the requirements in § 60.13 and according to PS-1 of 40 CFR part 60, appendix B;

(3) As specified in § 60.13(e)(1), each continuous opacity monitoring system must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period;

(4) Reduce the continuous opacity monitoring system data as specified in § 60.13(h)(1); and

(5) Determine and record all the 6-minute averages (and 1-hour block averages as applicable) collected.

(n) For coal and liquid/gas energy recovery units, incinerators, and small remote incinerators, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring particulate matter emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who continuously monitors particulate matter emissions instead of conducting performance testing using EPA Method 5 at 40 CFR part 60, appendix A-3 or, as applicable, monitor with a particulate matter CPMS according to paragraph (r) of this section, must install, calibrate, maintain, and operate a CEMS and must comply with the requirements specified in paragraphs (n)(1) through (13) of this section:

(1) Notify the Administrator 1 month before starting use of the system;

(2) Notify the Administrator 1 month before stopping use of the system;

(3) The monitor must be installed, evaluated, and operated in accordance with the requirements of performance specification 11 of appendix B of this part and quality assurance requirements of procedure two of appendix F of this part and § 60.13. Use Method 5 or

Method 5I of Appendix A of this part for the PM CEMS correlation testing;

(4) The initial performance evaluation must be completed no later than 180 days after the date of initial startup of the affected facility, as specified under § 60.2125 or within 180 days of notification to the Administrator of use of the continuous monitoring system if the owner or operator was previously determining compliance by Method 5 performance tests, whichever is later;

(5) The owner or operator of an affected facility may request that compliance with the particulate matter emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility must be established according to the procedures and methods specified in § 60.2145(t)(4)(i) through (iv);

(6) The owner or operator of an affected facility must conduct an initial performance test for particulate matter emissions as required under § 60.2125. Compliance with the particulate matter emission limit, if PM CEMS are elected for demonstrating compliance, must be determined by using the CEMS specified in paragraph (n) of this section to measure particulate matter. You must calculate a 30-day rolling average of 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown, as defined in this subpart, using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7;

(7) Compliance with the particulate matter emission limit must be determined based on the 30-day rolling average calculated using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7 from the 1-hour arithmetic average CEMS outlet data;

(8) At a minimum, valid continuous monitoring system hourly averages must be obtained as specified in § 60.2170(e);

(9) The 1-hour arithmetic averages required under paragraph (n)(7) of this section must be expressed in milligrams per dry standard cubic meter corrected to 7 percent oxygen (dry basis) and must be used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages must be calculated using the data points required under § 60.13(e)(2);

(10) All valid CEMS data must be used in calculating average emission concentrations even if the minimum



CEMS data requirements of paragraph (n)(8) of this section are not met.

(11) The CEMS must be operated according to performance specification 11 in appendix B of this part;

(12) During each relative accuracy test run of the CEMS required by performance specification 11 in appendix B of this part, particulate matter and oxygen (or carbon dioxide) data must be collected concurrently (or within a 30- to 60-minute period) by both the CEMS and the following test methods:

(i) For particulate matter, EPA Reference Method 5 must be used; and

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B, as applicable, must be used; and

(13) Quarterly accuracy determinations and daily calibration drift tests must be performed in accordance with procedure 2 in appendix F of this part.

(o) To demonstrate continuous compliance with the carbon monoxide emissions limit, you may substitute use of a continuous automated sampling system for the carbon monoxide annual performance test:

(1) Install, calibrate, maintain, and operate a CEMS for measuring carbon monoxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 4B of appendix B of this part, the quality assurance procedure 1 of appendix F of this part and the procedures under § 60.13 must be followed for installation, evaluation, and operation of the CEMS; and

(2) Following the date that the initial performance test for carbon monoxide is completed or is required to be completed under § 60.2140, compliance with the carbon monoxide emission limit may be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, using CEMS outlet data. Except for CEMS data during startup and shutdown, as defined in this subpart, the 1-hour arithmetic averages must be expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages must be calculated using the data points required under § 60.13(e)(2).

(p) The owner/operator of an affected source with a bypass stack shall install,

calibrate (to manufacturers' specifications), maintain, and operate a device or method for measuring the use of the bypass stack including date, time and duration.

(q) For energy recovery units with a design heat input capacity of 100 MMBtu per hour or greater that do not use a carbon monoxide CEMS, you must install, operate, and maintain an oxygen analyzer system as defined in § 60.2265 according to the procedures in paragraphs (q)(1) through (4) of this section:

(1) The oxygen analyzer system must be installed by the initial performance test date specified in § 60.2140;

(2) You must operate the oxygen trim system within compliance with paragraph (q)(3) of this section at all times;

(3) You must maintain the oxygen level such that the 30-day rolling average that is established as the operating limit for oxygen according to paragraph (q)(4) of this section is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test; and

(4) You must calculate and record a 30-day rolling average oxygen concentration using equation 19–19 in section 12.4.1 of EPA Reference Method 19 of Appendix A–7 of this part.

(r) For energy recovery units with annual average heat input rates greater than or equal to 250 MMBtu/hour and waste-burning kilns, you must install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in paragraphs (r)(1) through (8) of this section. If you elect to use a particulate matter CEMS as specified in paragraph (n) of this section, you are not required to use a PM CPMS to monitor particulate matter emissions. For other energy recovery units, you may elect to use PM CPMS operated in accordance with this section. PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure):

(1) Install, calibrate, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 60.2145(l) and (r)(1)(i) through (iii) of this section:

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation detection of PM in the exhaust gas or representative sample. The reportable measurement output from the PM CPMS must be expressed

as milliamps or a digital signal equivalent;

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes; and

(iii) The PM CPMS must be capable of detecting and responding to particulate matter concentration increments no greater than 0.5 mg/actual cubic meter.

(2) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, you must adjust the site-specific operating limit in accordance with the results of the performance test according to the procedures specified in § 60.2110.

(3) Collect PM CPMS hourly average output data for all energy recovery unit or waste-burning kiln operating hours. Express the PM CPMS output as milliamps or the digital signal equivalent.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit or waste-burning kiln operating hours data (milliamps or digital bits).

(5) You must collect data using the PM CPMS at all times the energy recovery unit or waste-burning kiln is operating and at the intervals specified in paragraph (r)(1)(ii) of this section, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in your site-specific monitoring plan.

(6) You must use all the data collected during all energy recovery unit or waste-burning kiln operating hours in assessing the compliance with your operating limit except:

(i) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions are not used in calculations (report any such periods in your annual deviation report);

(ii) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or quality control activities conducted during out-

of-control periods are not used in calculations (report emissions or operating levels and report any such periods in your annual deviation report); and

(iii) Any PM CPMS data recorded during periods of CEMS data during startup and shutdown, as defined in this subpart.

(7) You must record and make available upon request results of PM CPMS system performance audits, as well as the dates and duration of periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return the PM CPMS to operation consistent with your site-specific monitoring plan.

(8) For any deviation of the 30-day rolling average PM CPMS average value from the established operating parameter limit, you must:

(i) Within 48 hours of the deviation, visually inspect the air pollution control device;

(ii) If inspection of the air pollution control device identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value;

(iii) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify the operation of the emissions control device(s). Within 45 days of the deviation, you must re-establish the CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this paragraph; and

(iv) PM CPMS deviations leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a violation of this subpart.

(s) If you use a dry scrubber to comply with the emission limits of this subpart, you must monitor the injection rate of each sorbent and maintain the 3-hour block averages at or above the operating limits established during the hydrogen chloride performance test.

#### **§ 60.2170 Is there a minimum amount of monitoring data I must obtain?**

For each continuous monitoring system required or optionally allowed under § 60.2165, you must collect data according to this section:

(a) You must operate the monitoring system and collect data at all required intervals at all times compliance is required except for periods of

monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods (as specified in 60.2210(o)), and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data.

Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to effect monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable;

(b) You may not use data recorded during monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. You must use all the data collected during all other periods, including data normalized for above scale readings, in assessing the operation of the control device and associated control system; and

(c) Except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments, failure to collect required data is a deviation of the monitoring requirements.

#### **Recordkeeping and Reporting**

##### **§ 60.2175 What records must I keep?**

You must maintain the items (as applicable) as specified in paragraphs (a), (b), and (e) through (x) of this section for a period of at least 5 years:

(a) Calendar date of each record; and

(b) Records of the data described in paragraphs (b)(1) through (6) of this section:

(1) The CISWI unit charge dates, times, weights, and hourly charge rates;

(2) Liquor flow rate to the wet scrubber inlet every 15 minutes of operation, as applicable;

(3) Pressure drop across the wet scrubber system every 15 minutes of operation or amperage to the wet scrubber every 15 minutes of operation, as applicable;

(4) Liquor pH as introduced to the wet scrubber every 15 minutes of operation, as applicable;

(5) For affected CISWI units that establish operating limits for controls other than wet scrubbers under § 60.2110(d) through (g) or § 60.2115, you must maintain data collected for all operating parameters used to determine compliance with the operating limits. For energy recovery units using activated carbon injection or a dry scrubber, you must also maintain records of the load fraction and corresponding sorbent injection rate records;

(6) If a fabric filter is used to comply with the emission limitations, you must record the date, time, and duration of each alarm and the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. You must also record the percent of operating time during each 6-month period that the alarm sounds, calculated as specified in § 60.2110(c);

(c)–(d) [Reserved]

(e) Identification of calendar dates and times for which data show a deviation from the operating limits in table 2 of this subpart or a deviation from other operating limits established under § 60.2110(d) through (g) or § 60.2115 with a description of the deviations, reasons for such deviations, and a description of corrective actions taken;

(f) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating limits, as applicable. Retain a copy of the complete test report including calculations;

(g) All documentation produced as a result of the siting requirements of §§ 60.2045 and 60.2050;

(h) Records showing the names of CISWI unit operators who have completed review of the information in § 60.2095(a) as required by § 60.2095(b), including the date of the initial review and all subsequent annual reviews;

(i) Records showing the names of the CISWI operators who have completed the operator training requirements under § 60.2070, met the criteria for qualification under § 60.2080, and maintained or renewed their qualification under § 60.2085 or § 60.2090. Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications;

(j) For each qualified operator, the phone and/or pager number at which

they can be reached during operating hours;

(k) Records of calibration of any monitoring devices as required under § 60.2165;

(l) Equipment vendor specifications and related operation and maintenance requirements for the incinerator, emission controls, and monitoring equipment;

(m) The information listed in § 60.2095(a);

(n) On a daily basis, keep a log of the quantity of waste burned and the types of waste burned (always required);

(o) Maintain records of the annual air pollution control device inspections that are required for each CISWI unit subject to the emissions limits in table 1 of this subpart or tables 5 through 8 of this subpart, any required maintenance, and any repairs not completed within 10 days of an inspection or the timeframe established by the state regulatory agency;

(p) For continuously monitored pollutants or parameters, you must document and keep a record of the following parameters measured using continuous monitoring systems:

(1) All 6-minute average levels of opacity;

(2) All 1-hour average concentrations of sulfur dioxide emissions;

(3) All 1-hour average concentrations of nitrogen oxides emissions;

(4) All 1-hour average concentrations of carbon monoxide emissions. You must indicate which data are CEMS data during startup and shutdown;

(5) All 1-hour average concentrations of particulate matter emissions;

(6) All 1-hour average concentrations of mercury emissions;

(7) All 1-hour average concentrations of hydrogen chloride emissions;

(8) All 1-hour average percent oxygen concentrations; and

(9) All 1-hour average PM CPMS readings or particulate matter CEMS outputs;

(q) Records indicating use of the bypass stack, including dates, times, and durations.

(r) If you choose to stack test less frequently than annually, consistent with § 60.2155(a) through (c), you must keep annual records that document that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(s) Records of the occurrence and duration of each malfunction of

operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.

(t) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(u) Records of actions taken during periods of malfunction to minimize emissions in accordance with § 60.11(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(v) For operating units that combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to § 241.3(b)(1) of this chapter, you must keep a record which documents how the secondary material meets each of the legitimacy criteria under § 241.3(d)(1). If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to § 241.3(b)(4) of this chapter, you must keep records as to how the operations that produced the fuel satisfies the definition of processing in § 241.2 and each of the legitimacy criteria of § 241.3(d)(1) of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under § 241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per § 241.4, you must keep records documenting that the material is a listed non-waste under § 241.4(a).

(w) Records of the criteria used to establish that the unit qualifies as a small power production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)) and that the waste material the unit is proposed to burn is homogeneous.

(x) Records of the criteria used to establish that the unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)) and that the waste material the unit is proposed to burn is homogeneous.

**§ 60.2180 Where and in what format must I keep my records?**

All records must be available onsite in either paper copy or computer-readable format that can be printed upon request, unless an alternative format is approved by the Administrator.

**§ 60.2185 What reports must I submit?**

See table 4 of this subpart for a summary of the reporting requirements.

**§ 60.2190 What must I submit prior to commencing construction?**

You must submit a notification prior to commencing construction that includes the five items listed in paragraphs (a) through (e) of this section:

(a) A statement of intent to construct;

(b) The anticipated date of commencement of construction;

(c) All documentation produced as a result of the siting requirements of § 60.2050;

(d) The waste management plan as specified in §§ 60.2055 through 60.2065; and

(e) Anticipated date of initial startup.

**§ 60.2195 What information must I submit prior to initial startup?**

You must submit the information specified in paragraphs (a) through (e) of this section prior to initial startup:

(a) The type(s) of waste to be burned;

(b) The maximum design waste burning capacity;

(c) The anticipated maximum charge rate;

(d) If applicable, the petition for site-specific operating limits under § 60.2115; and

(e) The anticipated date of initial startup.

**§ 60.2200 What information must I submit following my initial performance test?**

You must submit the information specified in paragraphs (a) through (c) of this section no later than 60 days following the initial performance test. All reports must be signed by the facilities manager:

(a) The complete test report for the initial performance test results obtained under § 60.2135, as applicable;

(b) The values for the site-specific operating limits established in § 60.2110 or § 60.2115; and

(c) If you are using a fabric filter to comply with the emission limitations, documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by § 60.2165(b).

**§ 60.2205 When must I submit my annual report?**

You must submit an annual report no later than 12 months following the submission of the information in § 60.2200. You must submit subsequent reports no more than 12 months following the previous report. (If the unit is subject to permitting requirements under title V of the Clean Air Act, you may be required by the permit to submit these reports more frequently.)

**§ 60.2210 What information must I include in my annual report?**

The annual report required under § 60.2205 must include the ten items listed in paragraphs (a) through (j) of this section. If you have a deviation from the operating limits or the emission limitations, you must also submit deviation reports as specified in §§ 60.2215, 60.2220, and 60.2225:

- (a) Company name and address;
- (b) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report;
- (c) Date of report and beginning and ending dates of the reporting period;
- (d) The values for the operating limits established pursuant to § 60.2110 or § 60.2115;
- (e) If no deviation from any emission limitation or operating limit that applies to you has been reported, a statement that there was no deviation from the emission limitations or operating limits during the reporting period;
- (f) The highest recorded 3-hour average and the lowest recorded 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported;
- (g) Information recorded under § 60.2175(b)(6) and (c) through (e) for the calendar year being reported;
- (h) For each performance test conducted during the reporting period, if any performance test is conducted, the process unit(s) tested, the pollutant(s) tested and the date that such performance test was conducted. Submit, following the procedure specified in § 60.2235(b)(1), the performance test report no later than the date that you submit the annual report;
- (i) If you met the requirements of § 60.2155(a) or (b), and did not conduct a performance test during the reporting period, you must state that you met the requirements of § 60.2155(a) or (b), and, therefore, you were not required to conduct a performance test during the reporting period;
- (j) Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours, but less than 2 weeks;
- (k) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction that occurred during the reporting period and that caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 60.11(d),

including actions taken to correct a malfunction;

(l) For each deviation from an emission or operating limitation that occurs for a CISWI unit for which you are not using a continuous monitoring system to comply with the emission or operating limitations in this subpart, the annual report must contain the following information:

- (1) The total operating time of the CISWI unit at which the deviation occurred during the reporting period; and
- (2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.
- (m) If there were periods during which the continuous monitoring system, including the CEMS, was out of control as specified in paragraph (o) of this section, the annual report must contain the following information for each deviation from an emission or operating limitation occurring for a CISWI unit for which you are using a continuous monitoring system to comply with the emission and operating limitations in this subpart:
  - (1) The date and time that each malfunction started and stopped;
  - (2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks;
  - (3) The date, time, and duration that each continuous monitoring system was out-of-control, including start and end dates and hours and descriptions of corrective actions taken;
  - (4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period;
  - (5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period;
  - (6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes;
  - (7) A summary of the total duration of continuous monitoring system downtime during the reporting period, and the total duration of continuous monitoring system downtime as a percent of the total operating time of the CISWI unit at which the continuous monitoring system downtime occurred during that reporting period;
  - (8) An identification of each parameter and pollutant that was monitored at the CISWI unit;

(9) A brief description of the CISWI unit;

(10) A brief description of the continuous monitoring system;

(11) The date of the latest continuous monitoring system certification or audit; and

(12) A description of any changes in continuous monitoring system, processes, or controls since the last reporting period.

(n) If there were periods during which the continuous monitoring system, including the CEMS, was not out of control as specified in paragraph (o) of this section, a statement that there were not periods during which the continuous monitoring system was out of control during the reporting period.

(o) A continuous monitoring system is out of control in accordance with the procedure in 40 CFR part 60, appendix F of this part, as if any of the following occur:

(1) The zero (low-level), mid-level (if applicable), or high-level calibration drift exceeds two times the applicable calibration drift specification in the applicable performance specification or in the relevant standard;

(2) The continuous monitoring system fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; and

(3) The continuous opacity monitoring system calibration drift exceeds two times the limit in the applicable performance specification in the relevant standard.

**§ 60.2215 What else must I report if I have a deviation from the operating limits or the emission limitations?**

(a) You must submit a deviation report if any recorded 3-hour average parameter level is above the maximum operating limit or below the minimum operating limit established under this subpart, if the bag leak detection system alarm sounds for more than 5 percent of the operating time for the 6-month reporting period, or if a performance test was conducted that deviated from any emission limitation.

(b) The deviation report must be submitted by August 1 of that year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data you collected during the second half of the calendar year (July 1 to December 31).

**§ 60.2220 What must I include in the deviation report?**

In each report required under § 60.2215, for any pollutant or parameter that deviated from the

emission limitations or operating limits specified in this subpart, include the six items described in paragraphs (a) through (f) of this section:

(a) The calendar dates and times your unit deviated from the emission limitations or operating limit requirements;

(b) The averaged and recorded data for those dates;

(c) Durations and causes of the following:

(1) Each deviation from emission limitations or operating limits and your corrective actions;

(2) Bypass events and your corrective actions; and

(d) A copy of the operating limit monitoring data during each deviation and for any test report that documents the emission levels the process unit(s) tested, the pollutant(s) tested and the date that the performance test was conducted. Submit, following the procedure specified in § 60.2235(b)(1), the performance test report no later than the date that you submit the deviation report.

**§ 60.2225 What else must I report if I have a deviation from the requirement to have a qualified operator accessible?**

(a) If all qualified operators are not accessible for 2 weeks or more, you must take the two actions in paragraphs (a)(1) and (2) of this section:

(1) Submit a notification of the deviation within 10 days that includes the three items in paragraphs (a)(1)(i) through (iii) of this section:

(i) A statement of what caused the deviation;

(ii) A description of what you are doing to ensure that a qualified operator is accessible; and

(iii) The date when you anticipate that a qualified operator will be available.

(2) Submit a status report to the Administrator every 4 weeks that includes the three items in paragraphs (a)(2)(i) through (iii) of this section:

(i) A description of what you are doing to ensure that a qualified operator is accessible;

(ii) The date when you anticipate that a qualified operator will be accessible; and

(iii) Request approval from the Administrator to continue operation of the CISWI unit.

(b) If your unit was shut down by the Administrator, under the provisions of § 60.2100(b)(2), due to a failure to provide an accessible qualified operator, you must notify the Administrator that you are resuming operation once a qualified operator is accessible.

**§ 60.2230 Are there any other notifications or reports that I must submit?**

(a) Yes. You must submit notifications as provided by § 60.7.

(b) If you cease combusting solid waste but continue to operate, you must provide 30 days prior notice of the effective date of the waste-to-fuel switch, consistent with 60.2145(a). The notification must identify:

(1) The name of the owner or operator of the CISWI unit, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

(2) The currently applicable subcategory under this subpart, and any 40 CFR part 63 subpart and subcategory that will be applicable after you cease combusting solid waste;

(3) The fuel(s), non-waste material(s) and solid waste(s) the CISWI unit is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting;

(4) The date on which you became subject to the currently applicable emission limits; and

(5) The date upon which you will cease combusting solid waste, and the date (if different) that you intend for any new requirements to become applicable (*i.e.*, the effective date of the waste-to-fuel switch), consistent with paragraphs (b)(2) and (3) of this section.

**§ 60.2235 In what form can I submit my reports?**

(a) Submit initial, annual and deviation reports electronically on or before the submittal due dates. Submit the reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>.) Use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (<https://www3.epa.gov/ttn/chief/cedri/index.html>). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, submit the report to the Administrator at the appropriate address listed in § 60.4. Once the form has been available in CEDRI for 90 calendar days, you must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the report is submitted.

(b) Submit results of each performance test and CEMS

performance evaluation required by this subpart as follows:

(1) Within 60 days after the date of completing each performance test (*see* § 60.8) required by this subpart, you must submit the results of the performance test following the procedure specified in either paragraph (b)(1)(i) or (b)(1)(ii) of this section:

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site ([https://www3.epa.gov/ttn/chief/ert/ert\\_info.html](https://www3.epa.gov/ttn/chief/ert/ert_info.html)) at the time of the test, you must submit the results of the performance test to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX (<https://cdx.epa.gov/>.) Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the XML schema listed on the EPA's ERT Web site. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph; and

(ii) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in § 60.4.

(2) Within 60 days after the date of completing each continuous emissions monitoring system performance evaluation you must submit the results of the performance evaluation following the procedure specified in either paragraph (b)(2)(i) or (b)(2)(ii) of this section:

(i) For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the EPA via the CEDRI. (CEDRI can be

accessed through the EPA's CDX.) Performance evaluation data must be submitted in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT Web site. If you claim that some of the performance evaluation information being submitted is CBI, you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic storage media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph; and

(ii) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in § 60.4.

**§ 60.2240 Can reporting dates be changed?**

If the Administrator agrees, you may change the semiannual or annual reporting dates. See § 60.19(c) for procedures to seek approval to change your reporting date.

**Title V Operating Permits**

**§ 60.2242 Am I required to apply for and obtain a Title V operating permit for my unit?**

Yes. Each CISWI unit and air curtain incinerator subject to standards under this subpart must operate pursuant to a permit issued under Section 129(e) and Title V of the Clean Air Act.

**Air Curtain Incinerators**

**§ 60.2245 What is an air curtain incinerator?**

(a) An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air

technology such as mass burn, modular, and fluidized bed combustors.)

(b) Air curtain incinerators that burn only the materials listed in paragraphs (b)(1) through (3) of this section are only required to meet the requirements under § 60.2242 and under "Air Curtain Incinerators" (§§ 60.2245 through 60.2260):

- (1) 100 percent wood waste;
- (2) 100 percent clean lumber; and
- (3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

**§ 60.2250 What are the emission limitations for air curtain incinerators?**

Within 60 days after your air curtain incinerator reaches the charge rate at which it will operate, but no later than 180 days after its initial startup, you must meet the two limitations specified in paragraphs (a) and (b) of this section:

- (a) Maintain opacity to less than or equal to 10 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values), except as described in paragraph (b) of this section; and
- (b) Maintain opacity to less than or equal to 35 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) during the startup period that is within the first 30 minutes of operation.

**§ 60.2255 How must I monitor opacity for air curtain incinerators?**

- (a) Use Method 9 of appendix A of this part to determine compliance with the opacity limitation.
- (b) Conduct an initial test for opacity as specified in § 60.8.
- (c) After the initial test for opacity, conduct annual tests no more than 12 calendar months following the date of your previous test.

**§ 60.2260 What are the recordkeeping and reporting requirements for air curtain incinerators?**

- (a) Prior to commencing construction on your air curtain incinerator, submit the three items described in paragraphs (a)(1) through (3) of this section:
  - (1) Notification of your intent to construct the air curtain incinerators;
  - (2) Your planned initial startup date; and
  - (3) Types of materials you plan to burn in your air curtain incinerator.
- (b) Keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format, unless the Administrator approves another format, for at least 5 years.
- (c) Make all records available for submittal to the Administrator or for an inspector's onsite review.

(d) You must submit the results (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) of the initial opacity tests no later than 60 days following the initial test. Submit annual opacity test results within 12 months following the previous report.

(e) Submit initial and annual opacity test reports as electronic or paper copy on or before the applicable submittal date.

(f) Keep a copy of the initial and annual reports onsite for a period of 5 years.

**Definitions**

**§ 60.2265 What definitions must I know?**

Terms used but not defined in this subpart are defined in the Clean Air Act and subpart A (General Provisions) of this part.

*30-day rolling average* means the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes periods when this unit is not operating. The 720 hours should be consecutive, but not necessarily continuous if operations are intermittent.

*Administrator* means the Administrator of the U.S. Environmental Protection Agency or his/her authorized representative or Administrator of a State Air Pollution Control Agency.

*Air curtain incinerator* means an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)

*Annual heat input* means the heat input for the 12 months preceding the compliance demonstration.

*Auxiliary fuel* means natural gas, liquified petroleum gas, fuel oil, or diesel fuel.

*Average annual heat input rate* means annual heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

*Bag leak detection system* means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (*i.e.*, baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light

scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

*Burn-off oven* means any rack reclamation unit, part reclamation unit, or drum reclamation unit. A burn-off oven is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

*Bypass stack* means a device used for discharging combustion gases to avoid severe damage to the air pollution control device or other equipment.

*Calendar quarter* means three consecutive months (nonoverlapping) beginning on: January 1, April 1, July 1, or October 1.

*Calendar year* means 365 consecutive days starting on January 1 and ending on December 31.

*CEMS data during startup and shutdown* means the following:

(1) For incinerators and small remote incinerators: CEMS data collected during the first hours of a CISWI unit startup from a cold start until waste is fed to the unit and the hours of operation following the cessation of waste material being fed to the CISWI unit during a unit shutdown. For each startup event, the length of time that CEMS data may be claimed as being CEMS data during startup must be 48 operating hours or less. For each shutdown event, the length of time that CEMS data may be claimed as being CEMS data during shutdown must be 24 operating hours or less;

(2) For energy recovery units: CEMS data collected during the startup or shutdown periods of operation. Startup begins with either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy (such as steam or heat) for heating, cooling or process purposes, or producing electricity, or the firing of fuel in a boiler or process heater for any purpose after a shutdown event. Startup ends four hours after when the boiler or process heater makes useful thermal energy (such as heat or steam) for heating, cooling, or process purposes, or generates electricity, whichever is earlier. Shutdown begins when the boiler or process heater no longer makes useful thermal energy (such as heat or steam) for heating, cooling, or process purposes and/or generates electricity or when no fuel is being fed to the boiler or process heater, whichever is earlier. Shutdown ends when the boiler or process heater no longer makes useful thermal energy (such as steam or heat) for heating, cooling, or process purposes and/or generates electricity, and no fuel is being combusted in the boiler or process heater; and

(3) For waste-burning kilns: CEMS data collected during the periods of kiln operation that do not include normal operations. Startup means the time from when a shutdown kiln first begins firing fuel until it begins producing clinker. Startup begins when a shutdown kiln turns on the induced draft fan and begins firing fuel in the main burner. Startup ends when feed is being continuously introduced into the kiln for at least 120 minutes or when the feed rate exceeds 60 percent of the kiln design limitation rate, whichever occurs first. Shutdown means the cessation of kiln operation. Shutdown begins when feed to the kiln is halted and ends when continuous kiln rotation ceases.

*Chemical recovery unit* means combustion units burning materials to recover chemical constituents or to produce chemical compounds where there is an existing commercial market for such recovered chemical constituents or compounds. A chemical recovery unit is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart. The following seven types of units are considered chemical recovery units:

(1) Units burning only pulping liquors (*i.e.*, black liquor) that are reclaimed in a pulping liquor recovery process and reused in the pulping process;

(2) Units burning only spent sulfuric acid used to produce virgin sulfuric acid;

(3) Units burning only wood or coal feedstock for the production of charcoal;

(4) Units burning only manufacturing byproduct streams/residue containing catalyst metals that are reclaimed and reused as catalysts or used to produce commercial grade catalysts;

(5) Units burning only coke to produce purified carbon monoxide that is used as an intermediate in the production of other chemical compounds;

(6) Units burning only hydrocarbon liquids or solids to produce hydrogen, carbon monoxide, synthesis gas, or other gases for use in other manufacturing processes; and

(7) Units burning only photographic film to recover silver.

*Chemotherapeutic waste* means waste material resulting from the production or use of antineoplastic agents used for the purpose of stopping or reversing the growth of malignant cells.

*Clean lumber* means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Clean lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as

chromate copper arsenate, pentachlorophenol, and creosote.

*Commercial and industrial solid waste incineration (CISWI) unit* means any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding 6 months, any solid waste as that term is defined in 40 CFR part 241. If the operating unit burns materials other than traditional fuels as defined in § 241.2 that have been discarded, and you do not keep and produce records as required by § 60.2175(v), the operating unit is a CISWI unit. While not all CISWI units will include all of the following components, a CISWI unit includes, but is not limited to, the solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The CISWI unit does not include air pollution control equipment or the stack. The CISWI unit boundary starts at the solid waste hopper (if applicable) and extends through two areas: The combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and the combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. The CISWI unit includes all ash handling systems connected to the bottom ash handling system.

*Contained gaseous material* means gases that are in a container when that container is combusted.

*Continuous emission monitoring system (CEMS)* means the total equipment that may be required to meet the data acquisition and availability requirements of this subpart, used to sample, condition (if applicable), analyze, and provide a record of emissions.

*Continuous monitoring system (CMS)* means the total equipment, required under the emission monitoring sections in applicable subparts, used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters. A particulate matter continuous parameter monitoring system (PM CPMS) is a type of CMS.

*Cyclonic burn barrel* means a combustion device for waste materials that is attached to a 55 gallon, open-head drum. The device consists of a lid, which fits onto and encloses the drum, and a blower that forces combustion air into the drum in a cyclonic manner to enhance the mixing of waste material and air. A cyclonic burn barrel is not an incinerator, a waste-burning kiln, an



energy recovery unit or a small, remote incinerator under this subpart.

*Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation, operating limit, or operator qualification and accessibility requirements; and

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit.

*Dioxins/furans* means tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

*Discard* means, for purposes of this subpart and 40 CFR part 60, subpart DDDD, only, burned in an incineration unit without energy recovery.

*Drum reclamation unit* means a unit that burns residues out of drums (e.g., 55 gallon drums) so that the drums can be reused.

*Dry scrubber* means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems in fluidized bed boilers and process heaters are included in this definition. A dry scrubber is a dry control system.

*Energy recovery* means the process of recovering thermal energy from combustion for useful purposes such as steam generation or process heating.

*Energy recovery unit* means a combustion unit combusting solid waste (as that term is defined by the Administrator in 40 CFR part 241) for energy recovery. Energy recovery units include units that would be considered boilers and process heaters if they did not combust solid waste.

*Energy recovery unit designed to burn biomass (Biomass)* means an energy recovery unit that burns solid waste, biomass, and non-coal solid materials but less than 10 percent coal, on a heat input basis on an annual average, either alone or in combination with liquid waste, liquid fuel or gaseous fuels.

*Energy recovery unit designed to burn coal (Coal)* means an energy recovery unit that burns solid waste and at least 10 percent coal on a heat input basis on an annual average, either alone or in combination with liquid waste, liquid fuel or gaseous fuels.

*Energy recovery unit designed to burn liquid waste materials and gas (Liquid/gas)* means an energy recovery unit that

burns a liquid waste with liquid or gaseous fuels not combined with any solid fuel or waste materials.

*Energy recovery unit designed to burn solid materials (Solids)* includes energy recovery units designed to burn coal and energy recovery units designed to burn biomass.

*Fabric filter* means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse.

*Foundry sand thermal reclamation unit* means a type of part reclamation unit that removes coatings that are on foundry sand. A foundry sand thermal reclamation unit is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

*Incinerator* means any furnace used in the process of combusting solid waste (as that term is defined by the Administrator in 40 CFR part 241) for the purpose of reducing the volume of the waste by removing combustible matter. Incinerator designs include single chamber and two-chamber.

*In-line coal mill* means those coal mills using kiln exhaust gases in their process. Coal mills with a heat source other than the kiln or coal mills using exhaust gases from the clinker cooler alone are not an in-line coal mill.

*In-line kiln/raw mill* means a system in a Portland Cement production process where a dry kiln system is integrated with the raw mill so that all or a portion of the kiln exhaust gases are used to perform the drying operation of the raw mill, with no auxiliary heat source used. In this system the kiln is capable of operating without the raw mill operating, but the raw mill cannot operate without the kiln gases, and consequently, the raw mill does not generate a separate exhaust gas stream.

*Kiln* means an oven or furnace, including any associated preheater or precalciner devices, in-line raw mills, in-line coal mills or alkali bypasses used for processing a substance by burning, firing or drying. Kilns include cement kilns that produce clinker by heating limestone and other materials for subsequent production of Portland Cement. Because the alkali bypass, in-line raw mill and in-line coal mill are considered an integral part of the kiln, the kiln emissions limits also apply to the exhaust of the alkali bypass, in-line raw mill and in-line coal mill.

*Laboratory analysis unit* means units that burn samples of materials for the purpose of chemical or physical analysis. A laboratory analysis unit is not an incinerator, waste-burning kiln,

an energy recovery unit or a small, remote incinerator under this subpart.

*Load fraction* means the actual heat input of an energy recovery unit divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (e.g., for 50 percent load the load fraction is 0.5).

*Low-level radioactive waste* means waste material which contains radioactive nuclides emitting primarily beta or gamma radiation, or both, in concentrations or quantities that exceed applicable federal or state standards for unrestricted release. Low-level radioactive waste is not high-level radioactive waste, spent nuclear fuel, or byproduct material as defined by the Atomic Energy Act of 1954 (42 U.S.C. 2014(e)(2)).

*Malfunction* means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused, in part, by poor maintenance or careless operation are not malfunctions.

*Minimum voltage or amperage* means 90 percent of the lowest test-run average voltage or amperage to the electrostatic precipitator measured during the most recent particulate matter or mercury performance test demonstrating compliance with the applicable emission limits.

*Modification or modified CISWI unit* means a CISWI unit that has been changed later than August 7, 2013 and that meets one of two criteria:

(1) The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not including the cost of land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI unit used to calculate these costs, see the definition of CISWI unit; and

(2) Any physical change in the CISWI unit or change in the method of operating it that increases the amount of any air pollutant emitted for which section 129 or section 111 of the Clean Air Act has established standards.

*Municipal solid waste or municipal-type solid waste* means household, commercial/retail, or institutional waste. Household waste includes material discarded by residential dwellings, hotels, motels, and other similar permanent or temporary housing. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at



industrial facilities, and other similar establishments or facilities. Institutional waste includes materials discarded by schools, by hospitals (nonmedical), by nonmanufacturing activities at prisons and government facilities, and other similar establishments or facilities. Household, commercial/retail, and institutional waste does include yard waste and refuse-derived fuel. Household, commercial/retail, and institutional waste does not include used oil; sewage sludge; wood pallets; construction, renovation, and demolition wastes (which include railroad ties and telephone poles); clean wood; industrial process or manufacturing wastes; medical waste; or motor vehicles (including motor vehicle parts or vehicle fluff).

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

*Operating day* means a 24-hour period between 12 midnight and the following midnight during which any amount of solid waste is combusted at any time in the CISWI unit.

*Oxygen analyzer system* means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler or process heater flue gas, boiler or process heater, firebox, or other appropriate location. This definition includes oxygen trim systems and certified oxygen CEMS. The source owner or operator is responsible to install, calibrate, maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.

*Oxygen trim system* means a system of monitors that is used to maintain excess air at the desired level in a combustion device over its operating range. A typical system consists of a flue gas oxygen and/or carbon monoxide monitor that automatically provides a feedback signal to the combustion air controller or draft controller.

*Part reclamation unit* means a unit that burns coatings off parts (e.g., tools, equipment) so that the parts can be reconditioned and reused.

*Particulate matter* means total particulate matter emitted from CISWI units as measured by Method 5 or Method 29 of appendix A of this part.

*Pathological waste* means waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable).

*Performance evaluation* means the conduct of relative accuracy testing, calibration error testing, and other

measurements used in validating the continuous monitoring system data.

*Performance test* means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission standard as specified in the performance test section of the relevant standard.

*Process change* means any of the following physical or operational changes:

(1) A physical change (maintenance activities excluded) to the CISWI unit which may increase the emission rate of any air pollutant to which a standard applies;

(2) An operational change to the CISWI unit where a new type of non-hazardous secondary material is being combusted;

(3) A physical change (maintenance activities excluded) to the air pollution control devices used to comply with the emission limits for the CISWI unit (e.g., replacing an electrostatic precipitator with a fabric filter); and

(4) An operational change to the air pollution control devices used to comply with the emission limits for the affected CISWI unit (e.g., change in the sorbent injection rate used for activated carbon injection).

*Rack reclamation unit* means a unit that burns the coatings off racks used to hold small items for application of a coating. The unit burns the coating overspray off the rack so the rack can be reused.

*Raw mill* means a ball or tube mill, vertical roller mill or other size reduction equipment, that is not part of an in-line kiln/raw mill, used to grind feed to the appropriate size. Moisture may be added or removed from the feed during the grinding operation. If the raw mill is used to remove moisture from feed materials, it is also, by definition, a raw material dryer. The raw mill also includes the air separator associated with the raw mill.

*Reconstruction* means rebuilding a CISWI unit and meeting two criteria:

(1) The reconstruction begins on or after August 7, 2013; and

(2) The cumulative cost of the construction over the life of the incineration unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not including land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI unit used to calculate these costs, see the definition of CISWI unit.

*Refuse-derived fuel* means a type of municipal solid waste produced by processing municipal solid waste through shredding and size

classification. This includes all classes of refuse-derived fuel including two fuels:

(1) Low-density fluff refuse-derived fuel through densified refuse-derived fuel; and

(2) Pelletized refuse-derived fuel.

*Responsible official* means one of the following:

(1) For a corporation: A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

(i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or

(ii) The delegation of authority to such representatives is approved in advance by the permitting authority;

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

(3) For a municipality, state, federal, or other public agency: Either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA); or

(4) For affected facilities:

(i) The designated representative in so far as actions, standards, requirements, or prohibitions under Title IV of the Clean Air Act or the regulations promulgated thereunder are concerned; or

(ii) The designated representative for any other purposes under part 60.

*Shutdown* means, for incinerators and small, remote incinerators, the period of time after all waste has been combusted in the primary chamber.

*Small, remote incinerator* means an incinerator that combusts solid waste (as that term is defined by the Administrator in 40 CFR part 241) and combusts 3 tons per day or less solid waste and is more than 25 miles driving distance to the nearest municipal solid waste landfill.

*Soil treatment unit* means a unit that thermally treats petroleum-contaminated soils for the sole purpose of site remediation. A soil treatment unit may be direct-fired or indirect fired. A soil treatment unit is not an

incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

*Solid waste* means the term solid waste as defined in 40 CFR 241.2.

*Solid waste incineration unit* means a distinct operating unit of any facility which combusts any solid waste (as that term is defined by the Administrator in 40 CFR part 241) material from commercial or industrial establishments or the general public (including single and multiple residences, hotels and motels). Such term does not include incinerators or other units required to have a permit under section 3005 of the Solid Waste Disposal Act. The term "solid waste incineration unit" does not include:

- (1) Materials recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals;
- (2) Qualifying small power production facilities, as defined in section 3(17)(C) of the Federal Power Act (16 U.S.C. 769(17)(C)), or qualifying cogeneration facilities, as defined in section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)), which burn homogeneous waste (such as units which burn tires or used oil, but not including refuse-derived fuel) for the production of electric energy or in the case of qualifying cogeneration facilities

which burn homogeneous waste for the production of electric energy and steam or forms of useful energy (such as heat) which are used for industrial, commercial, heating or cooling purposes; or

(3) Air curtain incinerators provided that such incinerators only burn wood wastes, yard wastes, and clean lumber and that such air curtain incinerators comply with opacity limitations to be established by the Administrator by rule.

*Space heater* means a unit that meets the requirements of 40 CFR 279.23. A space heater is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

*Standard conditions*, when referring to units of measure, means a temperature of 68 °F (20 °C) and a pressure of 1 atmosphere (101.3 kilopascals).

*Startup period* means, for incinerators and small, remote incinerators, the period of time between the activation of the system and the first charge to the unit.

*Useful thermal energy* means energy (i.e., steam, hot water, or process heat) that meets the minimum operating temperature and/or pressure required by any energy use system that uses energy

provided by the affected energy recovery unit.

*Waste-burning kiln* means a kiln that is heated, in whole or in part, by combusting solid waste (as that term is defined by the Administrator in 40 CFR part 241). Secondary materials used in Portland cement kilns shall not be deemed to be combusted unless they are introduced into the flame zone in the hot end of the kiln or mixed with the precalciner fuel.

*Wet scrubber* means an add-on air pollution control device that uses an aqueous or alkaline scrubbing liquor to collect particulate matter (including nonvaporous metals and condensed organics) and/or to absorb and neutralize acid gases.

*Wood waste* means untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include:

- (1) Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands;
- (2) Construction, renovation, or demolition wastes; and
- (3) Clean lumber.

TABLE 1 TO SUBPART CCCC OF PART 60—EMISSION LIMITATIONS FOR INCINERATORS FOR WHICH CONSTRUCTION IS COMMENCED AFTER NOVEMBER 30, 1999, BUT NO LATER THAN JUNE 4, 2010, OR FOR WHICH MODIFICATION OR RECONSTRUCTION IS COMMENCED ON OR AFTER JUNE 1, 2001, BUT NO LATER THAN AUGUST 7, 2013

For the air pollutant	You must meet this emission limitation <sup>1</sup>	Using this averaging time	And determining compliance using this method
Cadmium .....	0.004 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of this part).
Carbon monoxide .....	157 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxin/Furan (toxic equivalency basis).	0.41 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meters per run).	Performance test (Method 23 of appendix A-7 of this part).
Hydrogen chloride .....	62 parts per million by dry volume.	3-run average (For Method 26, collect a minimum volume of 120 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run).	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A-8).
Lead .....	0.04 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of this part).
Mercury .....	0.47 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of this part).
Nitrogen Oxides .....	388 parts per million by dry volume.	3-run average (for Method 7E, 1 hour minimum sample time per run).	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).
Opacity .....	10 percent .....	6-minute averages .....	Performance test (Method 9 of appendix A of this part).
Oxides of nitrogen .....	388 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 7, 7A, 7C, 7D, or 7E of appendix A of this part).
Particulate matter .....	70 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 5 or 29 of appendix A of this part).

TABLE 1 TO SUBPART CCCC OF PART 60—EMISSION LIMITATIONS FOR INCINERATORS FOR WHICH CONSTRUCTION IS COMMENCED AFTER NOVEMBER 30, 1999, BUT NO LATER THAN JUNE 4, 2010, OR FOR WHICH MODIFICATION OR RECONSTRUCTION IS COMMENCED ON OR AFTER JUNE 1, 2001, BUT NO LATER THAN AUGUST 7, 2013—Continued

For the air pollutant	You must meet this emission limitation <sup>1</sup>	Using this averaging time	And determining compliance using this method
Sulfur Dioxide .....	20 parts per million by dry volume.	3-run average (For Method 6, collect a minimum volume of 20 liters per run. For Method 6C, collect sample for a minimum duration of 1 hour per run).	Performance test (Method 6 or 6C at 40 CFR part 60, appendix A-4).

<sup>1</sup> All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions.

TABLE 2 TO SUBPART CCCC OF PART 60—OPERATING LIMITS FOR WET SCRUBBERS

For these operating parameters	You must establish these operating limits	And monitoring using these minimum frequencies		
		Data measurement	Data recording	Averaging time
Charge rate .....	Maximum charge rate .....	Continuous .....	Every hour .....	Daily (batch units) 3-hour rolling (continuous and intermittent units). <sup>1</sup>
Pressure drop across the wet scrubber or amperage to wet scrubber.	Minimum pressure drop or amperage.	Continuous .....	Every 15 minutes.	3-hour rolling. <sup>1</sup>
Scrubber liquor flow rate .....	Minimum flow rate .....	Continuous .....	Every 15 minutes.	3-hour rolling. <sup>1</sup>
Scrubber liquor pH .....	Minimum pH .....	Continuous .....	Every 15 minutes.	3-hour rolling. <sup>1</sup>

<sup>1</sup> Calculated each hour as the average of the previous 3 operating hours.

TABLE 3 TO SUBPART CCCC OF PART 60—TOXIC EQUIVALENCY FACTORS

Dioxin/furan congener	Toxic equivalency factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin .....	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin .....	0.5
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin .....	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin .....	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin .....	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin .....	0.01
Octachlorinated dibenzo-p-dioxin .....	0.001
2,3,7,8-tetrachlorinated dibenzofuran .....	0.1
2,3,4,7,8-pentachlorinated dibenzofuran .....	0.5
1,2,3,7,8-pentachlorinated dibenzofuran .....	0.05
1,2,3,4,7,8-hexachlorinated dibenzofuran .....	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran .....	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran .....	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran .....	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran .....	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran .....	0.01
Octachlorinated dibenzofuran .....	0.001

TABLE 4 TO SUBPART CCCC OF PART 60—SUMMARY OF REPORTING REQUIREMENTS<sup>1</sup>

Report	Due date	Contents	Reference
Preconstruction report .....	Prior to commencing construction.	Statement of intent to construct ..... Anticipated date of commencement of construction. Documentation for siting requirements. Waste management plan.	§ 60.2190.
Startup notification .....	Prior to initial startup .....	Anticipated date of initial startup. • Type of waste to be burned ..... • Maximum design waste burning capacity. • Anticipated maximum charge rate. • If applicable, the petition for site-specific operating limits.	§ 60.2195.

TABLE 4 TO SUBPART CCCC OF PART 60—SUMMARY OF REPORTING REQUIREMENTS<sup>1</sup>—Continued

Report	Due date	Contents	Reference
Initial test report .....	No later than 60 days following the initial performance test.	<ul style="list-style-type: none"> <li>• Complete test report for the initial performance test.</li> <li>• The values for the site-specific operating limits.</li> <li>• Installation of bag leak detection system for fabric filter.</li> </ul>	§ 60.2200.
Annual report .....	No later than 12 months following the submission of the initial test report. Subsequent reports are to be submitted no more than 12 months following the previous report.	<ul style="list-style-type: none"> <li>• Name and address .....</li> <li>• Statement and signature by responsible official.</li> <li>• Date of report.</li> <li>• Values for the operating limits.</li> <li>• Highest recorded 3-hour average and the lowest 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported.</li> <li>• For each performance test conducted during the reporting period, if any performance test is conducted, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted.</li> <li>• If a performance test was not conducted during the reporting period, a statement that the requirements of § 60.2155(a) were met.</li> <li>• Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours but less than 2 weeks.</li> <li>• If you are conducting performance tests once every 3 years consistent with § 60.2155(a), the date of the last 2 performance tests, a comparison of the emission level you achieved in the last 2 performance tests to the 75 percent emission limit threshold required in § 60.2155(a) and a statement as to whether there have been any operational changes since the last performance test that could increase emissions.</li> </ul>	§§ 60.2205 and 60.2210.
Emission limitation or operating limit deviation report.	By August 1 of that year for data collected during the first half of the calendar year. By February 1 of the following year for data collected during the second half of the calendar year.	<ul style="list-style-type: none"> <li>• Dates and times of deviation .....</li> <li>• Averaged and recorded data for those dates.</li> <li>• Duration and causes of each deviation and the corrective actions taken.</li> <li>• Copy of operating limit monitoring data and, if any performance test was conducted that documents emission levels, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted.</li> <li>• Dates, times and causes for monitor downtime incidents.</li> </ul>	§ 60.2215 and 60.2220.
Qualified operator deviation notification.	Within 10 days of deviation ....	<ul style="list-style-type: none"> <li>• Statement of cause of deviation .....</li> <li>• Description of efforts to have an accessible qualified operator.</li> <li>• The date a qualified operator will be accessible.</li> </ul>	§ 60.2225(a)(1).
Qualified operator deviation status report.	Every 4 weeks following deviation.	<ul style="list-style-type: none"> <li>• Description of efforts to have an accessible qualified operator.</li> <li>• The date a qualified operator will be accessible.</li> <li>• Request for approval to continue operation.</li> </ul>	§ 60.2225(a)(2).
Qualified operator deviation notification of resumed operation.	Prior to resuming operation ....	<ul style="list-style-type: none"> <li>• Notification that you are resuming operation.</li> </ul>	§ 60.2225(b).

<sup>1</sup> This table is only a summary, see the referenced sections of the rule for the complete requirements.

TABLE 5 TO SUBPART CCCC OF PART 60—EMISSION LIMITATIONS FOR INCINERATORS THAT COMMENCED CONSTRUCTION AFTER JUNE 4, 2010, OR THAT COMMENCED RECONSTRUCTION OR MODIFICATION AFTER AUGUST 7, 2013

For the air pollutant	You must meet this emission limitation <sup>1</sup>	Using this averaging time	And determining compliance using this method
Cadmium .....	0.0023 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meter per run).	Performance test (Method 29 at 40 CFR part 60, appendix A–8 of this part). Use ICPMS for the analytical finish.
Carbon monoxide .....	17 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 10 at 40 CFR part 60, appendix A–4).
Dioxin/furan (Total Mass Basis).	0.58 nanograms per dry standard cubic meter <sup>3</sup> .	3-run average (collect a minimum volume of 4 dry standard cubic meters per run).	Performance test (Method 23 at 40 CFR part 60, appendix A–7).
Dioxin/furan (toxic equivalency basis).	0.13 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meter per run).	Performance test (Method 23 at 40 CFR part 60, appendix A–7).
Fugitive ash .....	Visible emissions for no more than 5 percent of the hourly observation period.	Three 1-hour observation periods .....	Visible emission test (Method 22 at 40 CFR part 60, appendix A–7).
Hydrogen chloride .....	0.091 parts per million by dry volume.	3-run average (For Method 26, collect a minimum volume of 360 liters per run. For Method 26A, collect a minimum volume of 3 dry standard cubic meters per run).	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A–8).
Lead .....	0.015 milligrams per dry standard cubic meter <sup>3</sup> .	3-run average (collect a minimum volume of 4 dry standard cubic meters per run).	Performance test (Method 29 of appendix A–8 at 40 CFR part 60). Use ICPMS for the analytical finish.
Mercury .....	0.00084 milligrams per dry standard cubic meter <sup>3</sup> .	3-run average (collect enough volume to meet a detection limit data quality objective of 0.03 ug/dry standard cubic meter).	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A–8) or ASTM D6784–02 (Reapproved 2008). <sup>2</sup>
Nitrogen Oxides .....	23 parts per million dry volume.	3-run average (for Method 7E, 1 hour minimum sample time per run).	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A–4).
Particulate matter (filterable) .....	18 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters per run).	Performance test (Method 5 or 29 at 40 CFR part 60, appendix A–3 or appendix A–8 at 40 CFR part 60).
Sulfur dioxide .....	11 parts per million dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 6 or 6C at 40 CFR part 60, appendix A–4).

<sup>1</sup> All emission limitations are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the Total Mass Limit or the toxic equivalency basis limit.

<sup>2</sup> Incorporated by reference, see § 60.17.

<sup>3</sup> If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 60.2155 if all of the other provisions of § 60.2155 are met. For all other pollutants that do not contain a footnote “3”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

TABLE 6 TO SUBPART CCCC OF PART 60—EMISSION LIMITATIONS FOR ENERGY RECOVERY UNITS THAT COMMENCED CONSTRUCTION AFTER JUNE 4, 2010, OR THAT COMMENCED RECONSTRUCTION OR MODIFICATION AFTER AUGUST 7, 2013

For the air pollutant	You must meet this emission limitation <sup>1</sup>		Using this averaging time	And determining compliance using this method
	Liquid/gas	Solids		
Cadmium .....	0.023 milligrams per dry standard cubic meter.	Biomass—0.0014 milligrams per dry standard cubic meter. <sup>3</sup> Coal—0.0017 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meters per run).	Performance test (Method 29 at 40 CFR part 60, appendix A–8). Use ICPMS for the analytical finish.
Carbon monoxide	35 parts per million dry volume.	Biomass—240 parts per million dry volume. Coal—95 parts per million dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 10 at 40 CFR part 60, appendix A–4).
Dioxin/furans (Total Mass Basis).	No Total Mass Basis limit, must meet the toxic equivalency basis limit below.	Biomass—0.52 nanograms per dry standard cubic meter. <sup>3</sup> Coal—5.1 nanograms per dry standard cubic meter <sup>3</sup> .	3-run average (collect a minimum volume of 4 dry standard cubic meters).	Performance test (Method 23 at 40 CFR part 60, appendix A–7).
Dioxins/furans (toxic equivalency basis).	0.093 nanograms per dry standard cubic meter <sup>3</sup> .	Biomass—0.076 nanograms per dry standard cubic meter. <sup>3</sup> Coal—0.075 nanograms per dry standard cubic meter <sup>3</sup> .	3-run average (collect a minimum volume of 4 dry standard cubic meters per run).	Performance test (Method 23 of appendix A–7 of this part).

TABLE 6 TO SUBPART CCCC OF PART 60—EMISSION LIMITATIONS FOR ENERGY RECOVERY UNITS THAT COMMENCED CONSTRUCTION AFTER JUNE 4, 2010, OR THAT COMMENCED RECONSTRUCTION OR MODIFICATION AFTER AUGUST 7, 2013—Continued

For the air pollutant	You must meet this emission limitation <sup>1</sup>		Using this averaging time	And determining compliance using this method
	Liquid/gas	Solids		
Fugitive ash .....	Visible emissions for no more than 5 percent of the hourly observation period.	Three 1-hour observation periods	Visible emission test (Method 22 at 40 CFR part 60, appendix A-7).	Fugitive ash.
Hydrogen chloride	14 parts per million dry volume.	Biomass—0.20 parts per million dry volume. Coal—58 parts per million dry volume.	3-run average (For Method 26, collect a minimum volume of 360 liters per run. For Method 26A, collect a minimum volume of 3 dry standard cubic meters per run).	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A-8).
Lead .....	0.096 milligrams per dry standard cubic meter.	Biomass—0.014 milligrams per dry standard cubic meter. <sup>3</sup> Coal—0.057 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meters per run).	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical finish.
Mercury .....	0.00056 milligrams per dry standard cubic meter <sup>3</sup> .	Biomass—0.0022 milligrams per dry standard cubic meter. Coal—0.013 milligrams per dry standard cubic meter.	3-run average (collect enough volume to meet an in-stack detection limit data quality objective of 0.03 ug/dscm).	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A-8) or ASTM D6784-02 (Reapproved 2008). <sup>2</sup>
Oxides of nitrogen	76 parts per million dry volume.	Biomass—290 parts per million dry volume. Coal—460 parts per million dry volume.	3-run average (for Method 7E, 1 hour minimum sample time per run).	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).
Particulate matter (filterable).	110 milligrams per dry standard cubic meter.	Biomass—5.1 milligrams per dry standard cubic meter. Coal—130 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter per run).	Performance test (Method 5 or 29 at 40 CFR part 60, appendix A-3 or appendix A-8) if the unit has an annual average heat input rate less than 250 MMBtu/hr; or PM CPMS (as specified in § 60.2145(x)) if the unit has an annual average heat input rate equal to or greater than 250 MMBtu/hr.
Sulfur dioxide .....	720 parts per million dry volume.	Biomass—7.3 parts per million dry volume. Coal—850 parts per million dry volume.	3-run average (for Method 6, collect a minimum of 60 liters, for Method 6C, 1 hour minimum sample time per run).	Performance test (Method 6 or 6C at 40 CFR part 60, appendix A-4).

<sup>1</sup> All emission limitations are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the Total Mass Basis limit or the toxic equivalency basis limit.

<sup>2</sup> Incorporated by reference, see § 60.17.

<sup>3</sup> If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 60.2155 if all of the other provisions of § 60.2155 are met. For all other pollutants that do not contain a footnote "3", your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

TABLE 7 TO SUBPART CCCC OF PART 60—EMISSION LIMITATIONS FOR WASTE-BURNING KILNS THAT COMMENCED CONSTRUCTION AFTER JUNE 4, 2010, OR RECONSTRUCTION OR MODIFICATION AFTER AUGUST 7, 2013

For the air pollutant	You must meet this emission limitation <sup>1</sup>	Using this averaging time	And determining compliance using this method <sup>3</sup>
Cadmium .....	0.0014 milligrams per dry standard cubic meter <sup>2</sup> .	3-run average (collect a minimum volume of 4 dry standard cubic meters per run).	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical finish.
Carbon monoxide .....	90 (long kilns)/190 (preheater/precalciner) parts per million dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxins/furans (total mass basis).	0.51 nanograms per dry standard cubic meter <sup>2</sup> .	3-run average (collect a minimum volume of 4 dry standard cubic meters per run).	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Dioxins/furans (toxic equivalency basis).	0.075 nanograms per dry standard cubic meter <sup>2</sup> .	3-run average (collect a minimum volume of 4 dry standard cubic meters).	Performance test (Method 23 at 40 CFR part 60, appendix A-7).

TABLE 7 TO SUBPART CCCC OF PART 60—EMISSION LIMITATIONS FOR WASTE-BURNING KILNS THAT COMMENCED CONSTRUCTION AFTER JUNE 4, 2010, OR RECONSTRUCTION OR MODIFICATION AFTER AUGUST 7, 2013—Continued

For the air pollutant	You must meet this emission limitation <sup>1</sup>	Using this averaging time	And determining compliance using this method <sup>3</sup>
Hydrogen chloride .....	3.0 parts per million dry volume <sup>2</sup> .	3-run average (1 hour minimum sample time per run) or 30-day rolling average if HCl CEMS are used.	Performance test (Method 321 at 40 CFR part 63, appendix A) or HCl CEMS if a wet scrubber or dry scrubber is not used, as specified in § 60.2145(j).
Lead .....	0.014 milligrams per dry standard cubic meter <sup>2</sup> .	3-run average (collect a minimum volume of 4 dry standard cubic meters).	Performance test (Method 29 at 40 CFR part 60, appendix A–8). Use ICPMS for the analytical finish.
Mercury .....	0.0037 milligrams per dry standard cubic meter.	30-day rolling average .....	Mercury CEMS or sorbent trap monitoring system (performance specification 12A or 12B, respectively, of appendix B of this part), as specified in § 60.2145(j).
Oxides of nitrogen .....	200 parts per million dry volume.	30-day rolling average .....	NO <sub>x</sub> CEMS (performance specification 2 of appendix B and procedure 1 of appendix F of this part).
Particulate matter (filterable).	4.9 milligrams per dry standard cubic meter.	30-day rolling average .....	PM CPMS (as specified in § 60.2145(x)).
Sulfur dioxide .....	28 parts per million dry volume.	30-day rolling average .....	Sulfur dioxide CEMS (performance specification 2 of appendix B and procedure 1 of appendix F of this part).

<sup>1</sup> All emission limitations are measured at 7 percent oxygen (except for CEMS data during startup and shutdown), dry basis at standard conditions. For dioxins/furans, you must meet either the Total Mass Basis limit or the toxic equivalency basis limit.

<sup>2</sup> If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 60.2155 if all of the other provisions of § 60.2155 are met. For all other pollutants that do not contain a footnote “2”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

<sup>3</sup> Alkali bypass and in-line coal mill stacks are subject to performance testing only, as specified in § 60.2145(y)(3). They are not subject to the CEMS, sorbent trap or CPMS requirements that otherwise may apply to the main kiln exhaust.

TABLE 8 TO SUBPART CCCC OF PART 60—EMISSION LIMITATIONS FOR SMALL, REMOTE INCINERATORS THAT COMMENCED CONSTRUCTION AFTER JUNE 4, 2010, OR THAT COMMENCED RECONSTRUCTION OR MODIFICATION AFTER AUGUST 7, 2013

For the air pollutant	You must meet this emission limitation <sup>1</sup>	Using this averaging time	And determining compliance using this method
Cadmium .....	0.67 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meters per run).	Performance test (Method 29 at 40 CFR part 60, appendix A–8).
Carbon monoxide .....	13 parts per million dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 10 at 40 CFR part 60, appendix A–4).
Dioxins/furans (total mass basis).	1,800 nanograms per dry standard cubic meter..	3-run average (collect a minimum volume of 1 dry standard cubic meters per run).	Performance test (Method 23 at 40 CFR part 60, appendix A–7).
Dioxins/furans (toxic equivalency basis).	31 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meters).	Performance test (Method 23 at 40 CFR part 60, appendix A–7).
Fugitive ash .....	Visible emissions for no more than 5 percent of the hourly observation period.	Three 1-hour observation periods .....	Visible emissions test (Method 22 at 40 CFR part 60, appendix A–7).
Hydrogen chloride .....	200 parts per million by dry volume.	3-run average (For Method 26, collect a minimum volume of 60 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run).	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A–8).
Lead .....	2.0 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meters).	Performance test (Method 29 at 40 CFR part 60, appendix A–8). Use ICPMS for the analytical finish.
Mercury .....	0.0035 milligrams per dry standard cubic meter.	3-run average (For Method 29 and ASTM D6784–02 (Reapproved 2008), <sup>2</sup> collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum volume as specified in Method 30B at 40 CFR part 60, appendix A).	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A–8) or ASTM D6784–02 (Reapproved 2008). <sup>2</sup>
Oxides of nitrogen .....	170 parts per million dry volume.	3-run average (for Method 7E, 1 hour minimum sample time per run).	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A–4).
Particulate matter (filterable).	270 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meters).	Performance test (Method 5 or 29 at 40 CFR part 60, appendix A–3 or appendix A–8).

TABLE 8 TO SUBPART CCCC OF PART 60—EMISSION LIMITATIONS FOR SMALL, REMOTE INCINERATORS THAT COMMENCED CONSTRUCTION AFTER JUNE 4, 2010, OR THAT COMMENCED RECONSTRUCTION OR MODIFICATION AFTER AUGUST 7, 2013—Continued

For the air pollutant	You must meet this emission limitation <sup>1</sup>	Using this averaging time	And determining compliance using this method
Sulfur dioxide .....	1.2 parts per million dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 6 or 6c at 40 CFR part 60, appendix A-4).

<sup>1</sup>All emission limitations are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the Total Mass Basis limit or the toxic equivalency basis limit.

<sup>2</sup>Incorporated by reference, see § 60.17.

■ 3. Part 60 is amended by revising subpart DDDD to read as follows:

### Subpart DDDD—Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units

Sec.

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Table 8 to Subpart DDDD of Part 60—Model Rule—Emission Limitations That Apply to Waste-Burning Kilns After May 20, 2011 [Date to be specified in state plan.]

Table 9 to Subpart DDDD of Part 60—Model Rule—Emission Limitations That Apply to Small, Remote Incinerators After May 20, 2011 [Date to be specified in state plan]

**Subpart DDDD—Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units****Introduction****§ 60.2500 What is the purpose of this subpart?**

This subpart establishes emission guidelines and compliance schedules for the control of emissions from commercial and industrial solid waste incineration (CISWI) units. The pollutants addressed by these emission guidelines are listed in table 2 of this subpart and tables 6 through 9 of this subpart. These emission guidelines are developed in accordance with sections 111(d) and 129 of the Clean Air Act and subpart B of this part.

**§ 60.2505 Am I affected by this subpart?**

(a) If you are the Administrator of an air quality program in a state or United States protectorate with one or more existing CISWI units that meet the criteria in paragraphs (b) through (d) of this section, you must submit a state plan to U.S. Environmental Protection Agency (EPA) that implements the emission guidelines contained in this subpart.

(b) You must submit a state plan to EPA by December 3, 2001 for incinerator units that commenced construction on or before November 30, 1999 and that were not modified or reconstructed after June 1, 2001.

(c) You must submit a state plan that meets the requirements of this subpart and contains the more stringent emission limit for the respective pollutant in table 6 of this subpart or table 1 of subpart CCCC of this part to EPA by February 7, 2014 for incinerators that commenced construction after November 30, 1999, but no later than June 4, 2010, or commenced modification or reconstruction after June 1, 2001 but no later than August 7, 2013.

(d) You must submit a state plan to EPA that meets the requirements of this subpart and contains the emission limits in tables 7 through 9 of this subpart by February 7, 2014, for CISWI units other than incinerator units that commenced construction on or before June 4, 2010, or commenced modification or reconstruction after June 4, 2010 but no later than August 7, 2013.

**§ 60.2510 Is a state plan required for all states?**

No. You are not required to submit a state plan if there are no existing CISWI units in your state, and you submit a negative declaration letter in place of the state plan.

**§ 60.2515 What must I include in my state plan?**

(a) You must include the nine items described in paragraphs (a)(1) through (9) of this section in your state plan:

(1) Inventory of affected CISWI units, including those that have ceased operation but have not been dismantled;

(2) Inventory of emissions from affected CISWI units in your state;

(3) Compliance schedules for each affected CISWI unit;

(4) Emission limitations, operator training and qualification requirements, a waste management plan, and operating limits for affected CISWI units that are at least as protective as the emission guidelines contained in this subpart;

(5) Performance testing, recordkeeping, and reporting requirements;

(6) Certification that the hearing on the state plan was held, a list of witnesses and their organizational affiliations, if any, appearing at the hearing, and a brief written summary of each presentation or written submission;

(7) Provision for state progress reports to EPA;

(8) Identification of enforceable state mechanisms that you selected for implementing the emission guidelines of this subpart; and

(9) Demonstration of your state's legal authority to carry out the sections 111(d) and 129 state plan.

(b) Your state plan may deviate from the format and content of the emission guidelines contained in this subpart. However, if your state plan does deviate in content, you must demonstrate that your state plan is at least as protective as the emission guidelines contained in this subpart. Your state plan must address regulatory applicability, increments of progress for retrofit, operator training and qualification, a waste management plan, emission limitations, performance testing, operating limits, monitoring, recordkeeping and reporting, and air curtain incinerator requirements.

(c) You must follow the requirements of subpart B of this part (Adoption and Submittal of State Plans for Designated Facilities) in your state plan.

**§ 60.2520 Is there an approval process for my state plan?**

Yes. The EPA will review your state plan according to § 60.27.

**§ 60.2525 What if my state plan is not approvable?**

(a) If you do not submit an approvable state plan (or a negative declaration letter) by December 2, 2002, EPA will

develop a federal plan according to § 60.27 to implement the emission guidelines contained in this subpart. Owners and operators of CISWI units not covered by an approved state plan must comply with the federal plan. The federal plan is an interim action and will be automatically withdrawn when your state plan is approved.

(b) If you do not submit an approvable state plan (or a negative declaration letter) to EPA that meets the requirements of this subpart and contains the emission limits in tables 6 through 9 of this subpart for CISWI units that commenced construction on or before June 4, 2010 and incinerator or air curtain incinerator units that commenced reconstruction or modification on or after June 1, 2001 but no later than August 7, 2013, then EPA will develop a federal plan according to § 60.27 to implement the emission guidelines contained in this subpart. Owners and operators of CISWI units not covered by an approved state plan must comply with the federal plan. The federal plan is an interim action and will be automatically withdrawn when your state plan is approved.

**§ 60.2530 Is there an approval process for a negative declaration letter?**

No. The EPA has no formal review process for negative declaration letters. Once your negative declaration letter has been received, EPA will place a copy in the public docket and publish a notice in the **Federal Register**. If, at a later date, an existing CISWI unit is found in your state, the federal plan implementing the emission guidelines contained in this subpart would automatically apply to that CISWI unit until your state plan is approved.

**§ 60.2535 What compliance schedule must I include in my state plan?**

(a) For CISWI units in the incinerator subcategory and air curtain incinerators that commenced construction on or before November 30, 1999, your state plan must include compliance schedules that require CISWI units in the incinerator subcategory and air curtain incinerators to achieve final compliance as expeditiously as practicable after approval of the state plan but not later than the earlier of the two dates specified in paragraphs (a)(1) and (2) of this section:

(1) December 1, 2005; and

(2) Three years after the effective date of state plan approval.

(b) For CISWI units in the incinerator subcategory and air curtain incinerators that commenced construction after November 30, 1999, but on or before June 4, 2010 or that commenced

reconstruction or modification on or after June 1, 2001 but no later than August 7, 2013, and for CISWI units in the small remote incinerator, energy recovery unit, and waste-burning kiln subcategories that commenced construction before June 4, 2010, your state plan must include compliance schedules that require CISWI units to achieve final compliance as expeditiously as practicable after approval of the state plan but not later than the earlier of the two dates specified in paragraphs (b)(1) and (2) of this section:

(1) February 7, 2018; and

(2) Three years after the effective date of State plan approval.

(c) For compliance schedules more than 1 year following the effective date of State plan approval, State plans must include dates for enforceable increments of progress as specified in § 60.2580.

**§ 60.2540 Are there any State plan requirements for this subpart that apply instead of the requirements specified in subpart B?**

Yes. Subpart B establishes general requirements for developing and processing section 111(d) plans. This subpart applies instead of the requirements in subpart B of this part for paragraphs (a) and (b) of this section:

(a) State plans developed to implement this subpart must be as protective as the emission guidelines contained in this subpart. State plans must require all CISWI units to comply by the dates specified in § 60.2535. This applies instead of the option for case-by-case less stringent emission standards and longer compliance schedules in § 60.24(f); and

(b) State plans developed to implement this subpart are required to include two increments of progress for the affected CISWI units. These two minimum increments are the final control plan submittal date and final compliance date in § 60.21(h)(1) and (5). This applies instead of the requirement of § 60.24(e)(1) that would require a State plan to include all five increments of progress for all CISWI units.

**§ 60.2541 In lieu of a state plan submittal, are there other acceptable option(s) for a state to meet its Clean Air Act section 111(d)/129(b)(2) obligations?**

Yes, a state may meet its Clean Air Act section 111(d)/129 obligations by submitting an acceptable written request for delegation of the federal plan that meets the requirements of this section. This is the only other option for a state to meet its Clean Air Act section 111(d)/129 obligations.

(a) An acceptable federal plan delegation request must include the following:

(1) A demonstration of adequate resources and legal authority to administer and enforce the federal plan;

(2) The items under § 60.2515(a)(1), (2) and (7);

(3) Certification that the hearing on the state delegation request, similar to the hearing for a state plan submittal, was held, a list of witnesses and their organizational affiliations, if any, appearing at the hearing, and a brief written summary of each presentation or written submission; and

(4) A commitment to enter into a Memorandum of Agreement with the Regional Administrator who sets forth the terms, conditions, and effective date of the delegation and that serves as the mechanism for the transfer of authority. Additional guidance and information is given in EPA's Delegation Manual, Item 7-139, Implementation and Enforcement of 111(d)(2) and 111(d)/(2)/129(b)(3) federal plans.

(b) A state with an already approved CISWI Clean Air Act section 111(d)/129 state plan is not precluded from receiving EPA approval of a delegation request for the revised federal plan, providing the requirements of paragraph (a) of this section are met, and at the time of the delegation request, the state also requests withdrawal of EPA's previous state plan approval.

(c) A state's Clean Air Act section 111(d)/129 obligations are separate from its obligations under Title V of the Clean Air Act.

**§ 60.2542 What authorities will not be delegated to state, local, or tribal agencies?**

The authorities listed under § 60.2030(c) will not be delegated to state, local, or tribal agencies.

**§ 60.2545 Does this subpart directly affect CISWI unit owners and operators in my state?**

(a) No. This subpart does not directly affect CISWI unit owners and operators in your state. However, CISWI unit owners and operators must comply with the state plan you develop to implement the emission guidelines contained in this subpart. States may choose to incorporate the model rule text directly in their state plan.

(b) If you do not submit an approvable plan to implement and enforce the guidelines contained in this subpart for CISWI units that commenced construction before November 30, 1999 by December 2, 2002, EPA will implement and enforce a federal plan, as provided in § 60.2525, to ensure that each unit within your state reaches

compliance with all the provisions of this subpart by December 1, 2005.

(c) If you do not submit an approvable plan to implement and enforce the guidelines contained in this subpart by February 7, 2014, for CISWI units that commenced construction on or before June 4, 2010, EPA will implement and enforce a federal plan, as provided in § 60.2525, to ensure that each unit within your state that commenced construction on or before June 4, 2010, reaches compliance with all the provisions of this subpart by February 7, 2018.

### Applicability of State Plans

#### § 60.2550 What CISWI units must I address in my state plan?

(a) Your state plan must address incineration units that meet all three criteria described in paragraphs (a)(1) through (3) of this section:

(1) CISWI units and air curtain incinerators in your state that commenced construction on or before June 4, 2010, or commenced modification or reconstruction after June 4, 2010 but no later than August 7, 2013;

(2) Incineration units that meet the definition of a CISWI unit as defined in § 60.2875; and

(3) Incineration units not exempt under § 60.2555.

(b) If the owner or operator of a CISWI unit or air curtain incinerator makes changes that meet the definition of modification or reconstruction after August 7, 2013, the CISWI unit becomes subject to subpart CCCC of this part and the state plan no longer applies to that unit.

(c) If the owner or operator of a CISWI unit makes physical or operational changes to an existing CISWI unit primarily to comply with your state plan, subpart CCCC of this part does not apply to that unit. Such changes do not qualify as modifications or reconstructions under subpart CCCC of this part.

#### § 60.2555 What combustion units are exempt from my state plan?

This subpart exempts the types of units described in paragraphs (a), (c) through (i), (m), and (n) of this section, but some units are required to provide notifications. Air curtain incinerators are exempt from the requirements in this subpart except for the provisions in §§ 60.2805, 60.2860, and 60.2870:

(a) *Pathological waste incineration units.* Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level

radioactive waste, and/or chemotherapeutic waste as defined in § 60.2875 are not subject to this subpart if you meet the two requirements specified in paragraphs (a)(1) and (2) of this section:

(1) Notify the Administrator that the unit meets these criteria; and

(2) Keep records on a calendar quarter basis of the weight of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste burned, and the weight of all other fuels and wastes burned in the unit.

(b) [Reserved]

(c) *Municipal waste combustion units.* Incineration units that are subject to subpart Ea of this part (Standards of Performance for Municipal Waste Combustors); subpart Eb of this part (Standards of Performance for Large Municipal Waste Combustors); subpart Cb of this part (Emission Guidelines and Compliance Time for Large Municipal Combustors); AAAA of this part (Standards of Performance for Small Municipal Waste Combustion Units); or subpart BBBB of this part (Emission Guidelines for Small Municipal Waste Combustion Units).

(d) *Medical waste incineration units.* Incineration units regulated under subpart Ec of this part (Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996) or subpart Ca of this part (Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators).

(e) *Small power production facilities.* Units that meet the three requirements specified in paragraphs (e)(1) through (4) of this section:

(1) The unit qualifies as a small power-production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C));

(2) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity;

(3) You submit documentation to the Administrator notifying the Agency that the qualifying small power production facility is combusting homogenous waste; and

(4) You maintain the records specified in § 60.2740(v).

(f) *Cogeneration facilities.* Units that meet the three requirements specified in paragraphs (f)(1) through (4) of this section:

(1) The unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B));

(2) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity and steam or

other forms of energy used for industrial, commercial, heating, or cooling purposes;

(3) You submit documentation to the Administrator notifying the Agency that the qualifying cogeneration facility is combusting homogenous waste; and

(4) You maintain the records specified in § 60.2740(w).

(g) *Hazardous waste combustion units.* Units for which you are required to get a permit under section 3005 of the Solid Waste Disposal Act.

(h) *Materials recovery units.* Units that combust waste for the primary purpose of recovering metals, such as primary and secondary smelters.

(i) *Air curtain incinerators.* Air curtain incinerators that burn only the materials listed in paragraphs (i)(1) through (3) of this section are only required to meet the requirements under § 60.2805 and under “Air Curtain Incinerators” (§§ 60.2810 through 60.2870):

(1) 100 percent wood waste;

(2) 100 percent clean lumber; and

(3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

(j)–(l) [Reserved]

(m) *Sewage treatment plants.* Incineration units regulated under subpart O of this part (Standards of Performance for Sewage Treatment Plants).

(n) *Sewage sludge incineration units.* Incineration units combusting sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter that are subject to subpart LLLL of this part (Standards of Performance for New Sewage Sludge Incineration Units) or subpart MMMM of this part (Emission Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units).

(o) *Other solid waste incineration units.* Incineration units that are subject to subpart EEEE of this part (Standards of Performance for Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006) or subpart FFFF of this part (Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units That Commenced Construction On or Before December 9, 2004).

### Use of Model Rule

#### § 60.2560 What is the “model rule” in this subpart?

(a) The model rule is the portion of these emission guidelines (§§ 60.2575 through 60.2875) that addresses the

regulatory requirements applicable to CISWI units. The model rule provides these requirements in regulation format. You must develop a state plan that is at least as protective as the model rule. You may use the model rule language as part of your state plan. Alternative language may be used in your state plan if you demonstrate that the alternative language is at least as protective as the model rule contained in this subpart.

(b) In the model rule of §§ 60.2575 to 60.2875, “you” means the owner or operator of a CISWI unit.

**§ 60.2565 How does the model rule relate to the required elements of my state plan?**

Use the model rule to satisfy the state plan requirements specified in § 60.2515(a)(4) and (5).

**§ 60.2570 What are the principal components of the model rule?**

The model rule contains the eleven major components listed in paragraphs (a) through (k) of this section:

- (a) Increments of progress toward compliance;
- (b) Waste management plan;
- (c) Operator training and qualification;
- (d) Emission limitations and operating limits;
- (e) Performance testing;
- (f) Initial compliance requirements;
- (g) Continuous compliance requirements;
- (h) Monitoring;
- (i) Recordkeeping and reporting;
- (j) Definitions; and
- (k) Tables.

**Model Rule—Increments of Progress**

**§ 60.2575 What are my requirements for meeting increments of progress and achieving final compliance?**

If you plan to achieve compliance more than 1 year following the effective date of state plan approval, you must meet the two increments of progress specified in paragraphs (a) and (b) of this section:

- (a) Submit a final control plan; and
- (b) Achieve final compliance.

**§ 60.2580 When must I complete each increment of progress?**

Table 1 of this subpart specifies compliance dates for each of the increments of progress.

**§ 60.2585 What must I include in the notifications of achievement of increments of progress?**

Your notification of achievement of increments of progress must include the three items specified in paragraphs (a) through (c) of this section:

- (a) Notification that the increment of progress has been achieved;

(b) Any items required to be submitted with each increment of progress; and

(c) Signature of the owner or operator of the CISWI unit.

**§ 60.2590 When must I submit the notifications of achievement of increments of progress?**

Notifications for achieving increments of progress must be postmarked no later than 10 business days after the compliance date for the increment.

**§ 60.2595 What if I do not meet an increment of progress?**

If you fail to meet an increment of progress, you must submit a notification to the Administrator postmarked within 10 business days after the date for that increment of progress in table 1 of this subpart. You must inform the Administrator that you did not meet the increment, and you must continue to submit reports each subsequent calendar month until the increment of progress is met.

**§ 60.2600 How do I comply with the increment of progress for submittal of a control plan?**

For your control plan increment of progress, you must satisfy the two requirements specified in paragraphs (a) and (b) of this section:

(a) Submit the final control plan that includes the five items described in paragraphs (a)(1) through (5) of this section:

- (1) A description of the devices for air pollution control and process changes that you will use to comply with the emission limitations and other requirements of this subpart;
- (2) The type(s) of waste to be burned;
- (3) The maximum design waste burning capacity;
- (4) The anticipated maximum charge rate; and
- (5) If applicable, the petition for site-specific operating limits under § 60.2680.

(b) Maintain an onsite copy of the final control plan.

**§ 60.2605 How do I comply with the increment of progress for achieving final compliance?**

For the final compliance increment of progress, you must complete all process changes and retrofit construction of control devices, as specified in the final control plan, so that, if the affected CISWI unit is brought online, all necessary process changes and air pollution control devices would operate as designed.

**§ 60.2610 What must I do if I close my CISWI unit and then restart it?**

(a) If you close your CISWI unit but will restart it prior to the final compliance date in your state plan, you must meet the increments of progress specified in § 60.2575.

(b) If you close your CISWI unit but will restart it after your final compliance date, you must complete emission control retrofits and meet the emission limitations and operating limits on the date your unit restarts operation.

**§ 60.2615 What must I do if I plan to permanently close my CISWI unit and not restart it?**

If you plan to close your CISWI unit rather than comply with the state plan, submit a closure notification, including the date of closure, to the Administrator by the date your final control plan is due.

**Model Rule—Waste Management Plan**

**§ 60.2620 What is a waste management plan?**

A waste management plan is a written plan that identifies both the feasibility and the methods used to reduce or separate certain components of solid waste from the waste stream in order to reduce or eliminate toxic emissions from incinerated waste.

**§ 60.2625 When must I submit my waste management plan?**

You must submit a waste management plan no later than the date specified in table 1 of this subpart for submittal of the final control plan.

**§ 60.2630 What should I include in my waste management plan?**

A waste management plan must include consideration of the reduction or separation of waste-stream elements such as paper, cardboard, plastics, glass, batteries, or metals; or the use of recyclable materials. The plan must identify any additional waste management measures, and the source must implement those measures considered practical and feasible, based on the effectiveness of waste management measures already in place, the costs of additional measures, the emissions reductions expected to be achieved, and any other environmental or energy impacts they might have.

**Model Rule—Operator Training and Qualification**

**§ 60.2635 What are the operator training and qualification requirements?**

(a) No CISWI unit can be operated unless a fully trained and qualified CISWI unit operator is accessible, either at the facility or can be at the facility

within 1 hour. The trained and qualified CISWI unit operator may operate the CISWI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified CISWI unit operators are temporarily not accessible, you must follow the procedures in § 60.2665.

(b) Operator training and qualification must be obtained through a state-approved program or by completing the requirements included in paragraph (c) of this section.

(c) Training must be obtained by completing an incinerator operator training course that includes, at a minimum, the three elements described in paragraphs (c)(1) through (3) of this section:

(1) Training on the eleven subjects listed in paragraphs (c)(1)(i) through (xi) of this section:

(i) Environmental concerns, including types of emissions;

(ii) Basic combustion principles, including products of combustion;

(iii) Operation of the specific type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures;

(iv) Combustion controls and monitoring;

(v) Operation of air pollution control equipment and factors affecting performance (if applicable);

(vi) Inspection and maintenance of the incinerator and air pollution control devices;

(vii) Actions to prevent and correct malfunctions or to prevent conditions that may lead to malfunctions;

(viii) Bottom and fly ash characteristics and handling procedures;

(ix) Applicable federal, state, and local regulations, including Occupational Safety and Health Administration workplace standards;

(x) Pollution prevention; and

(xi) Waste management practices.

(2) An examination designed and administered by the instructor.

(3) Written material covering the training course topics that can serve as reference material following completion of the course.

**§ 60.2640 When must the operator training course be completed?**

The operator training course must be completed by the later of the three dates specified in paragraphs (a) through (c) of this section:

(a) The final compliance date (Increment 2);

(b) Six months after CISWI unit startup; and

(c) Six months after an employee assumes responsibility for operating the CISWI unit or assumes responsibility for

supervising the operation of the CISWI unit.

**§ 60.2645 How do I obtain my operator qualification?**

(a) You must obtain operator qualification by completing a training course that satisfies the criteria under § 60.2635(b).

(b) Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under § 60.2635(c)(2).

**§ 60.2650 How do I maintain my operator qualification?**

To maintain qualification, you must complete an annual review or refresher course covering, at a minimum, the five topics described in paragraphs (a) through (e) of this section:

(a) Update of regulations;

(b) Incinerator operation, including startup and shutdown procedures, waste charging, and ash handling;

(c) Inspection and maintenance;

(d) Prevention and correction of malfunctions or conditions that may lead to malfunction; and

(e) Discussion of operating problems encountered by attendees.

**§ 60.2655 How do I renew my lapsed operator qualification?**

You must renew a lapsed operator qualification by one of the two methods specified in paragraphs (a) and (b) of this section:

(a) For a lapse of less than 3 years, you must complete a standard annual refresher course described in § 60.2650; and

(b) For a lapse of 3 years or more, you must repeat the initial qualification requirements in § 60.2645(a).

**§ 60.2660 What site-specific documentation is required?**

(a) Documentation must be available at the facility and readily accessible for all CISWI unit operators that addresses the ten topics described in paragraphs (a)(1) through (10) of this section. You must maintain this information and the training records required by paragraph (c) of this section in a manner that they can be readily accessed and are suitable for inspection upon request:

(1) Summary of the applicable standards under this subpart;

(2) Procedures for receiving, handling, and charging waste;

(3) Incinerator startup, shutdown, and malfunction procedures;

(4) Procedures for maintaining proper combustion air supply levels;

(5) Procedures for operating the incinerator and associated air pollution control systems within the standards established under this subpart;

(6) Monitoring procedures for demonstrating compliance with the incinerator operating limits;

(7) Reporting and recordkeeping procedures;

(8) The waste management plan required under §§ 60.2620 through 60.2630;

(9) Procedures for handling ash; and

(10) A list of the wastes burned during the performance test.

(b) You must establish a program for reviewing the information listed in paragraph (a) of this section with each incinerator operator:

(1) The initial review of the information listed in paragraph (a) of this section must be conducted by the later of the three dates specified in paragraphs (b)(1)(i) through (iii) of this section:

(i) The final compliance date (Increment 2);

(ii) Six months after CISWI unit startup; and

(iii) Six months after being assigned to operate the CISWI unit.

(2) Subsequent annual reviews of the information listed in paragraph (a) of this section must be conducted no later than 12 months following the previous review.

(c) You must also maintain the information specified in paragraphs (c)(1) through (3) of this section:

(1) Records showing the names of CISWI unit operators who have completed review of the information in § 60.2660(a) as required by § 60.2660(b), including the date of the initial review and all subsequent annual reviews;

(2) Records showing the names of the CISWI operators who have completed the operator training requirements under § 60.2635, met the criteria for qualification under § 60.2645, and maintained or renewed their qualification under § 60.2650 or § 60.2655. Records must include documentation of training, the dates of the initial refresher training, and the dates of their qualification and all subsequent renewals of such qualifications; and

(3) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

**§ 60.2665 What if all the qualified operators are temporarily not accessible?**

If all qualified operators are temporarily not accessible (*i.e.*, not at the facility and not able to be at the facility within 1 hour), you must meet one of the two criteria specified in paragraphs (a) and (b) of this section, depending on the length of time that a qualified operator is not accessible:

(a) When all qualified operators are not accessible for more than 8 hours, but less than 2 weeks, the CISWI unit may be operated by other plant personnel familiar with the operation of the CISWI unit who have completed a review of the information specified in § 60.2660(a) within the past 12 months. However, you must record the period when all qualified operators were not accessible and include this deviation in the annual report as specified under § 60.2770;

(b) When all qualified operators are not accessible for 2 weeks or more, you must take the two actions that are described in paragraphs (b)(1) and (2) of this section:

(1) Notify the Administrator of this deviation in writing within 10 days. In the notice, state what caused this deviation, what you are doing to ensure that a qualified operator is accessible, and when you anticipate that a qualified operator will be accessible; and

(2) Submit a status report to the Administrator every 4 weeks outlining what you are doing to ensure that a qualified operator is accessible, stating when you anticipate that a qualified operator will be accessible and requesting approval from the Administrator to continue operation of the CISWI unit. You must submit the first status report 4 weeks after you notify the Administrator of the deviation under paragraph (b)(1) of this section. If the Administrator notifies you that your request to continue operation of the CISWI unit is disapproved, the CISWI unit may continue operation for 90 days, then must cease operation. Operation of the unit may resume if you meet the two requirements in paragraphs (b)(2)(i) and (ii) of this section:

(i) A qualified operator is accessible as required under § 60.2635(a); and

(ii) You notify the Administrator that a qualified operator is accessible and that you are resuming operation.

#### **Model Rule—Emission Limitations and Operating Limits**

##### **§ 60.2670 What emission limitations must I meet and by when?**

(a) You must meet the emission limitations for each CISWI unit, including bypass stack or vent, specified in table 2 of this subpart or tables 6 through 9 of this subpart by the final compliance date under the approved state plan, federal plan, or delegation, as applicable. The emission limitations apply at all times the unit is operating including and not limited to startup, shutdown, or malfunction.

(b) Units that do not use wet scrubbers must maintain opacity to less

than or equal to the percent opacity (three 1-hour blocks consisting of ten 6-minute average opacity values) specified in table 2 of this subpart, as applicable.

##### **§ 60.2675 What operating limits must I meet and by when?**

(a) If you use a wet scrubber(s) to comply with the emission limitations, you must establish operating limits for up to four operating parameters (as specified in table 3 of this subpart) as described in paragraphs (a)(1) through (4) of this section during the initial performance test:

(1) Maximum charge rate, calculated using one of the two different procedures in paragraph (a)(1)(i) or (ii) of this section, as appropriate:

(i) For continuous and intermittent units, maximum charge rate is 110 percent of the average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations; and

(ii) For batch units, maximum charge rate is 110 percent of the daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(2) Minimum pressure drop across the wet particulate matter scrubber, which is calculated as the lowest 1-hour average pressure drop across the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations; or minimum amperage to the wet scrubber, which is calculated as the lowest 1-hour average amperage to the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.

(3) Minimum scrubber liquid flow rate, which is calculated as the lowest 1-hour average liquid flow rate at the inlet to the wet acid gas or particulate matter scrubber measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(4) Minimum scrubber liquor pH, which is calculated as the lowest 1-hour average liquor pH at the inlet to the wet acid gas scrubber measured during the most recent performance test demonstrating compliance with the HCl emission limitation.

(b) You must meet the operating limits established during the initial performance test on the date the initial performance test is required or completed (whichever is earlier). You must conduct an initial performance evaluation of each continuous monitoring system and continuous

parameter monitoring system within 90 days of installation of the monitoring system.

(c) If you use a fabric filter to comply with the emission limitations and you do not use a PM CPMS for monitoring PM compliance, you must operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by you to initiate corrective action.

(d) If you use an electrostatic precipitator to comply with the emission limitations and you do not use a PM CPMS for monitoring PM compliance, you must measure the (secondary) voltage and amperage of the electrostatic precipitator collection plates during the particulate matter performance test. Calculate the average electric power value (secondary voltage × secondary current = secondary electric power) for each test run. The operating limit for the electrostatic precipitator is calculated as the lowest 1-hour average secondary electric power measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.

(e) If you use activated carbon sorbent injection to comply with the emission limitations, you must measure the sorbent flow rate during the performance testing. The operating limit for the carbon sorbent injection is calculated as the lowest 1-hour average sorbent flow rate measured during the most recent performance test demonstrating compliance with the mercury emission limitations. For energy recovery units, when your unit operates at lower loads, multiply your sorbent injection rate by the load fraction, as defined in this subpart, to determine the required injection rate (e.g., for 50 percent load, multiply the injection rate operating limit by 0.5).

(f) If you use selective noncatalytic reduction to comply with the emission limitations, you must measure the charge rate, the secondary chamber temperature (if applicable to your CISWI unit), and the reagent flow rate during the nitrogen oxides performance testing. The operating limits for the selective noncatalytic reduction are calculated as the highest 1-hour average charge rate, lowest secondary chamber temperature,

and lowest reagent flow rate measured during the most recent performance test demonstrating compliance with the nitrogen oxides emission limitations.

(g) If you use a dry scrubber to comply with the emission limitations, you must measure the injection rate of each sorbent during the performance testing. The operating limit for the injection rate of each sorbent is calculated as the lowest 1-hour average injection rate of each sorbent measured during the most recent performance test demonstrating compliance with the hydrogen chloride emission limitations. For energy recovery units, when your unit operates at lower loads, multiply your sorbent injection rate by the load fraction, as defined in this subpart, to determine the required injection rate (e.g., for 50 percent load, multiply the injection rate operating limit by 0.5).

(h) If you do not use a wet scrubber, electrostatic precipitator, or fabric filter to comply with the emission limitations, and if you do not determine compliance with your particulate matter emission limitation with either a particulate matter CEMS or a particulate matter CPMS, you must maintain opacity to less than or equal to ten percent opacity (1-hour block average).

(i) If you use a PM CPMS to demonstrate compliance, you must establish your PM CPMS operating limit and determine compliance with it according to paragraphs (i)(1) through (5) of this section:

(1) During the initial performance test or any such subsequent performance test that demonstrates compliance with

the PM limit, record all hourly average output values (milliamps, or the digital signal equivalent) from the PM CPMS for the periods corresponding to the test runs (e.g., three 1-hour average PM CPMS output values for three 1-hour test runs):

(i) Your PM CPMS must provide a 4–20 milliamp output, or the digital signal equivalent, and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps or digital bits;

(ii) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to at least two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit; and

(iii) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values, or their digital equivalent, from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs).

(2) If the average of your three PM performance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS

signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS output values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in (i)(1) through (5) of this section:

(i) Determine your instrument zero output with one of the following procedures:

(A) Zero point data for *in-situ* instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench;

(B) Zero point data for extractive instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air;

(C) The zero point can also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept; and

(D) If none of the steps in paragraphs (i)(2)(i)(A) through (C) of this section are possible, you must use a zero output value provided by the manufacturer.

(ii) Determine your PM CPMS instrument average in milliamps, or the digital equivalent, and the average of your corresponding three PM compliance test runs, using equation 1:

$$\bar{x} = \frac{1}{n} \sum_{i=1}^n X_i, \bar{y} = \frac{1}{n} \sum_{i=1}^n Y_i$$

(Eq. 1)

Where:

X<sub>1</sub> = the PM CPMS output data points for the three runs constituting the performance test,

Y<sub>1</sub> = the PM concentration value for the three runs constituting the performance test, and

n = the number of data points.

(iii) With your instrument zero expressed in milliamps, or the digital equivalent, your three run average PM CPMS milliamp value, or its digital equivalent, and your three run average

PM concentration from your three compliance tests, determine a relationship of mg/dscm per milliamp or digital signal equivalent, with equation 2:

$$R = \frac{Y_1}{(X_1 - z)}$$

(Eq. 2)

Where:

R = the relative mg/dscm per milliamp, or the digital equivalent, for your PM CPMS,

Y<sub>1</sub> = the three run average mg/dscm PM concentration,

X<sub>1</sub> = the three run average milliamp output, or the digital equivalent, from your PM CPMS, and

z = the milliamp or digital signal equivalent of your instrument zero determined from paragraph (i)(2)(i) of this section.

(iv) Determine your source specific 30-day rolling average operating limit using the mg/dscm per milliamp value, or per digital signal equivalent, from

equation 2 in equation 3, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit:

$$O_1 = z + \frac{0.75(L)}{R} \quad (\text{Eq. 3})$$

Where:

$O_1$  = the operating limit for your PM CPMS on a 30-day rolling average, in milliamps or their digital signal equivalent,

$L$  = your source emission limit expressed in mg/dscm,

$z$  = your instrument zero in milliamps or digital equivalent, determined from paragraph (i)(2)(i) of this section, and

$R$  = the relative mg/dscm per milliamp, or per digital signal output equivalent, for your PM CPMS, from equation 2.

(3) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your operating limit by averaging the PM CPMS milliamp or

digital signal output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using equation 4 and you must submit all compliance test and PM CPMS data according to the reporting requirements in paragraph (i)(5) of this section:

$$O_1 = \frac{1}{n} \sum_{i=1}^n X_i$$

(Eq. 4)

Where:

$X_i$  = the PM CPMS data points for all runs  $i$ ,

$n$  = the number of data points, and

$O_h$  = your site specific operating limit, in milliamps or digital signal equivalent.

(4) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (*e.g.*, milliamps or digital signal bits, PM concentration, raw data signal) on a 30-day rolling average basis.

(5) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (*e.g.*, beta attenuation), span of the instruments primary analytical range, milliamp or digital signal value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp or digital signals corresponding to each PM compliance test run.

**§ 60.2680 What if I do not use a wet scrubber, fabric filter, activated carbon injection, selective noncatalytic reduction, an electrostatic precipitator, or a dry scrubber to comply with the emission limitations?**

(a) If you use an air pollution control device other than a wet scrubber, activated carbon injection, selective noncatalytic reduction, fabric filter, an electrostatic precipitator, or a dry scrubber or limit emissions in some other manner, including mass balances, to comply with the emission limitations under § 60.2670, you must petition the EPA Administrator for specific operating limits to be established during the initial performance test and continuously monitored thereafter. You must submit the petition at least sixty days before the performance test is scheduled to begin. Your petition must include the five items listed in paragraphs (a)(1) through (5) of this section:

(1) Identification of the specific parameters you propose to use as additional operating limits;

(2) A discussion of the relationship between these parameters and emissions of regulated pollutants, identifying how emissions of regulated pollutants change with changes in these parameters and how limits on these parameters will serve to limit emissions of regulated pollutants;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the operating limits on these parameters;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor

these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(b) [Reserved]

**Model Rule—Performance Testing**

**§ 60.2690 How do I conduct the initial and annual performance test?**

(a) All performance tests must consist of a minimum of three test runs conducted under conditions representative of normal operations.

(b) You must document that the waste burned during the performance test is representative of the waste burned under normal operating conditions by maintaining a log of the quantity of waste burned (as required in § 60.2740(b)(1)) and the types of waste burned during the performance test.

(c) All performance tests must be conducted using the minimum run duration specified in tables 2 and 6 through 9 of this subpart.

(d) Method 1 of appendix A of this part must be used to select the sampling location and number of traverse points.

(e) Method 3A or 3B of appendix A of this part must be used for gas composition analysis, including measurement of oxygen concentration. Method 3A or 3B of appendix A of this part must be used simultaneously with each method.

(f) All pollutant concentrations, except for opacity, must be adjusted to 7 percent oxygen using equation 5 of this section:

$$C_{adj} = C_{meas} (20.9 - 7) / (20.9 - \%O_2) \quad (\text{Eq. 5})$$



Where:

$C_{adj}$  = pollutant concentration adjusted to 7 percent oxygen;

$C_{meas}$  = pollutant concentration measured on a dry basis;

$(20.9 - 7) = 20.9$  percent oxygen - 7 percent oxygen (defined oxygen correction basis);

20.9 = oxygen concentration in air, percent; and

$\%O_2$  = oxygen concentration measured on a dry basis, percent.

(g) You must determine dioxins/furans toxic equivalency by following the procedures in paragraphs (g)(1) through (4) of this section:

(1) Measure the concentration of each dioxin/furan tetra- through octa-isomer emitted using EPA Method 23 at 40 CFR part 60, appendix A;

(2) Quantify isomers meeting identification criteria 2, 3, 4, and 5 in Section 5.3.2.5 of Method 23, regardless of whether the isomers meet identification criteria 1 and 7. You must quantify the isomers per Section 9.0 of Method 23. [Note: You may reanalyze the sample aliquot or split to reduce the number of isomers not meeting identification criteria 1 or 7 of Section 5.3.2.5.];

(3) For each dioxin/furan (tetra- through octa-chlorinated) isomer measured in accordance with paragraph (g)(1) and (2) of this section, multiply the isomer concentration by its corresponding toxic equivalency factor specified in table 4 of this subpart; and

(4) Sum the products calculated in accordance with paragraph (g)(3) of this section to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

(h) Method 22 at 40 CFR part 60, appendix A-7 must be used to determine compliance with the fugitive ash emission limit in table 2 of this subpart or tables 6 through 9 of this subpart.

(i) If you have an applicable opacity operating limit, you must determine compliance with the opacity limit using Method 9 at 40 CFR part 60, appendix A-4, based on three 1-hour blocks consisting of ten 6-minute average opacity values, unless you are required to install a continuous opacity monitoring system, consistent with § 60.2710 and § 60.2730.

(j) You must determine dioxins/furans total mass basis by following the procedures in paragraphs (j)(1) through (3) of this section:

(1) Measure the concentration of each dioxin/furan tetra- through octa-chlorinated isomer emitted using EPA Method 23 at 40 CFR part 60, appendix A-7;

(2) Quantify isomers meeting identification criteria 2, 3, 4, and 5 in

Section 5.3.2.5 of Method 23, regardless of whether the isomers meet identification criteria 1 and 7. You must quantify the isomers per Section 9.0 of Method 23. (Note: You may reanalyze the sample aliquot or split to reduce the number of isomers not meeting identification criteria 1 or 7 of Section 5.3.2.5.); and

(3) Sum the quantities measured in accordance with paragraphs (j)(1) and (2) of this section to obtain the total concentration of dioxins/furans emitted in terms of total mass basis.

#### **§ 60.2695 How are the performance test data used?**

You use results of performance tests to demonstrate compliance with the emission limitations in table 2 of this subpart or tables 6 through 9 of this subpart.

#### **Model Rule—Initial Compliance Requirements**

##### **§ 60.2700 How do I demonstrate initial compliance with the amended emission limitations and establish the operating limits?**

You must conduct a performance test, as required under §§ 60.2670 and 60.2690, to determine compliance with the emission limitations in table 2 of this subpart and tables 6 through 9 of this subpart, to establish compliance with any opacity operating limits in § 60.2675, to establish the kiln-specific emission limit in § 60.2710(y), as applicable, and to establish operating limits using the procedures in § 60.2675 or § 60.2680. The performance test must be conducted using the test methods listed in table 2 of this subpart and tables 6 through 9 of this subpart and the procedures in § 60.2690. The use of the bypass stack during a performance test shall invalidate the performance test. You must conduct a performance evaluation of each continuous monitoring system within 60 days of installation of the monitoring system.

##### **§ 60.2705 By what date must I conduct the initial performance test?**

(a) The initial performance test must be conducted no later than 180 days after your final compliance date. Your final compliance date is specified in table 1 of this subpart.

(b) If you commence or recommence combusting a solid waste at an existing combustion unit at any commercial or industrial facility and you conducted a test consistent with the provisions of this subpart while combusting the given solid waste within the 6 months preceding the reintroduction of that solid waste in the combustion chamber, you do not need to retest until 6 months

from the date you reintroduce that solid waste.

(c) If you commence or recommence combusting a solid waste at an existing combustion unit at any commercial or industrial facility and you have not conducted a performance test consistent with the provisions of this subpart while combusting the given solid waste within the 6 months preceding the reintroduction of that solid waste in the combustion chamber, you must conduct a performance test within 60 days from the date you reintroduce solid waste.

##### **§ 60.2706 By what date must I conduct the initial air pollution control device inspection?**

(a) The initial air pollution control device inspection must be conducted within 60 days after installation of the control device and the associated CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after the final compliance date for meeting the amended emission limitations.

(b) Within 10 operating days following an air pollution control device inspection, all necessary repairs must be completed unless the owner or operator obtains written approval from the state agency establishing a date whereby all necessary repairs of the designated facility must be completed.

#### **Model Rule—Continuous Compliance Requirements**

##### **§ 60.2710 How do I demonstrate continuous compliance with the amended emission limitations and the operating limits?**

(a) *Compliance with standards.* (1) The emission standards and operating requirements set forth in this subpart apply at all times.

(2) If you cease combusting solid waste you may opt to remain subject to the provisions of this subpart. Consistent with the definition of CISWI unit, you are subject to the requirements of this subpart at least 6 months following the last date of solid waste combustion. Solid waste combustion is ceased when solid waste is not in the combustion chamber (*i.e.*, the solid waste feed to the combustor has been cut off for a period of time not less than the solid waste residence time).

(3) If you cease combusting solid waste you must be in compliance with any newly applicable standards on the effective date of the waste-to-fuel switch. The effective date of the waste-to-fuel switch is a date selected by you, that must be at least 6 months from the date that you ceased combusting solid waste, consistent with § 60.2710(a)(2). Your source must remain in compliance

with this subpart until the effective date of the waste-to-fuel switch.

(4) If you own or operate an existing commercial or industrial combustion unit that combusted a fuel or non-waste material, and you commence or recommence combustion of solid waste, you are subject to the provisions of this subpart as of the first day you introduce or reintroduce solid waste to the combustion chamber, and this date constitutes the effective date of the fuel-to-waste switch. You must complete all initial compliance demonstrations for any Section 112 standards that are applicable to your facility before you commence or recommence combustion of solid waste. You must provide 30 days prior notice of the effective date of the waste-to-fuel switch. The notification must identify:

(i) The name of the owner or operator of the CISWI unit, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

(ii) The currently applicable subcategory under this subpart, and any 40 CFR part 63 subpart and subcategory that will be applicable after you cease combusting solid waste;

(iii) The fuel(s), non-waste material(s) and solid waste(s) the CISWI unit is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting;

(iv) The date on which you became subject to the currently applicable emission limits;

(v) The date upon which you will cease combusting solid waste, and the date (if different) that you intend for any new requirements to become applicable (*i.e.*, the effective date of the waste-to-fuel switch), consistent with paragraphs (a)(2) and (3) of this section.

(5) All air pollution control equipment necessary for compliance with any newly applicable emissions limits which apply as a result of the cessation or commencement or recommencement of combusting solid waste must be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch.

(6) All monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of combusting solid waste must be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch. All calibration and drift checks must be performed as of the effective date of the waste-to-fuel, or fuel-to-waste switch. Relative accuracy tests must be performed as of the

performance test deadline for PM CEMS (if PM CEMS are elected to demonstrate continuous compliance with the particulate matter emission limits). Relative accuracy testing for other CEMS need not be repeated if that testing was previously performed consistent with section 112 monitoring requirements or monitoring requirements under this subpart.

(b) You must conduct an annual performance test for the pollutants listed in table 2 of this subpart or tables 6 through 9 of this subpart and opacity for each CISWI unit as required under § 60.2690. The annual performance test must be conducted using the test methods listed in table 2 of this subpart or tables 6 through 9 of this subpart and the procedures in § 60.2690. Opacity must be measured using EPA Reference Method 9 at 40 CFR part 60. Annual performance tests are not required if you use CEMS or continuous opacity monitoring systems to determine compliance.

(c) You must continuously monitor the operating parameters specified in § 60.2675 or established under § 60.2680 and as specified in § 60.2735. Operation above the established maximum or below the established minimum operating limits constitutes a deviation from the established operating limits. Three-hour block average values are used to determine compliance (except for baghouse leak detection system alarms) unless a different averaging period is established under § 60.2680 or, for energy recovery units, where the averaging time for each operating parameter is a 30-day rolling, calculated each hour as the average of the previous 720 operating hours over the previous 30 days of operation. Operation above the established maximum, below the established minimum, or outside the allowable range of the operating limits specified in paragraph (a) of this section constitutes a deviation from your operating limits established under this subpart, except during performance tests conducted to determine compliance with the emission and operating limits or to establish new operating limits. Operating limits are confirmed or reestablished during performance tests.

(d) You must burn only the same types of waste and fuels used to establish subcategory applicability (for ERUs) and operating limits during the performance test.

(e) For energy recovery units, incinerators, and small remote units, you must perform annual visual emissions test for ash handling.

(f) For energy recovery units, you must conduct an annual performance

test for opacity using EPA Reference Method 9 at 40 CFR part 60 (except where particulate matter continuous monitoring system or continuous parameter monitoring systems are used) and the pollutants listed in table 7 of this subpart.

(g) For facilities using a CEMS to demonstrate compliance with the carbon monoxide emission limit, compliance with the carbon monoxide emission limit may be demonstrated by using the CEMS according to the following requirements:

(1) You must measure emissions according to § 60.13 to calculate 1-hour arithmetic averages, corrected to 7 percent oxygen. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. You must demonstrate initial compliance with the carbon monoxide emissions limit using a 30-day rolling average of the 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, calculated using equation 19–19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A–7.

(2) Operate the carbon monoxide continuous emissions monitoring system in accordance with the applicable requirements of performance specification 4A of appendix B and the quality assurance procedures of appendix F of this part.

(h) Coal and liquid/gas energy recovery units with annual average heat input rates greater than 250 MMBtu/hr may elect to demonstrate continuous compliance with the particulate matter emissions limit using a particulate matter CEMS according to the procedures in § 60.2730(n) instead of the continuous parameter monitoring system specified in § 60.2710(i). Coal and liquid/gas energy recovery units with annual average heat input rates less than 250 MMBtu/hr, incinerators, and small remote incinerators may also elect to demonstrate compliance using a particulate matter CEMS according to the procedures in § 60.2730(n) instead of particulate matter testing with EPA Method 5 at 40 CFR part 60, appendix A–3 and, if applicable, the continuous opacity monitoring requirements in paragraph (i) of this section.

(i) For energy recovery units with annual average heat input rates greater than or equal to 10 MMBTU/hour but less than 250 MMBtu/hr you must install, operate, certify and maintain a continuous opacity monitoring system (COMS) according to the procedures in § 60.2730.

(j) For waste-burning kilns, you must conduct an annual performance test for the pollutants (except mercury and particulate matter, and hydrogen chloride if no acid gas wet scrubber is used) listed in table 8 of this subpart. If you do not use an acid gas wet scrubber or dry scrubber, you must determine compliance with the hydrogen chloride emissions limit according to the requirements in paragraph (j)(1) of this section. You must determine compliance with the mercury emissions limit using a mercury CEMS according to paragraph (j)(2) of this section. You must determine compliance with particulate matter using CPMS:

(1) If you monitor compliance with the HCl emissions limit by operating an HCl CEMS, you must do so in accordance with Performance Specification 15 (PS 15) of appendix B to 40 CFR part 60, or, PS 18 of appendix B to 40 CFR part 60. You must operate, maintain, and quality assure a HCl CEMS installed and certified under PS 15 according to the quality assurance requirements in Procedure 1 of appendix F to 40 CFR part 60 except that the Relative Accuracy Test Audit requirements of Procedure 1 must be replaced with the validation requirements and criteria of sections 11.1.1 and 12.0 of PS 15. You must operate, maintain and quality assure a HCl CEMS installed and certified under PS 18 according to the quality assurance requirements in Procedure 6 of appendix F to 40 CFR part 60. For any performance specification that you use, you must use Method 321 of appendix A to 40 CFR part 63 as the reference test method for conducting relative accuracy testing. The span value and calibration requirements in paragraphs (j)(1)(i) and (ii) of this section apply to all HCl CEMS used under this subpart:

(i) You must use a measurement span value for any HCl CEMS of 0–10 ppmv unless the monitor is installed on a kiln without an inline raw mill. Kilns without an inline raw mill may use a higher span value sufficient to quantify all expected emissions concentrations. The HCl CEMS data recorder output range must include the full range of expected HCl concentration values which would include those expected during “mill off” conditions. The corresponding data recorder range shall be documented in the site-specific

monitoring plan and associated records; and

(ii) In order to quality assure data measured above the span value, you must use one of the three options in paragraphs (j)(1)(ii)(A) through (C) of this section:

(A) Include a second span that encompasses the HCl emission concentrations expected to be encountered during “mill off” conditions. This second span may be rounded to a multiple of 5 ppm of total HCl. The requirements of the appropriate HCl monitor performance specification shall be followed for this second span with the exception that a RATA with the mill off is not required;

(B) Quality assure any data above the span value by proving instrument linearity beyond the span value established in paragraph (j)(1)(i) of this section using the following procedure. Conduct a weekly “above span linearity” calibration challenge of the monitoring system using a reference gas with a certified value greater than your highest expected hourly concentration or greater than 75% of the highest measured hourly concentration. The “above span” reference gas must meet the requirements of the applicable performance specification and must be introduced to the measurement system at the probe. Record and report the results of this procedure as you would for a daily calibration. The “above span linearity” challenge is successful if the value measured by the HCl CEMS falls within 10 percent of the certified value of the reference gas. If the value measured by the HCl CEMS during the above span linearity challenge exceeds 10 percent of the certified value of the reference gas, the monitoring system must be evaluated and repaired and a new “above span linearity” challenge met before returning the HCl CEMS to service, or data above span from the HCl CEMS must be subject to the quality assurance procedures established in (j)(1)(ii)(D) of this section. In this manner values measured by the HCl CEMS during the above span linearity challenge exceeding  $\pm 20$  percent of the certified value of the reference gas must be normalized using equation 6;

(C) Quality assure any data above the span value established in paragraph (j)(1)(i) of this section using the following procedure. Any time two

consecutive one-hour average measured concentration of HCl exceeds the span value you must, within 24 hours before or after, introduce a higher, “above span” HCl reference gas standard to the HCl CEMS. The “above span” reference gas must meet the requirements of the applicable performance specification and target a concentration level between 50 and 150 percent of the highest expected hourly concentration measured during the period of measurements above span, and must be introduced at the probe. While this target represents a desired concentration range that is not always achievable in practice, it is expected that the intent to meet this range is demonstrated by the value of the reference gas. Expected values may include above span calibrations done before or after the above-span measurement period. Record and report the results of this procedure as you would for a daily calibration. The “above span” calibration is successful if the value measured by the HCl CEMS is within 20 percent of the certified value of the reference gas. If the value measured by the HCl CEMS is not within 20 percent of the certified value of the reference gas, then you must normalize the stack gas values measured above span as described in paragraph (j)(1)(ii)(D) of this section. If the “above span” calibration is conducted during the period when measured emissions are above span and there is a failure to collect the one data point in an hour due to the calibration duration, then you must determine the emissions average for that missed hour as the average of hourly averages for the hour preceding the missed hour and the hour following the missed hour. In an hour where an “above span” calibration is being conducted and one or more data points are collected, the emissions average is represented by the average of all valid data points collected in that hour; and

(D) In the event that the “above span” calibration is not successful (*i.e.*, the HCl CEMS measured value is not within 20 percent of the certified value of the reference gas), then you must normalize the one-hour average stack gas values measured above the span during the 24-hour period preceding or following the “above span” calibration for reporting based on the HCl CEMS response to the reference gas as shown in equation 6:

$$\frac{\text{Certified reference gas value}}{\text{Measured value of reference gas}} = \text{Measured stack gas} = \text{Normalized stack gas result} \quad (\text{Eq. 6})$$

Only one “above span” calibration is needed per 24-hour period.

(2) Compliance with the mercury emissions limit must be determined

using a mercury CEMS according to the following requirements:

(i) You must operate a CEMS in accordance with performance specification 12A at 40 CFR part 60, appendix B or a sorbent trap based integrated monitor in accordance with performance specification 12B at 40 CFR part 60, appendix B. The duration of the performance test must be a calendar month. For each calendar month in which the waste-burning kiln operates, hourly mercury concentration data and stack gas volumetric flow rate data must be obtained. You must demonstrate compliance with the mercury emissions limit using a 30-day rolling average of these 1-hour mercury concentrations, including CEMS data during startup and shutdown as defined in this subpart, calculated using equation 19–19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A–7 of this part. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content;

(ii) Owners or operators using a mercury continuous emissions monitoring systems must install, operate, calibrate and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A at 40 CFR part 60, appendix B and quality assurance procedure 5 at 40 CFR part 60, appendix F; and

(iii) The owner or operator of a waste-burning kiln must demonstrate initial compliance by operating a mercury CEMS while the raw mill of the in-line kiln/raw mill is operating under normal conditions and including at least one period when the raw mill is off.

(k) If you use an air pollution control device to meet the emission limitations in this subpart, you must conduct an initial and annual inspection of the air pollution control device. The inspection must include, at a minimum, the following:

(1) Inspect air pollution control device(s) for proper operation; and

(2) Develop a site-specific monitoring plan according to the requirements in paragraph (l) of this section. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under § 60.13(i).

(l) For each CMS required in this section, you must develop and submit to the EPA Administrator for approval a site-specific monitoring plan according to the requirements of this paragraph (l) that addresses paragraphs (l)(1)(i) through (vi) of this section:

(1) You must submit this site-specific monitoring plan at least 60 days before your initial performance evaluation of your continuous monitoring system:

(i) Installation of the continuous monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (*e.g.*, on or downstream of the last control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer and the data collection and reduction systems;

(iii) Performance evaluation procedures and acceptance criteria (*e.g.*, calibrations);

(iv) Ongoing operation and maintenance procedures in accordance with the general requirements of § 60.11(d);

(v) Ongoing data quality assurance procedures in accordance with the general requirements of § 60.13; and

(vi) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 60.7(b),(c), (c)(1), (c)(4), (d), (e), (f) and (g).

(2) You must conduct a performance evaluation of each continuous monitoring system in accordance with your site-specific monitoring plan.

(3) You must operate and maintain the continuous monitoring system in continuous operation according to the site-specific monitoring plan.

(m) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (l) and (m)(1) through (4) of this section:

(1) Install the flow sensor and other necessary equipment in a position that provides a representative flow;

(2) Use a flow sensor with a measurement sensitivity at full scale of no greater than 2 percent;

(3) Minimize the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances; and

(4) Conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(n) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (l) and (n)(1) through (6) of this section:

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (*e.g.*, PM scrubber pressure drop);

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion;

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less;

(4) Perform checks at the frequency outlined in your site-specific monitoring plan to ensure pressure measurements are not obstructed (*e.g.*, check for pressure tap plugging daily);

(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually; and

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in your monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(o) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (l) and (o)(1) through (4) of this section:

(1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH;

(2) Ensure the sample is properly mixed and representative of the fluid to be measured;

(3) Conduct a performance evaluation of the pH monitoring system in accordance with your monitoring plan at least once each process operating day; and

(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than quarterly.

(p) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator, you must meet the requirements in paragraphs (l) and (p)(1) and (2) of this section:

(1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates; and

(2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance

test but no less frequently than annually.

(q) If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (*e.g.*, weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (l) and (q)(1) and (2) of this section:

(1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate; and

(2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(r) If you elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraphs (l) and (r)(1) through (5) of this section:

(1) Install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute particulate matter loadings for each exhaust stack, roof vent, or compartment (*e.g.*, for a positive pressure fabric filter) of the fabric filter;

(2) Use a bag leak detection system certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less;

(3) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, *see* § 60.17);

(4) Use a bag leak detection system equipped with a device to continuously record the output signal from the sensor; and

(5) Use a bag leak detection system equipped with a system that will sound an alarm when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located where it is observed readily by plant operating personnel.

(s) For facilities using a CEMS to demonstrate compliance with the sulfur dioxide emission limit, compliance with the sulfur dioxide emission limit may be demonstrated by using the CEMS specified in § 60.2730 to measure sulfur dioxide. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. You must calculate a 30-day rolling average of the 1-hour arithmetic

average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7. The sulfur dioxide CEMS must be operated according to performance specification 2 in appendix B of this part and must follow the procedures and methods specified in paragraph (s) of this section.

For sources that have actual inlet emissions less than 100 parts per million dry volume, the relative accuracy criterion for inlet sulfur dioxide CEMS should be no greater than 20 percent of the mean value of the reference method test data in terms of the units of the emission standard, or 5 parts per million dry volume absolute value of the mean difference between the reference method and the CEMS, whichever is greater:

(1) During each relative accuracy test run of the CEMS required by performance specification 2 in appendix B of this part, collect sulfur dioxide and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the CEMS and the test methods specified in paragraphs (s)(1)(i) and (ii) of this section:

(i) For sulfur dioxide, EPA Reference Method 6 or 6C, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, *see* § 60.17) must be used; and

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, *see* § 60.17), as applicable, must be used.

(2) The span value of the CEMS at the inlet to the sulfur dioxide control device must be 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the unit subject to this subpart. The span value of the CEMS at the outlet of the sulfur dioxide control device must be 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the unit subject to this subpart.

(3) Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with procedure 1 in appendix F of this part.

(t) For facilities using a CEMS to demonstrate continuous compliance with the nitrogen oxides emission limit, compliance with the nitrogen oxides emission limit may be demonstrated by using the CEMS specified in § 60.2730 to measure nitrogen oxides. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. You must calculate a 30-day rolling average

of the 1-hour arithmetic average emission concentration using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7. The nitrogen oxides CEMS must be operated according to performance specification 2 in appendix B of this part and must follow the procedures and methods specified in paragraphs (t)(1) through (4) of this section:

(1) During each relative accuracy test run of the CEMS required by performance specification 2 of appendix B of this part, collect nitrogen oxides and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the CEMS and the test methods specified in paragraphs (t)(1)(i) and (ii) of this section:

(i) For nitrogen oxides, EPA Reference Method 7 or 7E at 40 CFR part 60, appendix A-4 must be used; and

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, *see* § 60.17), as applicable, must be used.

(2) The span value of the CEMS must be 125 percent of the maximum estimated hourly potential nitrogen oxide emissions of unit.

(3) Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with procedure 1 in appendix F of this part.

(4) The owner or operator of an affected facility may request that compliance with the nitrogen oxides emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. If carbon dioxide is selected for use in diluent corrections, the relationship between oxygen and carbon dioxide levels must be established during the initial performance test according to the procedures and methods specified in paragraphs (t)(4)(i) through (iv) of this section. This relationship may be reestablished during performance compliance tests:

(i) The fuel factor equation in Method 3B must be used to determine the relationship between oxygen and carbon dioxide at a sampling location. Method 3A, 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, *see* § 60.17), as applicable, must be used to determine the oxygen concentration at the same location as the carbon dioxide monitor;

(ii) Samples must be taken for at least 30 minutes in each hour;

(iii) Each sample must represent a 1-hour average; and

(iv) A minimum of 3 runs must be performed.

(u) For facilities using a continuous emissions monitoring system to demonstrate continuous compliance with any of the emission limits of this subpart, you must complete the following:

(1) Demonstrate compliance with the appropriate emission limit(s) using a 30-day rolling average of 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown, as defined in this subpart, calculated using equation 19–19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A–7. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content; and

(2) Operate all CEMS in accordance with the applicable procedures under appendices B and F of this part.

(v) Use of the bypass stack at any time is an emissions standards deviation for particulate matter, HCl, Pb, Cd, Hg, NO<sub>x</sub>, SO<sub>2</sub>, and dioxin/furans.

(w) For energy recovery units with a design heat input capacity of 100 MMBtu per hour or greater that do not use a carbon monoxide CEMS, you must install, operate, and maintain an oxygen analyzer system as defined in § 60.2875 according to the procedures in paragraphs (w)(1) through (4) of this section:

(1) The oxygen analyzer system must be installed by the initial performance test date specified in § 60.2675;

(2) You must operate the oxygen trim system within compliance with paragraph (w)(3) of this section at all times;

(3) You must maintain the oxygen level such that the 30-day rolling average that is established as the operating limit for oxygen is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test; and

(4) You must calculate and record a 30-day rolling average oxygen concentration using equation 19–19 in section 12.4.1 of EPA Reference Method 19 of Appendix A–7 of this part.

(x) For energy recovery units with annual average heat input rates greater than or equal to 250 MMBtu/hour and waste-burning kilns, you must install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in paragraphs (x)(1) through (8) of this section. For other energy recovery units, you may elect to use PM CPMS operated in accordance with this section. PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (e.g., bag

leak detectors, ESP secondary power, PM scrubber pressure):

(1) Install, calibrate, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with paragraphs (l) and (x)(1)(i) through (iii) of this section:

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation of the exhaust gas or representative sample. The reportable measurement output from the PM CPMS must be expressed as milliamps or the digital signal equivalent;

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes; and

(iii) The PM CPMS must be capable of detecting and responding to particulate matter concentrations increments no greater than 0.5 mg/actual cubic meter.

(2) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, you must adjust the site-specific operating limit in accordance with the results of the performance test according to the procedures specified in § 60.2675.

(3) Collect PM CPMS hourly average output data for all energy recovery unit or waste-burning kiln operating hours. Express the PM CPMS output as milliamps or the digital signal equivalent.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit or waste-burning kiln operating hours data (milliamps or their digital equivalent).

(5) You must collect data using the PM CPMS at all times the energy recovery unit or waste-burning kiln is operating and at the intervals specified in paragraph (x)(1)(ii) of this section, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in your site-specific monitoring plan.

(6) You must use all the data collected during all energy recovery unit or waste-burning kiln operating hours in assessing the compliance with your operating limit except:

(i) Any data collected during monitoring system malfunctions, repairs associated with monitoring system

malfunctions, or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions are not used in calculations (report any such periods in your annual deviation report);

(ii) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or quality control activities conducted during out-of-control periods are not used in calculations (report emissions or operating levels and report any such periods in your annual deviation report);

(iii) Any PM CPMS data recorded during periods of CEMS data during startup and shutdown, as defined in this subpart.

(7) You must record and make available upon request results of PM CPMS system performance audits, as well as the dates and duration of periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return the PM CPMS to operation consistent with your site-specific monitoring plan.

(8) For any deviation of the 30-day rolling average PM CPMS average value from the established operating parameter limit, you must:

(i) Within 48 hours of the deviation, visually inspect the air pollution control device;

(ii) If inspection of the air pollution control device identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value;

(iii) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify. Within 45 days of the deviation, you must re-establish the CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under paragraph (x) of this section; and

(iv) PM CPMS deviations leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a violation of this subpart.

(y) When there is an alkali bypass and/or an in-line coal mill that exhaust emissions through a separate stack(s), the combined emissions are subject to

the emission limits applicable to waste-burning kilns. To determine the kiln-

specific emission limit for demonstrating compliance, you must:

(1) Calculate a kiln-specific emission limit using equation 7:

$$C_{ks} = ((\text{Emission limit} \times (Q_{ab} + Q_{cm} + Q_{ks})) - (Q_{ab} \times C_{ab}) - (Q_{cm} \times C_{cm})) / Q_{ks} \quad (\text{Eq. 7})$$

Where:

$C_{ks}$  = Kiln stack concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O<sub>2</sub>.)

$Q_{ab}$  = Alkali bypass flow rate (volume/hr)

$C_{ab}$  = Alkali bypass concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O<sub>2</sub>.)

$Q_{cm}$  = In-line coal mill flow rate (volume/hr)

$C_{cm}$  = In-line coal mill concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O<sub>2</sub>.)

$Q_{ks}$  = Kiln stack flow rate (volume/hr)

(2) Particulate matter concentration must be measured downstream of the in-line coal mill. All other pollutant concentrations must be measured either upstream or downstream of the in-line coal mill.

(3) For purposes of determining the combined emissions from kilns equipped with an alkali bypass or that exhaust kiln gases to a coal mill that exhausts through a separate stack, instead of installing a CEMS or PM CPMS on the alkali bypass stack or in-line coal mill stack, the results of the initial and subsequent performance test can be used to demonstrate compliance with the relevant emissions limit. A performance test must be conducted on an annual basis (between 11 and 13 calendar months following the previous performance test).

**§ 60.2715 By what date must I conduct the annual performance test?**

You must conduct annual performance tests between 11 and 13 months of the previous performance test.

**§ 60.2716 By what date must I conduct the annual air pollution control device inspection?**

On an annual basis (no more than 12 months following the previous annual air pollution control device inspection), you must complete the air pollution control device inspection as described in § 60.2706.

**§ 60.2720 May I conduct performance testing less often?**

(a) You must conduct annual performance tests according to the schedule specified in § 60.2715, with the following exceptions:

(1) You may conduct a repeat performance test at any time to establish new values for the operating limits to apply from that point forward, as

specified in § 60.2725. The

Administrator may request a repeat performance test at any time;

(2) You must repeat the performance test within 60 days of a process change, as defined in § 60.2875; and

(3) If the initial or any subsequent performance test for any pollutant in table 2 or tables 6 through 9 of this subpart, as applicable, demonstrates that the emission level for the pollutant is no greater than the emission level specified in paragraph (a)(3)(i) or (a)(3)(ii) of this section, as applicable, and you are not required to conduct a performance test for the pollutant in response to a request by the Administrator in paragraph (a)(1) of this section or a process change in paragraph (a)(2) of this section, you may elect to skip conducting a performance test for the pollutant for the next 2 years. You must conduct a performance test for the pollutant during the third year and no more than 37 months following the previous performance test for the pollutant. For cadmium and lead, both cadmium and lead must be emitted at emission levels no greater than their respective emission levels specified in paragraph (a)(3)(i) of this section for you to qualify for less frequent testing under paragraph (a) of this section:

(i) For particulate matter, hydrogen chloride, mercury, carbon monoxide, nitrogen oxides, sulfur dioxide, cadmium, lead, and dioxins/furans, the emission level equal to 75 percent of the applicable emission limit in table 2 or tables 6 through 9 of this subpart, as applicable, to this subpart; and

(ii) For fugitive emissions, visible emissions (of combustion ash from the ash conveying system) for 2 percent of the time during each of the three 1-hour observation periods.

(4) If you are conducting less frequent testing for a pollutant as provided in paragraph (a)(3) of this section and a subsequent performance test for the pollutant indicates that your CISWI unit does not meet the emission level specified in paragraph (a)(3)(i) or (a)(3)(ii) of this section, as applicable, you must conduct annual performance tests for the pollutant according to the schedule specified in paragraph (a) of this section until you qualify for less frequent testing for the pollutant as specified in paragraph (a)(3) of this section.

(b) [Reserved]

**§ 60.2725 May I conduct a repeat performance test to establish new operating limits?**

(a) Yes. You may conduct a repeat performance test at any time to establish new values for the operating limits. The Administrator may request a repeat performance test at any time.

(b) You must repeat the performance test if your feed stream is different than the feed streams used during any performance test used to demonstrate compliance.

**Model Rule—Monitoring**

**§ 60.2730 What monitoring equipment must I install and what parameters must I monitor?**

(a) If you are using a wet scrubber to comply with the emission limitation under § 60.2670, you must install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the value of the operating parameters used to determine compliance with the operating limits listed in table 3 of this subpart. These devices (or methods) must measure and record the values for these operating parameters at the frequencies indicated in table 3 of this subpart at all times except as specified in § 60.2735(a).

(b) If you use a fabric filter to comply with the requirements of this subpart and you do not use a PM CPMS for monitoring PM compliance, you must install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraphs (b)(1) through (8) of this section:

(1) You must install and operate a bag leak detection system for each exhaust stack of the fabric filter;

(2) Each bag leak detection system must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations;

(3) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less;

(4) The bag leak detection system sensor must provide output of relative or absolute particulate matter loadings;



(5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor;

(6) The bag leak detection system must be equipped with an alarm system that will alert automatically an operator when an increase in relative particulate matter emission over a preset level is detected. The alarm must be located where it is observed easily by plant operating personnel;

(7) For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter; and

(8) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(c) If you are using something other than a wet scrubber, activated carbon, selective non-catalytic reduction, an electrostatic precipitator, or a dry scrubber to comply with the emission limitations under § 60.2670, you must install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor compliance with the site-specific operating limits established using the procedures in § 60.2680.

(d) If you use activated carbon injection to comply with the emission limitations in this subpart, you must measure the minimum sorbent flow rate once per hour.

(e) If you use selective noncatalytic reduction to comply with the emission limitations, you must complete the following:

(1) Following the date on which the initial performance test is completed or is required to be completed under § 60.2690, whichever date comes first, ensure that the affected facility does not operate above the maximum charge rate, or below the minimum secondary chamber temperature (if applicable to your CISWI unit) or the minimum reagent flow rate measured as 3-hour block averages at all times; and

(2) Operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature and below the minimum reagent flow rate simultaneously constitute a violation of the nitrogen oxides emissions limit.

(f) If you use an electrostatic precipitator to comply with the emission limits of this subpart and you do not use a PM CPMS for monitoring PM compliance, you must monitor the secondary power to the electrostatic precipitator collection plates and

maintain the 3-hour block averages at or above the operating limits established during the mercury or particulate matter performance test.

(g) For waste-burning kilns not equipped with a wet scrubber or dry scrubber, in place of hydrogen chloride testing with EPA Method 321 at 40 CFR part 63, appendix A, an owner or operator must install, calibrate, maintain, and operate a CEMS for monitoring hydrogen chloride emissions, as specified in § 60.2710(j), discharged to the atmosphere and record the output of the system. To demonstrate continuous compliance with the hydrogen chloride emissions limit for units other than waste-burning kilns not equipped with a wet scrubber or dry scrubber, a facility may substitute use of a hydrogen chloride CEMS for conducting the hydrogen chloride annual performance test, monitoring the minimum hydrogen chloride sorbent flow rate, monitoring the minimum scrubber liquor pH.

(h) To demonstrate continuous compliance with the particulate matter emissions limit, a facility may substitute use of either a particulate matter CEMS or a particulate matter CPMS for conducting the particulate matter annual performance test and other CMS monitoring for PM compliance (*e.g.*, bag leak detectors, ESP secondary power, PM scrubber pressure).

(i) To demonstrate continuous compliance with the dioxin/furan emissions limit, a facility may substitute use of a continuous automated sampling system for the dioxin/furan annual performance test. You must record the output of the system and analyze the sample according to EPA Method 23 at 40 CFR part 60, appendix A-7. This option to use a continuous automated sampling system takes effect on the date a final performance specification applicable to dioxin/furan from continuous monitors is published in the **Federal Register**. The owner or operator who elects to continuously sample dioxin/furan emissions instead of sampling and testing using EPA Method 23 at 40 CFR part 60, appendix A-7 must install, calibrate, maintain and operate a continuous automated sampling system and must comply with the requirements specified in § 60.58b(p) and (q). A facility may substitute continuous dioxin/furan monitoring for the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the dioxin/furan emission limit.

(j) To demonstrate continuous compliance with the mercury emissions limit, a facility may substitute use of a continuous automated sampling system

for the mercury annual performance test. You must record the output of the system and analyze the sample at set intervals using any suitable determinative technique that can meet performance specification 12B criteria. This option to use a continuous automated sampling system takes effect on the date a final performance specification applicable to mercury from monitors is published in the **Federal Register**. The owner or operator who elects to continuously sample mercury emissions instead of sampling and testing using EPA Method 29 or 30B at 40 CFR part 60, appendix A-8, ASTM D6784-02 (Reapproved 2008) (incorporated by reference, see § 60.17), or an approved alternative method for measuring mercury emissions, must install, calibrate, maintain and operate a continuous automated sampling system and must comply with the requirements specified in § 60.58b(p) and (q). A facility may substitute continuous mercury monitoring for the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the mercury emission limit. Waste-burning kilns must install, calibrate, maintain, and operate a mercury CEMS as specified in § 60.2710(j).

(k) To demonstrate continuous compliance with the nitrogen oxides emissions limit, a facility may substitute use of a CEMS for the nitrogen oxides annual performance test to demonstrate compliance with the nitrogen oxides emissions limits and monitoring the charge rate, secondary chamber temperature and reagent flow for selective noncatalytic reduction, if applicable:

(1) Install, calibrate, maintain and operate a CEMS for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 2 of appendix B of this part, the quality assurance procedure 1 of appendix F of this part and the procedures under § 60.13 must be followed for installation, evaluation and operation of the CEMS; and

(2) Following the date that the initial performance test for nitrogen oxides is completed or is required to be completed under § 60.2690, compliance with the emission limit for nitrogen oxides required under § 60.52b(d) must be determined based on the 30-day rolling average of the hourly emission concentrations using CEMS outlet data. The 1-hour arithmetic averages must be expressed in parts per million by volume corrected to 7 percent oxygen (dry basis) and used to calculate the 30-day rolling average concentrations.



CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages must be calculated using the data points required under § 60.13(e)(2).

(l) To demonstrate continuous compliance with the sulfur dioxide emissions limit, a facility may substitute use of a continuous automated sampling system for the sulfur dioxide annual performance test to demonstrate compliance with the sulfur dioxide emissions limits:

(1) Install, calibrate, maintain and operate a CEMS for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 2 of appendix B of this part, the quality assurance requirements of procedure 1 of appendix F of this part and the procedures under § 60.13 must be followed for installation, evaluation and operation of the CEMS; and

(2) Following the date that the initial performance test for sulfur dioxide is completed or is required to be completed under § 60.2690, compliance with the sulfur dioxide emission limit may be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations using CEMS outlet data. The 1-hour arithmetic averages must be expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages must be calculated using the data points required under § 60.13(e)(2).

(m) For energy recovery units over 10 MMBtu/hr but less than 250 MMBtu/hr annual average heat input rates that do not use a wet scrubber, fabric filter with bag leak detection system, or particulate matter CEMS, you must install, operate, certify and maintain a continuous opacity monitoring system according to the procedures in paragraphs (m)(1) through (5) of this section by the compliance date specified in § 60.2670. Energy recovery units that use a particulate matter CEMS to demonstrate initial and continuing compliance according to the procedures in § 60.2730(n) are not required to install a continuous opacity monitoring system and must perform the annual performance tests for opacity consistent with § 60.2710(f):

(1) Install, operate and maintain each continuous opacity monitoring system

according to performance specification 1 at 40 CFR part 60, appendix B;

(2) Conduct a performance evaluation of each continuous opacity monitoring system according to the requirements in § 60.13 and according to performance specification 1 at 40 CFR part 60, appendix B;

(3) As specified in § 60.13(e)(1), each continuous opacity monitoring system must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period;

(4) Reduce the continuous opacity monitoring system data as specified in § 60.13(h)(1); and

(5) Determine and record all the 6-minute averages (and 1-hour block averages as applicable) collected.

(n) For coal and liquid/gas energy recovery units, incinerators, and small remote incinerators, an owner or operator may elect to install, calibrate, maintain and operate a CEMS for monitoring particulate matter emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who continuously monitors particulate matter emissions instead of conducting performance testing using EPA Method 5 at 40 CFR part 60, appendix A-3 or, as applicable, monitor with a particulate matter CPMS according to paragraph (r) of this section, must install, calibrate, maintain and operate a CEMS and must comply with the requirements specified in paragraphs (n)(1) through (13) of this section:

(1) Notify the Administrator 1 month before starting use of the system;

(2) Notify the Administrator 1 month before stopping use of the system;

(3) The monitor must be installed, evaluated and operated in accordance with the requirements of performance specification 11 of appendix B of this part and quality assurance requirements of procedure 2 of appendix F of this part and § 60.13;

(4) The initial performance evaluation must be completed no later than 180 days after the final compliance date for meeting the amended emission limitations, as specified under § 60.2690 or within 180 days of notification to the Administrator of use of the continuous monitoring system if the owner or operator was previously determining compliance by Method 5 at 40 CFR part 60, appendix A-3 performance tests, whichever is later;

(5) The owner or operator of an affected facility may request that compliance with the particulate matter emission limit be determined using carbon dioxide measurements corrected

to an equivalent of 7 percent oxygen.

The relationship between oxygen and carbon dioxide levels for the affected facility must be established according to the procedures and methods specified in § 60.2710(t)(4)(i) through (iv);

(6) The owner or operator of an affected facility must conduct an initial performance test for particulate matter emissions as required under § 60.2690. Compliance with the particulate matter emission limit, if PM CEMS are elected for demonstrating compliance, must be determined by using the CEMS specified in paragraph (n) of this section to measure particulate matter. You must calculate a 30-day rolling average of 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown, as defined in this subpart, using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7 of this part;

(7) Compliance with the particulate matter emission limit must be determined based on the 30-day rolling average calculated using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, Appendix A-7 of the part from the 1-hour arithmetic average of the CEMS outlet data.

(8) At a minimum, valid continuous monitoring system hourly averages must be obtained as specified § 60.2735;

(9) The 1-hour arithmetic averages required under paragraph (n)(7) of this section must be expressed in milligrams per dry standard cubic meter corrected to 7 percent oxygen (or carbon dioxide) (dry basis) and must be used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages must be calculated using the data points required under § 60.13(e)(2);

(10) All valid CEMS data must be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (n)(8) of this section are not met;

(11) The CEMS must be operated according to performance specification 11 in appendix B of this part;

(12) During each relative accuracy test run of the CEMS required by performance specification 11 in appendix B of this part, particulate matter and oxygen (or carbon dioxide) data must be collected concurrently (or within a 30-to 60-minute period) by both the CEMS and the following test methods:

(i) For particulate matter, EPA Reference Method 5 at 40 CFR part 60, appendix A-3 must be used; and

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B at 40 CFR part 60, appendix A-2, as applicable, must be used; and

(13) Quarterly accuracy determinations and daily calibration drift tests must be performed in accordance with procedure 2 in appendix F of this part.

(o) To demonstrate continuous compliance with the carbon monoxide emissions limit, a facility may substitute use of a continuous automated sampling system for the carbon monoxide annual performance test to demonstrate compliance with the carbon monoxide emissions limits:

(1) Install, calibrate, maintain, and operate a CEMS for measuring carbon monoxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 4B of appendix B of this part, the quality assurance procedure 1 of appendix F of this part and the procedures under § 60.13 must be followed for installation, evaluation, and operation of the CEMS; and

(2) Following the date that the initial performance test for carbon monoxide is completed or is required to be completed under § 60.2690, compliance with the carbon monoxide emission limit may be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, using CEMS outlet data. Except for CEMS data during startup and shutdown, as defined in this subpart, the 1-hour arithmetic averages must be expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 30-day rolling average emission concentrations. CEMS data collected during startup or shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages must be calculated using the data points required under § 60.13(e)(2).

(p) The owner/operator of an affected source with a bypass stack shall install, calibrate (to manufacturers' specifications), maintain and operate a device or method for measuring the use of the bypass stack including date, time and duration.

(q) For energy recovery units with a heat input capacity of 100 MMBtu per hour or greater that do not use a carbon monoxide CEMS, you must install, operate and maintain the continuous

oxygen monitoring system as defined in § 60.2875 according to the procedures in paragraphs (q)(1) through (4) of this section:

(1) The oxygen analyzer system must be installed by the initial performance test date specified in § 60.2675;

(2) You must operate the oxygen trim system within compliance with paragraph (q)(3) of this section at all times;

(3) You must maintain the oxygen level such that the 30-day rolling average that is established as the operating limit for oxygen according to paragraph (q)(4) of this section is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test; and

(4) You must calculate and record a 30-day rolling average oxygen concentration using equation 19-19 in section 12.4.1 of EPA Reference Method 19 of Appendix A-7 of this part.

(r) For energy recovery units with annual average heat input rates greater than or equal to 250 MMBtu/hour and waste-burning kilns, you must install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in paragraphs (r)(1) through (8) of this section. For other energy recovery units, you may elect to use PM CPMS operated in accordance with this section. PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure):

(1) Install, calibrate, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 60.2710(l) and (r)(1)(i) through (iii) of this section:

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation of the exhaust gas or representative sample. The reportable measurement output from the PM CPMS must be expressed as milliamps or the digital signal equivalent;

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes; and

(iii) The PM CPMS must be capable of detecting and responding to particulate matter concentrations increments no greater than 0.5 mg/actual cubic meter.

(2) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, you must adjust the site-specific operating limit in accordance with the results of the performance test

according to the procedures specified in § 60.2675.

(3) Collect PM CPMS hourly average output data for all energy recovery unit or waste-burning kiln operating hours. Express the PM CPMS output as milliamps or the digital signal equivalent.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit or waste-burning kiln operating hours data (milliamps or digital bits).

(5) You must collect data using the PM CPMS at all times the energy recovery unit or waste-burning kiln is operating and at the intervals specified in paragraph (r)(1)(ii) of this section, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in your site-specific monitoring plan.

(6) You must use all the data collected during all energy recovery unit or waste-burning kiln operating hours in assessing the compliance with your operating limit except:

(i) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions are not used in calculations (report any such periods in your annual deviation report);

(ii) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or quality control activities conducted during out-of-control periods are not used in calculations (report emissions or operating levels and report any such periods in your annual deviation report); and

(iii) Any PM CPMS data recorded during periods of CEMS data during startup and shutdown, as defined in this subpart.

(7) You must record and make available upon request results of PM CPMS system performance audits, as well as the dates and duration of periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return

the PM CPMS to operation consistent with your site-specific monitoring plan.

(8) For any deviation of the 30-day rolling average PM CPMS average value from the established operating parameter limit, you must:

(i) Within 48 hours of the deviation, visually inspect the air pollution control device;

(ii) If inspection of the air pollution control device identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value;

(iii) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify the operation of the emissions control device(s). Within 45 days of the deviation, you must re-establish the CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this paragraph; and

(iv) PM CPMS deviations leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a violation of this subpart.

(s) If you use a dry scrubber to comply with the emission limits of this subpart, you must monitor the injection rate of each sorbent and maintain the 3-hour block averages at or above the operating limits established during the hydrogen chloride performance test.

**§ 60.2735 Is there a minimum amount of monitoring data I must obtain?**

For each continuous monitoring system required or optionally allowed under § 60.2730, you must monitor and collect data according to this section:

(a) You must operate the monitoring system and collect data at all required intervals at all times compliance is required except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods (as specified in § 60.2770(o)), and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions.

You are required to effect monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

(b) You may not use data recorded during the monitoring system malfunctions, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. You must use all the data collected during all other periods, including data normalized for above scale readings, in assessing the operation of the control device and associated control system.

(c) Except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments, failure to collect required data is a deviation of the monitoring requirements.

**Model Rule—Recordkeeping and Reporting**

**§ 60.2740 What records must I keep?**

You must maintain the items (as applicable) as specified in paragraphs (a), (b), and (e) through (w) of this section for a period of at least 5 years:

- (a) Calendar date of each record;
- (b) Records of the data described in paragraphs (b)(1) through (6) of this section:
  - (1) The CISWI unit charge dates, times, weights, and hourly charge rates;
  - (2) Liquor flow rate to the wet scrubber inlet every 15 minutes of operation, as applicable;
  - (3) Pressure drop across the wet scrubber system every 15 minutes of operation or amperage to the wet scrubber every 15 minutes of operation, as applicable;
  - (4) Liquor pH as introduced to the wet scrubber every 15 minutes of operation, as applicable;
  - (5) For affected CISWI units that establish operating limits for controls other than wet scrubbers under § 60.2675(d) through (g) or § 60.2680, you must maintain data collected for all operating parameters used to determine compliance with the operating limits. For energy recovery units using activated carbon injection or a dry scrubber, you must also maintain records of the load fraction and corresponding sorbent injection rate records; and

(6) If a fabric filter is used to comply with the emission limitations, you must record the date, time, and duration of each alarm and the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. You must also record the percent of operating time during each 6-month period that the alarm sounds, calculated as specified in § 60.2675(c).

(c)–(d) [Reserved]

(e) Identification of calendar dates and times for which data show a deviation from the operating limits in table 3 of this subpart or a deviation from other operating limits established under § 60.2675(d) through (g) or § 60.2680 with a description of the deviations, reasons for such deviations, and a description of corrective actions taken.

(f) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating limits, as applicable. Retain a copy of the complete test report including calculations.

(g) Records showing the names of CISWI unit operators who have completed review of the information in § 60.2660(a) as required by § 60.2660(b), including the date of the initial review and all subsequent annual reviews.

(h) Records showing the names of the CISWI operators who have completed the operator training requirements under § 60.2635, met the criteria for qualification under § 60.2645, and maintained or renewed their qualification under § 60.2650 or § 60.2655. Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.

(i) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

(j) Records of calibration of any monitoring devices as required under § 60.2730.

(k) Equipment vendor specifications and related operation and maintenance requirements for the incinerator, emission controls, and monitoring equipment.

(l) The information listed in § 60.2660(a).

(m) On a daily basis, keep a log of the quantity of waste burned and the types of waste burned (always required).

(n) Maintain records of the annual air pollution control device inspections that are required for each CISWI unit subject to the emissions limits in table

2 of this subpart or tables 6 through 9 of this subpart, any required maintenance and any repairs not completed within 10 days of an inspection or the timeframe established by the state regulatory agency.

(o) For continuously monitored pollutants or parameters, you must document and keep a record of the following parameters measured using continuous monitoring systems:

(1) All 6-minute average levels of opacity;

(2) All 1-hour average concentrations of sulfur dioxide emissions. You must indicate which data are CEMS data during startup and shutdown;

(3) All 1-hour average concentrations of nitrogen oxides emissions. You must indicate which data are CEMS data during startup and shutdown;

(4) All 1-hour average concentrations of carbon monoxide emissions. You must indicate which data are CEMS data during startup and shutdown;

(5) All 1-hour average concentrations of particulate matter emissions. You must indicate which data are CEMS data during startup and shutdown;

(6) All 1-hour average concentrations of mercury emissions. You must indicate which data are CEMS data during startup and shutdown;

(7) All 1-hour average concentrations of hydrogen chloride emissions. You must indicate which data are CEMS data during startup and shutdown;

(8) All 1-hour average percent oxygen concentrations; and

(9) All 1-hour average PM CPMS readings or particulate matter CEMS outputs.

(p) Records indicating use of the bypass stack, including dates, times and durations.

(q) If you choose to stack test less frequently than annually, consistent with § 60.2720(a) through (c), you must keep annual records that document that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(r) Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.

(s) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(t) Records of actions taken during periods of malfunction to minimize

emissions in accordance with § 60.11(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(u) For operating units that combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to § 241.3(b)(1) of this chapter, you must keep a record which documents how the secondary material meets each of the legitimacy criteria under § 241.3(d)(1). If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to § 241.3(b)(4), you must keep records as to how the operations that produced the fuel satisfies the definition of processing in § 241.2 and each of the legitimacy criteria in § 241.3(d)(1) of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under § 241.3(c), you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per § 241.4, you must keep records documenting that the material is a listed non-waste under § 241.4(a).

(v) Records of the criteria used to establish that the unit qualifies as a small power production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)) and that the waste material the unit is proposed to burn is homogeneous.

(w) Records of the criteria used to establish that the unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)) and that the waste material the unit is proposed to burn is homogeneous.

**§ 60.2745 Where and in what format must I keep my records?**

All records must be available onsite in either paper copy or computer-readable format that can be printed upon request, unless an alternative format is approved by the Administrator.

**§ 60.2750 What reports must I submit?**

See table 5 of this subpart for a summary of the reporting requirements.

**§ 60.2755 When must I submit my waste management plan?**

You must submit the waste management plan no later than the date specified in table 1 of this subpart for submittal of the final control plan.

**§ 60.2760 What information must I submit following my initial performance test?**

You must submit the information specified in paragraphs (a) through (c) of this section no later than 60 days following the initial performance test. All reports must be signed by the facilities manager:

(a) The complete test report for the initial performance test results obtained under § 60.2700, as applicable;

(b) The values for the site-specific operating limits established in § 60.2675 or § 60.2680; and

(c) If you are using a fabric filter to comply with the emission limitations, documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by § 60.2730(b).

**§ 60.2765 When must I submit my annual report?**

You must submit an annual report no later than 12 months following the submission of the information in § 60.2760. You must submit subsequent reports no more than 12 months following the previous report. (If the unit is subject to permitting requirements under title V of the Clean Air Act, you may be required by the permit to submit these reports more frequently.)

**§ 60.2770 What information must I include in my annual report?**

The annual report required under § 60.2765 must include the ten items listed in paragraphs (a) through (j) of this section. If you have a deviation from the operating limits or the emission limitations, you must also submit deviation reports as specified in §§ 60.2775, 60.2780, and 60.2785:

(a) Company name and address;

(b) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report;

(c) Date of report and beginning and ending dates of the reporting period;

(d) The values for the operating limits established pursuant to § 60.2675 or § 60.2680;

(e) If no deviation from any emission limitation or operating limit that applies to you has been reported, a statement that there was no deviation from the emission limitations or operating limits during the reporting period;

(f) The highest recorded 3-hour average and the lowest recorded 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported;

(g) Information recorded under § 60.2740(b)(6) and (c) through (e) for the calendar year being reported;

(h) For each performance test conducted during the reporting period, if any performance test is conducted, the process unit(s) tested, the pollutant(s) tested and the date that such performance test was conducted. Submit, following the procedure specified in § 60.2795(b)(1), the performance test report no later than the date that you submit the annual report;

(i) If you met the requirements of § 60.2720(a) or (b), and did not conduct a performance test during the reporting period, you must state that you met the requirements of § 60.2720(a) or (b), and, therefore, you were not required to conduct a performance test during the reporting period;

(j) Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours, but less than 2 weeks;

(k) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction that occurred during the reporting period and that caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 60.11(d), including actions taken to correct a malfunction;

(l) For each deviation from an emission or operating limitation that occurs for a CISWI unit for which you are not using a CMS to comply with the emission or operating limitations in this subpart, the annual report must contain the following information:

(1) The total operating time of the CISWI unit at which the deviation occurred during the reporting period; and

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(m) If there were periods during which the continuous monitoring system, including the CEMS, was out of control as specified in paragraph (o) of this section, the annual report must contain the following information for each deviation from an emission or operating limitation occurring for a CISWI unit for which you are using a continuous monitoring system to comply with the emission and operating limitations in this subpart:

(1) The date and time that each malfunction started and stopped;

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks;

(3) The date, time, and duration that each continuous monitoring system was out-of-control, including start and end dates and hours and descriptions of corrective actions taken;

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period;

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period;

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes;

(7) A summary of the total duration of continuous monitoring system downtime during the reporting period, and the total duration of continuous monitoring system downtime as a percent of the total operating time of the CISWI unit at which the continuous monitoring system downtime occurred during that reporting period;

(8) An identification of each parameter and pollutant that was monitored at the CISWI unit;

(9) A brief description of the CISWI unit;

(10) A brief description of the continuous monitoring system;

(11) The date of the latest continuous monitoring system certification or audit; and

(12) A description of any changes in continuous monitoring system, processes, or controls since the last reporting period.

(n) If there were periods during which the continuous monitoring system, including the CEMS, was not out of control as specified in paragraph (o) of this section, a statement that there were not periods during which the continuous monitoring system was out of control during the reporting period.

(o) A continuous monitoring system is out of control if any of the following occur:

(1) The zero (low-level), mid-level (if applicable), or high-level calibration drift exceeds two times the applicable calibration drift specification in the applicable performance specification or in the relevant standard;

(2) The continuous monitoring system fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; and

(3) The continuous opacity monitoring system calibration drift exceeds two times the limit in the applicable performance specification in the relevant standard.

(p) For energy recovery units, include the annual heat input and average annual heat input rate of all fuels being burned in the unit to verify which subcategory of energy recovery unit applies.

**§ 60.2775 What else must I report if I have a deviation from the operating limits or the emission limitations?**

(a) You must submit a deviation report if any recorded 3-hour average parameter level is above the maximum operating limit or below the minimum operating limit established under this subpart, if the bag leak detection system alarm sounds for more than 5 percent of the operating time for the 6-month reporting period, or if a performance test was conducted that deviated from any emission limitation.

(b) The deviation report must be submitted by August 1 of that year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data you collected during the second half of the calendar year (July 1 to December 31).

**§ 60.2780 What must I include in the deviation report?**

In each report required under § 60.2775, for any pollutant or parameter that deviated from the emission limitations or operating limits specified in this subpart, include the four items described in paragraphs (a) through (d) of this section:

(a) The calendar dates and times your unit deviated from the emission limitations or operating limit requirements;

(b) The averaged and recorded data for those dates;

(c) Durations and causes of the following:

(1) Each deviation from emission limitations or operating limits and your corrective actions; and

(2) Bypass events and your corrective actions.

(d) A copy of the operating limit monitoring data during each deviation and for any test report that documents the emission levels the process unit(s) tested, the pollutant(s) tested and the date that the performance test was conducted. Submit, following the procedure specified in § 60.2795(b)(1), the performance test report no later than the date that you submit the deviation report.

**§ 60.2785 What else must I report if I have a deviation from the requirement to have a qualified operator accessible?**

(a) If all qualified operators are not accessible for 2 weeks or more, you must take the two actions in paragraphs (a)(1) and (2) of this section:

(1) Submit a notification of the deviation within 10 days that includes the three items in paragraphs (a)(1)(i) through (iii) of this section:

(i) A statement of what caused the deviation;

(ii) A description of what you are doing to ensure that a qualified operator is accessible; and

(iii) The date when you anticipate that a qualified operator will be available.

(2) Submit a status report to the Administrator every 4 weeks that includes the three items in paragraphs (a)(2)(i) through (iii) of this section:

(i) A description of what you are doing to ensure that a qualified operator is accessible;

(ii) The date when you anticipate that a qualified operator will be accessible; and

(iii) Request approval from the Administrator to continue operation of the CISWI unit.

(b) If your unit was shut down by the Administrator, under the provisions of § 60.2665(b)(2), due to a failure to provide an accessible qualified operator, you must notify the Administrator that you are resuming operation once a qualified operator is accessible.

**§ 60.2790 Are there any other notifications or reports that I must submit?**

(a) Yes. You must submit notifications as provided by § 60.7.

(b) If you cease combusting solid waste but continue to operate, you must provide 30 days prior notice of the effective date of the waste-to-fuel switch, consistent with § 60.2710(a). The notification must identify:

(1) The name of the owner or operator of the CISWI unit, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

(2) The currently applicable subcategory under this subpart, and any 40 CFR part 63 subpart and subcategory that will be applicable after you cease combusting solid waste;

(3) The fuel(s), non-waste material(s) and solid waste(s) the CISWI unit is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting;

(4) The date on which you became subject to the currently applicable emission limits; and

(5) The date upon which you will cease combusting solid waste, and the

date (if different) that you intend for any new requirements to become applicable (*i.e.*, the effective date of the waste-to-fuel switch), consistent with paragraphs (b)(2) and (3) of this section.

**§ 60.2795 In what form can I submit my reports?**

(a) Submit initial, annual and deviation reports electronically on or before the submittal due dates. Submit the reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>)). Use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (<https://www3.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, submit the report to the Administrator at the appropriate address listed in § 60.4. Once the form has been available in CEDRI for 90 calendar days, you must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the report is submitted.

(b) Submit results of each performance test and CEMS performance evaluation required by this subpart as follows:

(1) Within 60 days after the date of completing each performance test (*see* § 60.8) required by this subpart, you must submit the results of the performance test following the procedure specified in either paragraph (b)(1)(i) or (b)(1)(ii) of this section:

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site ([https://www3.epa.gov/ttn/chief/ert/ert\\_info.html](https://www3.epa.gov/ttn/chief/ert/ert_info.html)) at the time of the test, you must submit the results of the performance test to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX (<https://cdx.epa.gov/>)). Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the XML schema listed on the EPA's ERT Web site. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML

schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph; and

(ii) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in § 60.4.

(2) Within 60 days after the date of completing each continuous emissions monitoring system performance evaluation you must submit the results of the performance evaluation following the procedure specified in either paragraph (b)(1) or (b)(2) of this section:

(i) For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) Performance evaluation data must be submitted in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT Web site. If you claim that some of the performance evaluation information being submitted is CBI, you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic storage media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph; and

(ii) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of

the evaluation, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in § 60.4.

**§ 60.2800 Can reporting dates be changed?**

If the Administrator agrees, you may change the semiannual or annual reporting dates. See § 60.19(c) for procedures to seek approval to change your reporting date.

**Model Rule—Title V Operating Permits**

**§ 60.2805 Am I required to apply for and obtain a Title V operating permit for my unit?**

Yes. Each CISWI unit and air curtain incinerator subject to standards under this subpart must operate pursuant to a permit issued under Clean Air Act sections 129(e) and Title V.

**Model Rule—Air Curtain Incinerators**

**§ 60.2810 What is an air curtain incinerator?**

(a) An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)

(b) Air curtain incinerators that burn only the materials listed in paragraphs (b)(1) through (3) of this section are only required to meet the requirements under § 60.2805 and under “Air Curtain Incinerators” (§§ 60.2810 through 60.2870):

- (1) 100 percent wood waste;
- (2) 100 percent clean lumber; and
- (3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

**§ 60.2815 What are my requirements for meeting increments of progress and achieving final compliance?**

If you plan to achieve compliance more than 1 year following the effective date of state plan approval, you must meet the two increments of progress specified in paragraphs (a) and (b) of this section:

- (a) Submit a final control plan; and
- (b) Achieve final compliance.

**§ 60.2820 When must I complete each increment of progress?**

Table 1 of this subpart specifies compliance dates for each of the increments of progress.

**§ 60.2825 What must I include in the notifications of achievement of increments of progress?**

Your notification of achievement of increments of progress must include the three items described in paragraphs (a) through (c) of this section:

- (a) Notification that the increment of progress has been achieved;
- (b) Any items required to be submitted with each increment of progress (see § 60.2840); and
- (c) Signature of the owner or operator of the incinerator.

**§ 60.2830 When must I submit the notifications of achievement of increments of progress?**

Notifications for achieving increments of progress must be postmarked no later than 10 business days after the compliance date for the increment.

**§ 60.2835 What if I do not meet an increment of progress?**

If you fail to meet an increment of progress, you must submit a notification to the Administrator postmarked within 10 business days after the date for that increment of progress in table 1 of this subpart. You must inform the Administrator that you did not meet the increment, and you must continue to submit reports each subsequent calendar month until the increment of progress is met.

**§ 60.2840 How do I comply with the increment of progress for submittal of a control plan?**

For your control plan increment of progress, you must satisfy the two requirements specified in paragraphs (a) and (b) of this section:

- (a) Submit the final control plan, including a description of any devices for air pollution control and any process changes that you will use to comply with the emission limitations and other requirements of this subpart; and
- (b) Maintain an onsite copy of the final control plan.

**§ 60.2845 How do I comply with the increment of progress for achieving final compliance?**

For the final compliance increment of progress, you must complete all process changes and retrofit construction of control devices, as specified in the final control plan, so that, if the affected incinerator is brought online, all necessary process changes and air pollution control devices would operate as designed.

**§ 60.2850 What must I do if I close my air curtain incinerator and then restart it?**

(a) If you close your incinerator but will reopen it prior to the final compliance date in your state plan, you

must meet the increments of progress specified in § 60.2815.

(b) If you close your incinerator but will restart it after your final compliance date, you must complete emission control retrofits and meet the emission limitations on the date your incinerator restarts operation.

**§ 60.2855 What must I do if I plan to permanently close my air curtain incinerator and not restart it?**

If you plan to close your incinerator rather than comply with the state plan, submit a closure notification, including the date of closure, to the Administrator by the date your final control plan is due.

**§ 60.2860 What are the emission limitations for air curtain incinerators?**

After the date the initial stack test is required or completed (whichever is earlier), you must meet the limitations in paragraphs (a) and (b) of this section:

(a) Maintain opacity to less than or equal to 10 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values), except as described in paragraph (b) of this section; and

(b) Maintain opacity to less than or equal to 35 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) during the startup period that is within the first 30 minutes of operation.

**§ 60.2865 How must I monitor opacity for air curtain incinerators?**

(a) Use Method 9 of appendix A of this part to determine compliance with the opacity limitation.

(b) Conduct an initial test for opacity as specified in § 60.8 no later than 180 days after your final compliance date.

(c) After the initial test for opacity, conduct annual tests no more than 12 calendar months following the date of your previous test.

**§ 60.2870 What are the recordkeeping and reporting requirements for air curtain incinerators?**

(a) Keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format, unless the Administrator approves another format, for at least 5 years.

(b) Make all records available for submittal to the Administrator or for an inspector's onsite review.

(c) Submit an initial report no later than 60 days following the initial opacity test that includes the information specified in paragraphs (c)(1) and (2) of this section:



(1) The types of materials you plan to combust in your air curtain incinerator; and

(2) The results (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) of the initial opacity tests.

(d) Submit annual opacity test results within 12 months following the previous report.

(e) Submit initial and annual opacity test reports as electronic or paper copy on or before the applicable submittal date and keep a copy onsite for a period of 5 years.

#### Model Rule—Definitions

##### § 60.2875 What definitions must I know?

Terms used but not defined in this subpart are defined in the Clean Air Act and subparts A and B of this part.

*30-day rolling average* means the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes periods when this unit is not operating. The 720 hours should be consecutive, but not necessarily continuous if operations are intermittent.

*Administrator* means the Administrator of the U.S. Environmental Protection Agency or his/her authorized representative or Administrator of a State Air Pollution Control Agency.

*Agricultural waste* means vegetative agricultural materials such as nut and grain hulls and chaff (e.g., almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds, and other vegetative waste materials generated as a result of agricultural operations.

*Air curtain incinerator* means an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)

*Annual heat input* means the heat input for the 12 months preceding the compliance demonstration.

*Auxiliary fuel* means natural gas, liquified petroleum gas, fuel oil, or diesel fuel.

*Average annual heat input rate* means annual heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

*Bag leak detection system* means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (i.e., baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

*Burn-off oven* means any rack reclamation unit, part reclamation unit, or drum reclamation unit. A burn-off oven is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

*Bypass stack* means a device used for discharging combustion gases to avoid severe damage to the air pollution control device or other equipment.

*Calendar quarter* means three consecutive months (nonoverlapping) beginning on: January 1, April 1, July 1, or October 1.

*Calendar year* means 365 consecutive days starting on January 1 and ending on December 31.

*CEMS data during startup and shutdown* means the following:

(1) For incinerators and small remote incinerators: CEMS data collected during the first hours of operation of a CISWI unit startup from a cold start until waste is fed into the unit and the hours of operation following the cessation of waste material being fed to the CISWI unit during a unit shutdown. For each startup event, the length of time that CEMS data may be claimed as being CEMS data during startup must be 48 operating hours or less. For each shutdown event, the length of time that CEMS data may be claimed as being CEMS data during shutdown must be 24 operating hours or less;

(2) For energy recovery units: CEMS data collected during the startup or shutdown periods of operation. Startup begins with either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy (such as steam or heat) for heating, cooling or process purposes, or producing electricity, or the firing of fuel in a boiler or process heater for any purpose after a shutdown event. Startup ends four hours after when the boiler or process heater makes useful thermal energy (such as heat or steam) for heating, cooling, or process purposes, or generates electricity, whichever is earlier. Shutdown begins when the boiler or process heater no longer makes useful thermal energy (such as heat or steam) for heating, cooling, or process purposes and/or generates electricity or when no fuel is being fed to the boiler

or process heater, whichever is earlier. Shutdown ends when the boiler or process heater no longer makes useful thermal energy (such as steam or heat) for heating, cooling, or process purposes and/or generates electricity, and no fuel is being combusted in the boiler or process heater; and

(3) For waste-burning kilns: CEMS data collected during the periods of kiln operation that do not include normal operations. Startup means the time from when a shutdown kiln first begins firing fuel until it begins producing clinker. Startup begins when a shutdown kiln turns on the induced draft fan and begins firing fuel in the main burner. Startup ends when feed is being continuously introduced into the kiln for at least 120 minutes or when the feed rate exceeds 60 percent of the kiln design limitation rate, whichever occurs first. Shutdown means the cessation of kiln operation. Shutdown begins when feed to the kiln is halted and ends when continuous kiln rotation ceases.

*Chemical recovery unit* means combustion units burning materials to recover chemical constituents or to produce chemical compounds where there is an existing commercial market for such recovered chemical constituents or compounds. A chemical recovery unit is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart. The following seven types of units are considered chemical recovery units:

(1) Units burning only pulping liquors (i.e., black liquor) that are reclaimed in a pulping liquor recovery process and reused in the pulping process;

(2) Units burning only spent sulfuric acid used to produce virgin sulfuric acid;

(3) Units burning only wood or coal feedstock for the production of charcoal;

(4) Units burning only manufacturing byproduct streams/residue containing catalyst metals that are reclaimed and reused as catalysts or used to produce commercial grade catalysts;

(5) Units burning only coke to produce purified carbon monoxide that is used as an intermediate in the production of other chemical compounds;

(6) Units burning only hydrocarbon liquids or solids to produce hydrogen, carbon monoxide, synthesis gas, or other gases for use in other manufacturing processes; and

(7) Units burning only photographic film to recover silver.

*Chemotherapeutic waste* means waste material resulting from the production or use of antineoplastic agents used for



the purpose of stopping or reversing the growth of malignant cells.

*Clean lumber* means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Clean lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote.

*Commercial and industrial solid waste incineration (CISWI) unit* means any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding 6 months, any solid waste as that term is defined in 40 CFR part 241. If the operating unit burns materials other than traditional fuels as defined in § 241.2 that have been discarded, and you do not keep and produce records as required by § 60.2740(u), the operating unit is a CISWI unit. While not all CISWI units will include all of the following components, a CISWI unit includes, but is not limited to, the solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The CISWI unit does not include air pollution control equipment or the stack. The CISWI unit boundary starts at the solid waste hopper (if applicable) and extends through two areas: The combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and the combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. The CISWI unit includes all ash handling systems connected to the bottom ash handling system.

*Contained gaseous material* means gases that are in a container when that container is combusted.

*Continuous emission monitoring system (CEMS)* means the total equipment that may be required to meet the data acquisition and availability requirements of this subpart, used to sample, condition (if applicable), analyze, and provide a record of emissions.

*Continuous monitoring system (CMS)* means the total equipment, required under the emission monitoring sections in applicable subparts, used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters. A particulate matter continuous parameter monitoring system (PM CPMS) is a type of CMS.

*Cyclonic burn barrel* means a combustion device for waste materials

that is attached to a 55 gallon, open-head drum. The device consists of a lid, which fits onto and encloses the drum, and a blower that forces combustion air into the drum in a cyclonic manner to enhance the mixing of waste material and air. A cyclonic burn barrel is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

*Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation, operating limit, or operator qualification and accessibility requirements; and

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit.

*Dioxins/furans* means tetra-through octachlorinated dibenzo-p-dioxins and dibenzofurans.

*Discard* means, for purposes of this subpart and 40 CFR part 60, subpart DDDD, only, burned in an incineration unit without energy recovery.

*Drum reclamation unit* means a unit that burns residues out of drums (e.g., 55 gallon drums) so that the drums can be reused.

*Dry scrubber* means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems in fluidized bed boilers and process heaters are included in this definition. A dry scrubber is a dry control system.

*Energy recovery* means the process of recovering thermal energy from combustion for useful purposes such as steam generation or process heating.

*Energy recovery unit* means a combustion unit combusting solid waste (as that term is defined by the Administrator in 40 CFR part 241) for energy recovery. Energy recovery units include units that would be considered boilers and process heaters if they did not combust solid waste.

*Energy recovery unit designed to burn biomass (Biomass)* means an energy recovery unit that burns solid waste, biomass, and non-coal solid materials but less than 10 percent coal, on a heat input basis on an annual average, either alone or in combination with liquid waste, liquid fuel or gaseous fuels.

*Energy recovery unit designed to burn coal (Coal)* means an energy recovery

unit that burns solid waste and at least 10 percent coal on a heat input basis on an annual average, either alone or in combination with liquid waste, liquid fuel or gaseous fuels.

*Energy recovery unit designed to burn liquid waste materials and gas (Liquid/gas)* means an energy recovery unit that burns a liquid waste with liquid or gaseous fuels not combined with any solid fuel or waste materials.

*Energy recovery unit designed to burn solid materials (Solids)* includes energy recovery units designed to burn coal and energy recovery units designed to burn biomass

*Fabric filter* means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse.

*Foundry sand thermal reclamation unit* means a type of part reclamation unit that removes coatings that are on foundry sand. A foundry sand thermal reclamation unit is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

*Incinerator* means any furnace used in the process of combusting solid waste (as that term is defined by the Administrator in 40 CFR part 241) for the purpose of reducing the volume of the waste by removing combustible matter. Incinerator designs include single chamber and two-chamber.

*In-line coal mill* means those coal mills using kiln exhaust gases in their process. Coal mills with a heat source other than the kiln or coal mills using exhaust gases from the clinker cooler alone are not an in-line coal mill.

*In-line kiln/raw mill* means a system in a Portland Cement production process where a dry kiln system is integrated with the raw mill so that all or a portion of the kiln exhaust gases are used to perform the drying operation of the raw mill, with no auxiliary heat source used. In this system the kiln is capable of operating without the raw mill operating, but the raw mill cannot operate without the kiln gases, and consequently, the raw mill does not generate a separate exhaust gas stream.

*Kiln* means an oven or furnace, including any associated preheater or precalciner devices, in-line raw mills, in-line coal mills or alkali bypasses used for processing a substance by burning, firing or drying. Kilns include cement kilns that produce clinker by heating limestone and other materials for subsequent production of Portland Cement. Because the alkali bypass, in-line raw mill and in-line coal mill are considered an integral part of the kiln, the kiln emissions limits also apply to

the exhaust of the alkali bypass, in-line raw mill and in-line coal mill.

*Laboratory analysis unit* means units that burn samples of materials for the purpose of chemical or physical analysis. A laboratory analysis unit is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

*Load fraction* means the actual heat input of an energy recovery unit divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (e.g., for 50 percent load the load fraction is 0.5).

*Low-level radioactive waste* means waste material which contains radioactive nuclides emitting primarily beta or gamma radiation, or both, in concentrations or quantities that exceed applicable federal or state standards for unrestricted release. Low-level radioactive waste is not high-level radioactive waste, spent nuclear fuel, or by-product material as defined by the Atomic Energy Act of 1954 (42 U.S.C. 2014(e)(2)).

*Malfunction* means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused, in part, by poor maintenance or careless operation are not malfunctions.

*Minimum voltage or amperage* means 90 percent of the lowest test-run average voltage or amperage to the electrostatic precipitator measured during the most recent particulate matter or mercury performance test demonstrating compliance with the applicable emission limits.

*Modification or modified CISWI unit* means a CISWI unit that has been changed later than August 7, 2013, and that meets one of two criteria:

(1) The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not including the cost of land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI unit used to calculate these costs, see the definition of CISWI unit; and

(2) Any physical change in the CISWI unit or change in the method of operating it that increases the amount of any air pollutant emitted for which section 129 or section 111 of the Clean Air Act has established standards.

*Municipal solid waste or municipal-type solid waste* means household, commercial/retail, or institutional waste. Household waste includes

material discarded by residential dwellings, hotels, motels, and other similar permanent or temporary housing. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at industrial facilities, and other similar establishments or facilities. Institutional waste includes materials discarded by schools, by hospitals (nonmedical), by nonmanufacturing activities at prisons and government facilities, and other similar establishments or facilities. Household, commercial/retail, and institutional waste does include yard waste and refuse-derived fuel. Household, commercial/retail, and institutional waste does not include used oil; sewage sludge; wood pallets; construction, renovation, and demolition wastes (which include railroad ties and telephone poles); clean wood; industrial process or manufacturing wastes; medical waste; or motor vehicles (including motor vehicle parts or vehicle fluff).

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

*Operating day* means a 24-hour period between 12:00 midnight and the following midnight during which any amount of solid waste is combusted at any time in the CISWI unit.

*Oxygen analyzer system* means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler or process heater flue gas, boiler/process heater, firebox, or other appropriate location. This definition includes oxygen trim systems and certified oxygen CEMS. The source owner or operator is responsible to install, calibrate, maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.

*Oxygen trim system* means a system of monitors that is used to maintain excess air at the desired level in a combustion device over its operating range. A typical system consists of a flue gas oxygen and/or carbon monoxide monitor that automatically provides a feedback signal to the combustion air controller or draft controller.

*Part reclamation unit* means a unit that burns coatings off parts (e.g., tools, equipment) so that the parts can be reconditioned and reused.

*Particulate matter* means total particulate matter emitted from CISWI units as measured by Method 5 or Method 29 of appendix A of this part.

*Pathological waste* means waste material consisting of only human or

animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable).

*Performance evaluation* means the conduct of relative accuracy testing, calibration error testing, and other measurements used in validating the continuous monitoring system data.

*Performance test* means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission standard as specified in the performance test section of the relevant standard.

*Process change* means any of the following physical or operational changes:

(1) A physical change (maintenance activities excluded) to the CISWI unit which may increase the emission rate of any air pollutant to which a standard applies;

(2) An operational change to the CISWI unit where a new type of non-hazardous secondary material is being combusted;

(3) A physical change (maintenance activities excluded) to the air pollution control devices used to comply with the emission limits for the CISWI unit (e.g., replacing an electrostatic precipitator with a fabric filter); and

(4) An operational change to the air pollution control devices used to comply with the emission limits for the affected CISWI unit (e.g., change in the sorbent injection rate used for activated carbon injection).

*Rack reclamation unit* means a unit that burns the coatings off racks used to hold small items for application of a coating. The unit burns the coating overspray off the rack so the rack can be reused.

*Raw mill* means a ball or tube mill, vertical roller mill or other size reduction equipment, that is not part of an in-line kiln/raw mill, used to grind feed to the appropriate size. Moisture may be added or removed from the feed during the grinding operation. If the raw mill is used to remove moisture from feed materials, it is also, by definition, a raw material dryer. The raw mill also includes the air separator associated with the raw mill.

*Reconstruction* means rebuilding a CISWI unit and meeting two criteria:

(1) The reconstruction begins on or after August 7, 2013; and

(2) The cumulative cost of the construction over the life of the incineration unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not including land) updated to current costs (current

dollars). To determine what systems are within the boundary of the CISWI unit used to calculate these costs, see the definition of CISWI unit.

*Refuse-derived fuel* means a type of municipal solid waste produced by processing municipal solid waste through shredding and size classification. This includes all classes of refuse-derived fuel including two fuels:

(1) Low-density fluff refuse-derived fuel through densified refuse-derived fuel; and

(2) Pelletized refuse-derived fuel.

*Responsible official* means one of the following:

(1) For a corporation: A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

(i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or

(ii) The delegation of authority to such representatives is approved in advance by the permitting authority;

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

(3) For a municipality, state, federal, or other public agency: Either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA); or

(4) For affected facilities:

(i) The designated representative in so far as actions, standards, requirements, or prohibitions under Title IV of the Clean Air Act or the regulations promulgated thereunder are concerned; or

(ii) The designated representative for any other purposes under part 60.

*Shutdown* means, for incinerators and small, remote incinerators, the period of

time after all waste has been combusted in the primary chamber.

*Small, remote incinerator* means an incinerator that combusts solid waste (as that term is defined by the Administrator in 40 CFR part 241) and combusts 3 tons per day or less solid waste and is more than 25 miles driving distance to the nearest municipal solid waste landfill.

*Soil treatment unit* means a unit that thermally treats petroleum-contaminated soils for the sole purpose of site remediation. A soil treatment unit may be direct-fired or indirect fired. A soil treatment unit is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

*Solid waste* means the term solid waste as defined in 40 CFR 241.2.

*Solid waste incineration unit* means a distinct operating unit of any facility which combusts any solid waste (as that term is defined by the Administrator in 40 CFR part 241) material from commercial or industrial establishments or the general public (including single and multiple residences, hotels and motels). Such term does not include incinerators or other units required to have a permit under section 3005 of the Solid Waste Disposal Act. The term "solid waste incineration unit" does not include:

(1) Materials recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals;

(2) Qualifying small power production facilities, as defined in section 3(17)(C) of the Federal Power Act (16 U.S.C. 769(17)(C)), or qualifying cogeneration facilities, as defined in section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)), which burn homogeneous waste (such as units which burn tires or used oil, but not including refuse-derived fuel) for the production of electric energy or in the case of qualifying cogeneration facilities which burn homogeneous waste for the production of electric energy and steam or forms of useful energy (such as heat) which are used for industrial, commercial, heating or cooling purposes; or

(3) Air curtain incinerators provided that such incinerators only burn wood wastes, yard wastes and clean lumber

and that such air curtain incinerators comply with opacity limitations to be established by the Administrator by rule.

*Space heater* means a unit that meets the requirements of 40 CFR 279.23. A space heater is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

*Standard conditions*, when referring to units of measure, means a temperature of 68 °F (20 °C) and a pressure of 1 atmosphere (101.3 kilopascals).

*Startup period* means, for incinerators and small, remote incinerators, the period of time between the activation of the system and the first charge to the unit.

*Useful thermal energy* means energy (i.e., steam, hot water, or process heat) that meets the minimum operating temperature and/or pressure required by any energy use system that uses energy provided by the affected energy recovery unit.

*Waste-burning kiln* means a kiln that is heated, in whole or in part, by combusting solid waste (as the term is defined by the Administrator in 40 CFR part 241). Secondary materials used in Portland cement kilns shall not be deemed to be combusted unless they are introduced into the flame zone in the hot end of the kiln or mixed with the precalciner fuel.

*Wet scrubber* means an add-on air pollution control device that uses an aqueous or alkaline scrubbing liquor to collect particulate matter (including nonvaporous metals and condensed organics) and/or to absorb and neutralize acid gases.

*Wood waste* means untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include:

(1) Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands;

(2) Construction, renovation, or demolition wastes; or

(3) Clean lumber.

TABLE 1 TO SUBPART DDDD OF PART 60—MODEL RULE—INCREMENTS OF PROGRESS AND COMPLIANCE SCHEDULES

Comply with these increments of progress	By these dates <sup>1</sup>
Increment 1—Submit final control plan.	(Dates to be specified in state plan).

TABLE 1 TO SUBPART DDDD OF PART 60—MODEL RULE—INCREMENTS OF PROGRESS AND COMPLIANCE SCHEDULES—Continued

Comply with these increments of progress	By these dates <sup>1</sup>
Increment 2—Final compliance.	(Dates to be specified in state plan). <sup>2</sup>

<sup>2</sup>The date can be no later than 3 years after the effective date of state plan approval or December 1, 2005 for CISWI units that commenced construction on or before November 30, 1999. The date can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018, for CISWI units that commenced construction on or before June 4, 2010.

<sup>1</sup> Site-specific schedules can be used at the discretion of the state.

TABLE 2 TO SUBPART DDDD OF PART 60—MODEL RULE—EMISSION LIMITATIONS THAT APPLY TO INCINERATORS BEFORE

[Date to be specified in state plan]<sup>2</sup>

For the air pollutant	You must meet this emission limitation <sup>1</sup>	Using this averaging time	And determining compliance using this method
Cadmium .....	0.004 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of this part).
Carbon monoxide .....	157 parts per million by dry volume ..	3-run average (1 hour minimum sample time per run).	Performance test (Method 10, 10A, or 10B, of appendix A of this part).
Dioxins/furans (toxic equivalency basis).	0.41 nanograms per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 23 of appendix A of this part).
Hydrogen chloride .....	62 parts per million by dry volume ....	3-run average (For Method 26, collect a minimum volume of 120 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run).	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A–8).
Lead .....	0.04 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of this part)
Mercury .....	0.47 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A–8) or ASTM D6784–02 (Reapproved 2008). <sup>3</sup>
Opacity .....	10 percent .....	Three 1-hour blocks consisting of ten 6-minute average opacity values.	Performance test (Method 9 at 40 CFR part 60, appendix A–4).
Oxides of nitrogen .....	388 parts per million by dry volume ..	3-run average (1 hour minimum sample time per run).	Performance test (Methods 7 or 7E at 40 CFR part 60, appendix A–4).
Particulate matter .....	70 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 5 or 29 of appendix A of this part).
Sulfur dioxide .....	20 parts per million by dry volume ....	3-run average (1 hour minimum sample time per run).	Performance test (Method 6 or 6c of appendix A of this part).

<sup>1</sup> All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions.

<sup>2</sup> Applies only to incinerators subject to the CISWI standards through a state plan or the Federal plan prior to June 4, 2010. The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018.

<sup>3</sup> Incorporated by reference, see § 60.17.

TABLE 3 TO SUBPART DDDD OF PART 60—MODEL RULE—OPERATING LIMITS FOR WET SCRUBBERS

For these operating parameters	You must establish these operating limits	And monitor using these minimum frequencies		
		Data measurement	Data recording	Averaging time
Charge rate .....	Maximum charge rate .....	Continuous .....	Every hour .....	Daily (batch units). 3-hour rolling (continuous and intermittent units). <sup>1</sup>
Pressure drop across the wet scrubber or amperage to wet scrubber.	Minimum pressure drop or amperage.	Continuous .....	Every 15 minutes .....	3-hour rolling. <sup>1</sup>
Scrubber liquor flow rate .....	Minimum flow rate .....	Continuous .....	Every 15 minutes .....	3-hour rolling. <sup>1</sup>
Scrubber liquor pH .....	Minimum pH .....	Continuous .....	Every 15 minutes .....	3-hour rolling. <sup>1</sup>

<sup>1</sup> Calculated each hour as the average of the previous 3 operating hours.

TABLE 4 TO SUBPART DDDD OF PART 60—MODEL RULE—TOXIC EQUIVALENCY FACTORS

Dioxin/furan isomer	Toxic equivalency factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin .....	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin .....	0.5
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin .....	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin .....	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin .....	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin .....	0.01
octachlorinated dibenzo-p-dioxin .....	0.001
2,3,7,8-tetrachlorinated dibenzofuran .....	0.1
2,3,4,7,8-pentachlorinated dibenzofuran .....	0.5
1,2,3,7,8-pentachlorinated dibenzofuran .....	0.05
1,2,3,4,7,8-hexachlorinated dibenzofuran .....	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran .....	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran .....	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran .....	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran .....	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran .....	0.01
octachlorinated dibenzofuran .....	0.001

TABLE 5 TO SUBPART DDDD OF PART 60—MODEL RULE—SUMMARY OF REPORTING REQUIREMENTS <sup>1</sup>

Report	Due date	Contents	Reference
Waste Management Plan ....	No later than the date specified in table 1 for submittal of the final control plan.	<ul style="list-style-type: none"> <li>Waste management plan .....</li> </ul>	§ 60.2755.
Initial Test Report .....	No later than 60 days following the initial performance test.	<ul style="list-style-type: none"> <li>Complete test report for the initial performance test.</li> <li>The values for the site-specific operating limits.</li> <li>Installation of bag leak detection systems for fabric filters.</li> </ul>	§ 60.2760.
Annual report .....	<p>No later than 12 months following the submission of the initial test report. Subsequent reports are to be submitted no more than 12 months following the previous report.</p> <ul style="list-style-type: none"> <li>Statement and signature by responsible official</li> <li>Date of report .....</li> <li>Values for the operating limits .....</li> <li>Highest recorded 3-hour average and the lowest 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported.</li> <li>If a performance test was conducted during the reporting period, the results of the test.</li> <li>If a performance test was not conducted during the reporting period, a statement that the requirements of § 60.2720(a) were met.</li> <li>Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours but less than 2 weeks.</li> <li>If you are conducting performance tests once every 3 years consistent with § 60.2720(a), the date of the last 2 performance tests, a comparison of the emission level you achieved in the last 2 performance tests to the 75 percent emission limit threshold required in § 60.2720(a) and a statement as to whether there have been any operational changes since the last performance test that could increase emissions.</li> </ul>	<ul style="list-style-type: none"> <li>Name and address .....</li> </ul>	§§ 60.2765 and 60.2770.

TABLE 5 TO SUBPART DDDD OF PART 60—MODEL RULE—SUMMARY OF REPORTING REQUIREMENTS <sup>1</sup>—Continued

Report	Due date	Contents	Reference
Emission limitation or operating limit deviation report.	By August 1 of that year for data collected during the first half of the calendar year. By February 1 of the following year for data collected during the second half of the calendar year.	<ul style="list-style-type: none"> <li>Dates and times of deviation .....</li> <li>Averaged and recorded data for those dates.</li> <li>Duration and causes of each deviation and the corrective actions taken.</li> <li>Copy of operating limit monitoring data and any test reports.</li> <li>Dates, times and causes for monitor downtime incidents.</li> <li>Statement of cause of deviation .....</li> <li>Description of efforts to have an accessible qualified operator.</li> <li>The date a qualified operator will be accessible.</li> </ul>	§ 60.2775 and 60.2780.
Qualified Operator Deviation Notification.	Within 10 days of deviation .....	<ul style="list-style-type: none"> <li>Description of efforts to have an accessible qualified operator.</li> <li>The date a qualified operator will be accessible.</li> </ul>	§ 60.2785(a)(1).
Qualified Operator Deviation Status Report.	Every 4 weeks following deviation .....	<ul style="list-style-type: none"> <li>Description of efforts to have an accessible qualified operator.</li> <li>The date a qualified operator will be accessible.</li> <li>Request for approval to continue operation.</li> </ul>	§ 60.2785(a)(2).
Qualified Operator Deviation Notification of Resumed Operation.	Prior to resuming operation .....	<ul style="list-style-type: none"> <li>Notification that you are resuming operation.</li> </ul>	§ 60.2785(b)

<sup>1</sup> This table is only a summary, see the referenced sections of the rule for the complete requirements.

TABLE 6 TO SUBPART DDDD OF PART 60—MODEL RULE—EMISSION LIMITATIONS THAT APPLY TO INCINERATORS ON AND AFTER

[Date to be specified in state plan] <sup>1</sup>

For the air pollutant	You must meet this emission limitation <sup>2</sup>	Using this averaging time	And determining compliance using this method
Cadmium .....	0.0026 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 at 40 CFR part 60, appendix A–8). Use ICPMS for the analytical finish.
Carbon monoxide .....	17 parts per million dry volume .....	3-run average (1 hour minimum sample time per run).	Performance test (Method 10 at 40 CFR part 60, appendix A–4).
Dioxins/furans (total mass basis).	4.6 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 23 at 40 CFR part 60, appendix A–7).
Dioxins/furans (toxic equivalency basis).	0.13 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 23 at 40 CFR part 60, appendix A–7).
Hydrogen chloride .....	29 parts per million dry volume .....	3-run average (For Method 26, collect a minimum volume of 60 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run).	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A–8).
Lead .....	0.015 milligrams per dry standard cubic meter <sup>3</sup> .	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 at 40 CFR part 60, appendix A–8). Use ICPMS for the analytical finish.
Mercury .....	0.0048 milligrams per dry standard cubic meter.	3-run average (For Method 29 an ASTM D6784–02 (Reapproved 2008) <sup>4</sup> , collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum sample as specified in Method 30B at 40 CFR part 60, appendix A).	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A–8) or ASTM D6784–02 (Reapproved 2008). <sup>4</sup>
Oxides of nitrogen .....	53 parts per million dry volume .....	3-run average (for Method 7E, 1 hour minimum sample time per run).	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A–4).
Particulate matter filterable.	34 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 5 or 29 at 40 CFR part 60, appendix A–3 or appendix A–8).
Sulfur dioxide .....	11 parts per million dry volume .....	3-run average (1 hour minimum sample time per run).	Performance test (Method 6 or 6c at 40 CFR part 60, appendix A–4).

TABLE 6 TO SUBPART DDDD OF PART 60—MODEL RULE—EMISSION LIMITATIONS THAT APPLY TO INCINERATORS ON AND AFTER—Continued

[Date to be specified in state plan]<sup>1</sup>

For the air pollutant	You must meet this emission limitation <sup>2</sup>	Using this averaging time	And determining compliance using this method
Fugitive ash .....	Visible emissions for no more than 5% of the hourly observation period.	Three 1-hour observation periods .....	Visible emission test (Method 22 at 40 CFR part 60, appendix A-7).

<sup>1</sup> The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018.

<sup>2</sup> All emission limitations are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the total mass basis limit or the toxic equivalency basis limit.

<sup>3</sup> If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 60.2720 if all of the other provisions of § 60.2720 are met. For all other pollutants that do not contain a footnote “3”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

<sup>4</sup> Incorporated by reference, see § 60.17.

TABLE 7 TO SUBPART DDDD OF PART 60—MODEL RULE—EMISSION LIMITATIONS THAT APPLY TO ENERGY RECOVERY UNITS AFTER MAY 20, 2011

[Date to be specified in state plan]<sup>1</sup>

For the air pollutant	You must meet this emission limitation <sup>2</sup>		Using this averaging time	And determining compliance using this method
	Liquid/Gas	Solids		
Cadmium .....	0.023 milligrams per dry standard cubic meter.	Biomass—0.0014 milligrams per dry standard cubic meter. Coal—0.0017 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical finish.
Carbon monoxide .....	35 parts per million dry volume.	Biomass—260 parts per million dry volume. Coal—95 parts per million dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxins/furans (total mass basis).	2.9 nanograms per dry standard cubic meter.	Biomass—0.52 nanograms per dry standard cubic meter. <sup>3</sup> Coal—5.1 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meter).	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Dioxins/furans (toxic equivalency basis).	0.32 nanograms per dry standard cubic meter.	Biomass—0.12 nanograms per dry standard cubic meter. Coal—0.075 nanograms per dry standard cubic meter <sup>3</sup> .	3-run average (collect a minimum volume of 4 dry standard cubic meters).	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Hydrogen chloride .....	14 parts per million dry volume.	Biomass—0.20 parts per million dry volume. Coal—58 parts per million dry volume.	3-run average (for Method 26, collect a minimum of 120 liters; for Method 26A, collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A-8).
Lead .....	0.096 milligrams per dry standard cubic meter.	Biomass—0.014 milligrams per dry standard cubic meter. <sup>3</sup> Coal—0.057 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical finish.
Mercury .....	0.0024 milligrams per dry standard cubic meter.	Biomass—0.0022 milligrams per dry standard cubic meter. Coal—0.013 milligrams per dry standard cubic meter.	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008), <sup>4</sup> collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum sample as specified in Method 30B at 40 CFR part 60, appendix A).	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A-8) or ASTM D6784-02 (Reapproved 2008). <sup>4</sup>
Oxides of nitrogen .....	76 parts per million dry volume.	Biomass—290 parts per million dry volume. Coal—460 parts per million dry volume.	3-run average (for Method 7E, 1 hour minimum sample time per run).	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).

TABLE 7 TO SUBPART DDDD OF PART 60—MODEL RULE—EMISSION LIMITATIONS THAT APPLY TO ENERGY RECOVERY UNITS AFTER MAY 20, 2011—Continued

[Date to be specified in state plan]<sup>1</sup>

For the air pollutant	You must meet this emission limitation <sup>2</sup>		Using this averaging time	And determining compliance using this method
	Liquid/Gas	Solids		
Particulate matter filterable.	110 milligrams per dry standard cubic meter.	Biomass—11 milligrams per dry standard cubic meter. Coal—130 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 5 or 29 at 40 CFR part 60, appendix A-3 or appendix A-8) if the unit has an annual average heat input rate less than or equal to 250 MMBtu/hr; or PM CPMS (as specified in § 60.2710(x)) if the unit has an annual average heat input rate greater than 250 MMBtu/hr.
Sulfur dioxide .....	720 parts per million dry volume.	Biomass—7.3 parts per million dry volume. Coal—850 parts per million dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 6 or 6c at 40 CFR part 60, appendix A-4).
Fugitive ash .....	Visible emissions for no more than 5 percent of the hourly observation period.	Visible emissions for no more than 5 percent of the hourly observation period.	Three 1-hour observation periods.	Visible emission test (Method 22 at 40 CFR part 60, appendix A-7).

<sup>1</sup> The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018.

<sup>2</sup> All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the total mass basis limit or the toxic equivalency basis limit.

<sup>3</sup> If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 60.2720 if all of the other provisions of § 60.2720 are met. For all other pollutants that do not contain a footnote “3”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing, with the exception of annual performance tests to certify a CEMS or PM CPMS.

<sup>4</sup> Incorporated by reference, see § 60.17.

TABLE 8 TO SUBPART DDDD OF PART 60—MODEL RULE—EMISSION LIMITATIONS THAT APPLY TO WASTE-BURNING KILNS AFTER MAY 20, 2011

[Date to be specified in state plan.]<sup>1</sup>

For the air pollutant	You must meet this emission limitation <sup>2</sup>	Using this averaging time	And determining compliance using this method <sup>4</sup>
Cadmium .....	0.0014 milligrams per dry standard cubic meter <sup>3</sup> .	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 at 40 CFR part 60, appendix A-8).
Carbon monoxide .....	110 (long kilns)/790 (preheater/precalciner) parts per million dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxins/furans (total mass basis).	1.3 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meters).	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Dioxins/furans (toxic equivalency basis).	0.075 nanograms per dry standard cubic meter <sup>3</sup> .	3-run average (collect a minimum volume of 4 dry standard cubic meters).	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Hydrogen chloride .....	3.0 parts per million dry volume <sup>3</sup> .	3-run average (collect a minimum volume of 1 dry standard cubic meter) or 30-day rolling average if HCl CEMS is being used.	Performance test (Method 321 at 40 CFR part 63, appendix A of this part) or HCl CEMS if a wet scrubber or dry scrubber is not used, as specified in § 60.2710(j).
Lead .....	0.014 milligrams per dry standard cubic meter <sup>3</sup> .	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 at 40 CFR part 60, appendix A-8).
Mercury .....	0.011 milligrams per dry standard cubic meter.	30-day rolling average .....	Mercury CEMS or sorbent trap monitoring system (performance specification 12A or 12B, respectively, of appendix B of this part), as specified in § 60.2710(j).
Oxides of nitrogen .....	630 parts per million dry volume.	3-run average (for Method 7E, 1 hour minimum sample time per run).	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).
Particulate matter filterable.	13.5 milligrams per dry standard cubic meter.	30-day rolling average .....	PM CPMS (as specified in § 60.2710(x)).



TABLE 8 TO SUBPART DDDD OF PART 60—MODEL RULE—EMISSION LIMITATIONS THAT APPLY TO WASTE-BURNING KILNS AFTER MAY 20, 2011—Continued

[Date to be specified in state plan.]<sup>1</sup>

For the air pollutant	You must meet this emission limitation <sup>2</sup>	Using this averaging time	And determining compliance using this method <sup>4</sup>
Sulfur dioxide .....	600 parts per million dry volume.	3-run average (for Method 6, collect a minimum of 20 liters; for Method 6C, 1 hour minimum sample time per run).	Performance test (Method 6 or 6c at 40 CFR part 60, appendix A-4).

<sup>1</sup> The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018.

<sup>2</sup> All emission limitations are measured at 7 percent oxygen (except for CEMS data during startup and shutdown), dry basis at standard conditions. For dioxins/furans, you must meet either the total mass basis limit or the toxic equivalency basis limit.

<sup>3</sup> If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 60.2720 if all of the other provisions of § 60.2720 are met. For all other pollutants that do not contain a footnote “3”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing, with the exception of annual performance tests to certify a CEMS or PM CPMS.

<sup>4</sup> Alkali bypass and in-line coal mill stacks are subject to performance testing only, as specified in 60.2710(y)(3). They are not be subject to the CEMS, sorbent trap or CPMS requirements that otherwise may apply to the main kiln exhaust.

TABLE 9 TO SUBPART DDDD OF PART 60—MODEL RULE—EMISSION LIMITATIONS THAT APPLY TO SMALL, REMOTE INCINERATORS AFTER MAY 20, 2011

[Date to be specified in state plan]<sup>1</sup>

For the air pollutant	You must meet this emission limitation <sup>2</sup>	Using this averaging time	And determining compliance using this method
Cadmium .....	0.95 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meters per run).	Performance test (Method 29 at 40 CFR part 60, appendix A-8).
Carbon monoxide .....	64 parts per million dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxins/furans (total mass basis).	4,400 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meters per run).	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Dioxins/furans (toxic equivalency basis).	180 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meters).	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Fugitive ash .....	Visible emissions for no more than 5 percent of the hourly observation period.	Three 1-hour observation periods .....	Visible emissions test (Method 22 at 40 CFR part 60, appendix A-7).
Hydrogen chloride .....	300 parts per million dry volume.	3-run average (For Method 26, collect a minimum volume of 120 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run).	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A-8).
Lead .....	2.1 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meters).	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical finish.
Mercury .....	0.0053 milligrams per dry standard cubic meter.	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008), <sup>3</sup> collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum sample as specified in Method 30B at 40 CFR part 60, appendix A).	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A-8) or ASTM D6784-02 (Reapproved 2008). <sup>3</sup>
Oxides of nitrogen .....	190 parts per million dry volume.	3-run average (for Method 7E, 1 hour minimum sample time per run).	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).
Particulate matter (filterable) .....	270 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meters).	Performance test (Method 5 or 29 at 40 CFR part 60, appendix A-3 or appendix A-8).
Sulfur dioxide .....	150 parts per million dry volume.	3-run average (for Method 6, collect a minimum of 20 liters per run; for Method 6C, 1 hour minimum sample time per run).	Performance test (Method 6 or 6c at 40 CFR part 60, appendix A-4).

<sup>1</sup> The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018.

<sup>2</sup> All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the total mass basis limit or the toxic equivalency basis limit.

<sup>3</sup> Incorporated by reference, see § 60.17.