



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

JUL 3 2014

Mr. Karl Brooks
Regional Administrator
U.S. EPA, Region VII
11201 Renner Boulevard
Lenexa, KS 66219

Dear Mr. Brooks:

The Missouri Department of Natural Resources requests that the U.S. Environmental Protection Agency amend the Missouri State Plan for Designated Facilities and Pollutants to include the following rule for existing hospital, medical, infectious waste incinerators pursuant to section 111(d) of the Clean Air Act.

10 CSR 10-6.200 Hospital, Medical, Infectious Waste Incinerators

This rule action removes language from the compliance and performance testing provisions that provide an exemption to the emission limits for hospital, medical, and infectious waste incinerators (HMIWI) during start-up, shutdown, or malfunction conditions. In addition, the hierarchy of definitions is changed to clearly state that the applicable definitions in the Code of Federal Regulations take precedence over those in 10 CSR 10-6.020 Definitions and Common Reference Tables, and the EPA test method references in the state rule are revised to match how these methods are referred to in the federal HMIWI regulations.

The Missouri Air Conservation Commission adopted the enclosed rule action(s) on March 27, 2014, after considering comments received at public hearing and throughout the open public comment period. The commission has full legal authority to develop rules pursuant to Section 643.050 of the Missouri Air Conservation Law. The state followed all applicable administrative procedures in proposing and adopting the rule action(s).

Enclosed are the required submittal elements for the plan as per 40 CFR 60, Subpart B, Adoption and Submittal of State Plans for Designated Facilities.

An exact duplicate of this submittal is also being provided as an electronic attachment in an email to the Region VII Missouri coordinator. A searchable pdf version of the rule is available on the Code of State Regulations website at <http://www.sos.mo.gov/adrules/csr/current/10csr/10c10-6b.pdf>.

Mr. Karl Brooks
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Thank you for your attention to this matter. If you have any questions regarding this submittal, please contact Wendy Vit, with the Department's Air Pollution Control Program at P.O. Box 176, Jefferson City, MO 65102 or by phone at (573) 751-7840 or email at wendy.vit@dnr.mo.gov.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Original signed by Kyra L. Moore

Kyra L. Moore
Director

KLM:spc

Enclosures:

Copy of rule published in CSR
Copy of commission signature page certifying Missouri Air Conservation Commission adoption
Copy of technical support documentation for rule (if applicable)
Copies of public hearing notices
Copy of public hearing transcript introductory statement
Copy of MO Reg proposed rulemaking
Copy of MO Reg order of rulemaking with comments/responses
Mark-Up of Existing Federally-Approved State Regulation(s)

c: Missouri Air Conservation Commission



signed by the person responsible for the tests.

(2) Director May Make Tests. The director may conduct tests of emissions of air contaminants from any source. Upon request of the director, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts and other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.

AUTHORITY: section 643.050, RSMo Supp. 1992. Original rule filed Aug. 2, 1990, effective Dec. 31, 1990.*

**Original authority: 643.050, RSMo 1965, amended 1972, 1992.*

10 CSR 10-6.190 Sewage Sludge and Industrial Waste Incinerators

Editor's Note: On March 29, 1993 the Circuit Court of Cole County found that 10 CSR 10-6.190 was void since it exceeds the statutory cost analysis requirements of sections 536.200 and 536.205, RSMo.

10 CSR 10-6.191 Sewage Sludge Incinerators

PURPOSE: This rule incorporates by reference the federal regulatory requirements for existing sewage sludge incineration units in Missouri. The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is Federal Register Notice 76 FR 15372, dated March 21, 2011.

PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.

(1) Applicability.

(A) This rule applies to each sewage sludge incineration (SSI) unit, as defined in section (2) of this rule, for which construction was commenced on or before October 14, 2010, except as provided in subsection (1)(C) of this rule.

(B) If the owner or operator of an SSI unit makes physical or operational changes to an SSI unit for which construction commenced on or before September 21, 2011, primarily to comply with this rule, 10 CSR 10-6.070

New Source Performance Regulations does not apply to that unit.

(C) Exemptions to this rule are as follows:

1. Combustion units that incinerate sewage sludge and are not located at a wastewater treatment facility designed to treat domestic sewage sludge. Owners or operators of combustion units claiming exemption under this paragraph must notify the director; and

2. Any SSI unit that becomes subject to 10 CSR 10-6.070 New Source Performance Regulations because the owner or operator made changes after September 21, 2011, that meet the definition of modification, as defined in section (2) of this rule.

(2) Definitions.

(A) The provisions of 40 CFR 60.5250, promulgated as of July 1, 2011, shall apply and are hereby incorporated by reference in this rule, as published by the Office of Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions.

(B) Definitions of certain terms specified in this rule, other than those defined in subsection (2)(A) of this rule, may be found in 10 CSR 10-6.020.

(3) General Provisions. The following references to 40 CFR 60.5085 through 60.5225, 40 CFR 60.5240 through 60.5245, and 40 CFR 60, Subpart MMM Tables 1 through 6, promulgated as of July 1, 2011, shall apply and are hereby incorporated by reference in this rule, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions.

(A) Increments of Progress 40 CFR 60.5085 through 60.5125;

(B) Operator Training and Qualifications 40 CFR 60.5130 through 60.5160;

(C) Emission Limits, Emission Standards, and Operating Limits and Requirements 40 CFR 60.5165 through 60.5181;

(D) Initial Compliance Requirements 40 CFR 60.5185 through 60.5200;

(E) Continuous Compliance Requirements 40 CFR 60.5205 through 60.5215;

(F) Performance Testing, Monitoring, and Calibration Requirements 40 CFR 60.5220 through 60.5225;

(G) Title V Operating Permit 40 CFR 60.5240 through 60.5245; and

(H) Table 1 through Table 6. The compliance dates for the increments of progress are—

1. For Increment 1, submit final control plan within one (1) year of the effective date of this rule; and

2. For Increment 2, final compliance by March 21, 2016.

(4) Reporting and Record Keeping. The provisions of 40 CFR 60.5230 through 40 CFR 60.5235, promulgated as of July 1, 2011, shall apply and are hereby incorporated by reference in this rule, as published by the Office of Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions.

(5) Test Methods. (Not applicable)

AUTHORITY: section 643.050, RSMo Supp. 2012. Original rule filed Aug. 27, 2012, effective May 30, 2013.*

**Original authority: 643.050, RSMo 1965, amended 1972, 1992, 1993, 1995, 2011.*

10 CSR 10-6.200 Hospital, Medical, Infectious Waste Incinerators

PURPOSE: This rule establishes emission limits for existing hospital, medical, and infectious waste incinerators. The pollutants regulated include metals, particulate matter, acid gases, organic compounds, carbon monoxide, and opacity. This rule includes requirements for operator training and qualification, waste management, compliance and performance testing, monitoring, and reporting/record keeping.

PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.

(1) Applicability.

(A) Except as provided in subsection (1)(B) through (H) of this rule, this rule applies to each individual hospital or medical/infectious waste incinerator (HMIWI)—

1. For which construction was commenced after June 20, 1996, but no later than December 1, 2008; or

2. For which modification is commenced after March 16, 1998, but no later than April 6, 2010.

(B) A combustor is not subject to this rule during periods when only pathological waste, low-level radioactive waste, and/or chemotherapeutic waste is burned, provided



the owner or operator of the combustor—

1. Notifies the director of an exemption claim; and

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.

(C) Any co-fired combustor is not subject to this rule if the owner or operator of the co-fired combustor—

1. Notifies the director of an exemption claim;

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

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.

(D) Any combustor required to have a permit under section 3005 of the Solid Waste Disposal Act is not subject to this rule.

(E) Any combustor which meets the applicability requirements under Subpart Cb, Ea, or Eb of 40 CFR 60 is not subject to this rule.

(F) Any pyrolysis unit is not subject to this rule.

(G) Cement kilns firing hospital waste and/or medical/infectious waste are not subject to this rule.

(H) Physical or operational changes made to an HMIWI unit solely for the purpose of complying with this rule are not considered a modification and do not result in an HMIWI unit becoming subject to the provisions of 40 CFR 60, Subpart Ec.

(I) Facilities subject to this rule shall operate pursuant to a permit issued under the permitting authorities operating permit program.

(2) Definitions.

(A) Definitions of certain terms specified in this rule may be found in 40 CFR 60.21 and 40 CFR 60.51c, promulgated as of July 1, 2012, and are hereby incorporated by reference in this rule, as published by the Office of Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions.

(B) Definitions of certain terms specified in this rule, other than those defined in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions.

(A) Emission Limits.

1. No owner or operator of an HMIWI subject to this rule shall cause to be discharged into the atmosphere any gases that

contain stack emissions in excess of the limits presented in Table 1 of this subsection, except as provided for in paragraph (3)(A)2. of this rule.



Table 1—Emissions Limits for Small, Medium, and Large HMIWI

| Pollutant | Units (7 percent oxygen, dry basis) | Emissions limits | | | Averaging time ¹ | Method for demonstrating compliance ² |
|--------------------|---|------------------------------|--------------------------------------|----------------------------|--|---|
| | | 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) or 34 (.015) ³ | 25 (0.011) | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 5 of 40 CFR 60, Appendix A-3 or EPA Reference Method 26A or 29 of 40 CFR 60, Appendix A-8. |
| 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 40 CFR 60, Appendix A-4. |
| Dioxins/furans | Nanograms per dry standard cubic meter total dioxins/furans (ng/dscm) (grains per billion dry standard cubic feet (gr/10 ⁹ dscf)) or ng/dscm TEQ (gr/10 ⁹ 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 40 CFR 60, Appendix A-7. |
| Hydrogen chloride | ppmv | 44 or 15 or 99% ³ | 7.7 | 6.6 | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 26 or 26A of 40 CFR 60, Appendix A-8. |
| 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 40 CFR 60, Appendix A-4. |
| Nitrogen oxides | ppmv | 190 | 190 | 140 | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 7 or 7E of 40 CFR 60, Appendix A-4. |
| Lead | mg/dscm (grains per thousand dry standard cubic feet (gr/10 ³ 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 40 CFR 60, Appendix A-8. |
| Cadmium | mg/dscm (gr/10 ³ 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 40 CFR 60, Appendix A-8. |
| Mercury | mg/dscm (gr/10 ³ 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 40 CFR 60, Appendix A-8. |

¹ Except as allowed under section 60.56c(c) for HMIWI equipped with Continuous Emission Monitoring System (CEMS).

² Does not include CEMS and approved alternative non-EPA test methods allowed under section 60.56c(b).

³ HMIWI constructed 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 6, 2010.



2. No owner or operator of a small HMIWI constructed on or before June 20, 1996, which is located more than fifty (50) miles from the boundary of the nearest Standard Metropolitan Statistical Area and which burns less than two thousand (2,000) pounds per week of hospital waste and medical/infectious waste shall cause to be discharged into the atmosphere any gases that contain stack emissions in excess of the limits presented in Table 2 of this paragraph. The two thousand (2,000) pounds per week limitation does not apply during performance tests.

Table 2—Emissions Limits for Small HMIWI Which Meet the Criteria Under Paragraph (3)(A)2. of this Rule

| Pollutant | Units (7 percent oxygen, dry basis) | HMIWI Emissions limits | Averaging time ¹ | Method for demonstrating compliance ² |
|--------------------|---|------------------------------|--|---|
| Particulate matter | mg/dscm (gr/dscf) | 87 (0.038) | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 5 of 40 CFR 60, Appendix A-3 or EPA Reference Method 26A or 29 of 40 CFR 60, Appendix A-8. |
| Carbon monoxide | ppmv | 20 | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 10 or 10B of 40 CFR 60, Appendix A-4. |
| Dioxins/furans | ng/dscm total dioxins/furans (gr/10 ⁹ dscf) or ng/dscm TEQ (gr/10 ⁹ dscf) | 240 (100) or 5.1 (2.2) | 3-run average (4-hour minimum sample time per run) | EPA Reference Method 23 of 40 CFR 60, Appendix A-7. |
| Hydrogen chloride | ppmv | 810 | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 26 or 26A of 40 CFR 60, Appendix A-8. |
| Sulfur dioxide | ppmv | 55 | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 6 or 6C of 40 CFR 60, Appendix A-4. |
| Nitrogen oxides | ppmv | 130 | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 7 or 7E of 40 CFR 60, Appendix A-4. |
| Lead | mg/dscm (gr/10 ³ dscf) | 0.50 (0.22) | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 29 of 40 CFR 60, Appendix A-8. |
| Cadmium | mg/dscm (gr/10 ³ dscf) | 0.11 (0.048) | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 29 of 40 CFR 60, Appendix A-8. |
| Mercury | mg/dscm (gr/10 ³ dscf) | 0.0051 (0.0022) | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 29 of 40 CFR 60, Appendix A-8. |

¹ Except as allowed under section 60.56c(c) for HMIWI equipped with CEMS.

² Does not include CEMS and approved alternative non-EPA test methods allowed under section 60.56c(b).



3. No owner or operator of an HMIWI subject to this rule shall cause to be discharged into the atmosphere from the stack of that HMIWI any gases that exhibit greater than six percent (6%) opacity (six (6)-minute block average).

(B) Operator Training and Qualification Requirements.

1. No owner or operator of an HMIWI subject to this rule shall allow the HMIWI to operate at any time unless a fully trained and qualified HMIWI operator is accessible, either at the facility or available within one (1) hour. The trained and qualified HMIWI operator may operate the HMIWI directly or be the direct supervisor of one (1) or more HMIWI operators.

2. Operator training and qualification shall be obtained by completing the requirements included in paragraphs (3)(B)3. through 7. of this rule.

3. Training shall be obtained by completing an HMIWI operator training course that includes, at a minimum, the following provisions:

A. Twenty-four (24) hours of training on the following subjects:

(I) Environmental concerns, including pathogen destruction and types of emissions;

(II) Basic combustion principles, including products of combustion;

(III) Operation of the type of incinerator to be used by the operator, including proper start-up, waste charging, and shutdown procedures;

(IV) Combustion controls and monitoring;

(V) Operation of air pollution control equipment and factors affecting performance (if applicable);

(VI) Methods to monitor pollutants and equipment calibration procedures (where applicable);

(VII) Inspection and maintenance of the HMIWI, air pollution control devices, and continuous emission monitoring systems;

(VIII) Actions to correct malfunctions or conditions that may lead to malfunction;

(IX) Bottom and fly ash characteristics and handling procedures;

(X) Applicable federal, state, and local regulations;

(XI) Work safety procedures;

(XII) Inspections prior to start-up;

and

(XIII) Record-keeping requirements;

B. An examination designed and administered by the instructor; and

C. Reference material distributed to the attendees covering the course topics.

4. Qualifications shall be obtained by—

A. Completion of a training course that satisfies the criteria under paragraph (3)(B)3. of this rule; and

B. Either six (6) months experience as an HMIWI operator, six (6) months experience as a direct supervisor of an HMIWI operator, or completion of at least two (2) burn cycles under the observation of two (2) qualified HMIWI operators.

5. Qualification is valid from the date on which the examination is passed or the completion of the required experience, whichever is later.

6. To maintain qualification, the trained and qualified HMIWI operator shall complete and pass an annual review or refresher course of at least four (4) hours covering, at a minimum, the following:

A. Update of regulations;

B. Incinerator operation, including start-up and shutdown procedures;

C. Inspection and maintenance;

D. Responses to malfunctions or conditions that may lead to malfunction; and

E. Discussion of operating problems encountered by attendees.

7. A lapsed qualification shall be renewed by one (1) of the following methods:

A. For a lapse of less than three (3) years, the HMIWI operator shall complete and pass a standard annual refresher course described in paragraph (3)(B)6. of this rule; or

B. For a lapse of three (3) years or more, the HMIWI operator shall complete and pass a training course with the minimum criteria described in paragraph (3)(B)3. of this rule.

8. The owner or operator of an HMIWI shall maintain documentation at the facility that addresses the following:

A. Summary of the applicable standards under this subpart;

B. Description of basic combustion theory applicable to an HMIWI;

C. Procedures for receiving, handling, and charging waste;

D. HMIWI start-up, shutdown, and malfunction procedures;

E. Procedures for maintaining proper combustion air supply levels;

F. Procedures for operating the HMIWI and associated air pollution control systems within the standards established under this subpart;

G. Procedures for responding to periodic malfunction or conditions that may lead to malfunction;

H. Procedures for monitoring HMIWI emissions;

I. Reporting and record-keeping procedures; and

J. Procedures for handling ash.

9. The owner or operator of an HMIWI shall establish a program for reviewing the information listed in paragraph (3)(B)8. of this rule annually with each HMIWI operator.

A. The initial review of the information listed in paragraph (3)(B)8. of this rule shall be conducted prior to assumption of responsibilities affecting HMIWI operation.

B. Subsequent reviews of the information listed in paragraph (3)(B)8. of this rule shall be conducted annually.

10. The information listed in paragraph (3)(B)8. of this rule shall be kept in a readily-accessible location for all HMIWI operators. This information, along with records of training, shall be available for inspection by the department or its delegated enforcement agent upon request.

(C) Waste Management Plan. The owner or operator of an HMIWI shall prepare a waste management plan. The waste management plan shall identify both the feasibility and the approach to separate certain components of solid waste from the health care waste stream in order to reduce the amount of toxic emissions from incinerated waste. A waste management plan may include, but is not limited to, elements such as segregation and recycling of paper, cardboard, plastics, glass, batteries, food waste, and metals (e.g., aluminum cans, metals-containing devices); segregation of non-recyclable wastes (e.g., polychlorinated biphenyl-containing waste, pharmaceutical waste, and mercury-containing waste, such as dental waste); and purchasing recycled or recyclable products. A waste management plan may include different goals or approaches for different areas or departments of the facility and need not include new waste management goals for every waste stream. It should identify, where possible, reasonably available additional waste management measures, taking into account the effectiveness of waste management measures already in place, the costs of additional measures, the emission reductions expected to be achieved, and any other environmental or energy impacts they might have. The development of the waste management plan shall consider the publication entitled *An Ounce of Prevention: Waste Reduction Strategies for Health Care Facilities* (Catalog No. 057007), copyright year 1993, and hereby incorporated by reference in this rule, as published by the American Hospital Association Services, Inc., PO Box 92683, Chicago, IL 60675-2683. This rule does not incorporate any subsequent amendments or additions to this publication. The owner or operator of each commercial HMIWI company shall conduct training and



education programs in waste segregation for each of the company's waste generator clients and ensure that each client prepares its own waste management plan that includes, but is not limited to, the provisions listed previously in this subsection.

(D) Inspection Guidelines.

1. Each HMIWI subject to the emission limits under paragraph (3)(A)1. of this rule and each small HMIWI subject to the emission limits under paragraph (3)(A)2. of this rule shall undergo an initial equipment inspection that is at least as protective as the following:

A. At a minimum, an inspection shall include the following:

(I) Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation, and clean pilot flame sensor, as necessary;

(II) Ensure proper adjustment of primary and secondary chamber combustion air, and adjust as necessary;

(III) Inspect hinges and door latches and lube as necessary;

(IV) Inspect dampers, fans, and blowers for proper operation;

(V) Inspect HMIWI door and door gaskets for proper sealing;

(VI) Inspect motors for proper operation;

(VII) Inspect primary chamber refractory lining and clean and repair/replace as necessary;

(VIII) Inspect incinerator shell for corrosion and/or hot spots;

(IX) Inspect secondary/tertiary chamber and stack; clean as necessary;

(X) Inspect mechanical loader, including limit switches, for proper operation, if applicable;

(XI) Visually inspect waste bed (grates) and repair/seal, as necessary;

(XII) For the burn cycle that follows the inspection, document that the incinerator is operating properly and make any necessary adjustments;

(XIII) Inspect air pollution control devices for proper operation, if applicable;

(XIV) Inspect waste heat boiler systems to ensure proper operation, if applicable;

(XV) Inspect bypass stack components;

(XVI) Ensure proper calibration of thermocouples, sorbent feed systems, and any other monitoring equipment; and

(XVII) Generally observe that the equipment is maintained in good operating condition; and

B. Within ten (10) operating days following an equipment inspection all necessary

repairs shall be completed unless the owner or operator obtains written approval from the department or local air pollution control authority establishing a date whereby all necessary repairs of the designated facility shall be completed.

2. Each HMIWI subject to the emissions limits under paragraph (3)(A)1. of this rule and each small HMIWI subject to the emission limits under paragraph (3)(A)2. of this rule shall undergo an equipment inspection annually (no more than twelve (12) months following the previous annual equipment inspection), as outlined in paragraph (3)(D)1. of this rule.

3. Each HMIWI subject to the emissions limits under paragraph (3)(A)1. of this rule and each small HMIWI subject to the emissions limits under paragraph (3)(A)2. of this rule shall undergo an initial air pollution control device inspection, as applicable, that is at least as protective as the following:

A. At a minimum, an inspection shall include the following:

(I) Inspect air pollution control device(s) for proper operation, if applicable;

(II) Ensure proper calibration of thermocouples, sorbent feed systems, and any other monitoring equipment; and

(III) Generally observe that the equipment is maintained in good operating condition; and

B. Within ten (10) operating days following an air pollution control device inspection, all necessary repairs shall be completed unless the owner or operator obtains written approval from the Missouri Department of Natural Resources' Air Pollution Control Program establishing a date whereby all necessary repairs of the designated facility shall be completed.

4. Each HMIWI subject to the emissions limits under paragraph (3)(A)1. of this rule and each small HMIWI subject to the emissions limits under paragraph (3)(A)2. of this rule shall undergo an air pollution control device inspection, as applicable, annually (no more than twelve (12) months following the previous annual air pollution control device inspection), as outlined in paragraph (3)(D)3. of this rule.

(E) Compliance and Performance Testing.

1. The emission limits under this rule apply at all times.

2. Except as provided in paragraph (3)(E)12. of this rule, the owner or operator of an HMIWI subject to this rule shall conduct an initial performance test to determine compliance with the emission limits using the procedures and test methods listed in subparagraphs (3)(E)2.A. through L. of this rule. The use of the bypass stack during a

performance test shall invalidate the performance test. For small HMIWIs as defined in paragraph (3)(A)2. of this rule, the two-thousand (2,000)-pound-per-week limitation does not apply during performance tests.

A. All performance tests shall consist of a minimum of three (3) test runs conducted under representative operating conditions.

B. The minimum sample time shall be one (1) hour per test run unless otherwise indicated.

C. The sampling location and number of traverse points shall be determined using EPA Reference Method 1 of 40 CFR 60, Appendix A-1.

D. Gas composition shall be analyzed and include a measurement of oxygen concentration using EPA Reference Method 3, 3A, or 3B of 40 CFR 60, Appendix A-2. EPA Reference Method 3, 3A, or 3B shall be used simultaneously with each of the other EPA reference methods. As an alternative to EPA Reference Method 3B, ASME PTC-19-10-1981-Part 10 may be used.

E. The pollutant concentrations shall be adjusted to seven percent (7%) oxygen using the following equation:

$$C_{adj} = C_{meas} (20.9 - 7) / (20.9 - \% O_2)$$

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

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

F. Particulate Matter (PM) emissions shall be measured using EPA Reference Method 5 of 40 CFR 60, Appendix A-3. An acceptable alternate method for measuring PM emissions is EPA Reference Method 26A or Method 29 of 40 CFR 60, Appendix A-8. As an alternative, PM Continuous Emission Monitoring System (CEMS) may also be used as specified in subparagraph (3)(E)3.C. of this rule.

G. Stack opacity shall be measured using EPA Reference Method 9 of 40 CFR 60, Appendix A-4. As an alternative, demonstration of compliance with the PM standards using bag leak detection systems as specified in paragraph (3)(E)11. of this rule or PM CEMS as specified in subparagraph (3)(E)3.C. of this



rule is considered demonstrative of compliance with the opacity requirements.

H. Carbon monoxide (CO) emissions shall be measured using EPA Reference Method 10 or 10B of 40 CFR 60, Appendix A-4. As an alternative, CO CEMS may be used as specified in subparagraph (3)(E)3.C. of this rule.

I. Total dioxin/furan emissions shall be measured using EPA Reference Method 23 of 40 CFR 60, Appendix A-7. As an alternative, an owner or operator may elect to sample dioxins/furans by installing, calibrating, maintaining, and operating a continuous automated sampling system for monitoring dioxin/furan emissions. Sampling shall be done using EPA Reference Method 23 of 40 CFR 60, Appendix A-7. The minimum sample time shall be four (4) hours per test run. If the affected facility has selected the toxic equivalency standards for dioxin/furans the following procedures shall be used to determine compliance:

(I) Measure the concentration of each dioxin/furan tetra- through octa-congener emitted using EPA Reference Method 23 of 40 CFR 60, Appendix A-7;

(II) For each dioxin/furan congener measured in accordance with part (3)(E)2.I.(I) of this rule, multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 3 of this part; and

**Table 3—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 |

(III) Sum the products calculated in accordance with part (3)(E)2.I.(II) of this rule to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

J. Hydrogen chloride (HCl) shall be measured using EPA Reference Method 26 or 26A of 40 CFR 60, Appendix A-8. As an alternative, HCl CEMS may be used as specified in subparagraph (3)(E)3.C. of this rule.

K. Lead (Pb), cadmium (Cd), and mercury (Hg) emissions shall be measured using EPA Reference Method 29 of 40 CFR 60, Appendix A-8. As an alternative, Hg emissions may be measured using ASTM D6784-02(2008). As an alternative for Pb, Cd, and Hg, multi-metals CEMS or Hg CEMS, may be used as specified in subparagraph (3)(E)3.C. of this rule. As an alternative, an owner or operator may elect to sam-

ple Hg by installing, calibrating, maintaining, and operating a continuous automated sampling system for monitoring Hg emissions.

L. Compliance for fugitive ash emissions shall be determined using EPA Reference Method 22 of 40 CFR 60, Appendix A-7. The minimum observation time shall be a series of three (3) one (1)-hour observations.

3. Following the date on which the initial performance test is completed, the owner or operator of an affected facility shall—

A. Determine compliance with the opacity limit by conducting an annual performance test (no more than twelve (12) months following the previous performance test) using the applicable procedures and test methods listed in paragraph (3)(E)2. of this rule;

B. Determine compliance with the PM, CO, and HCl emission limits by con-

ducting an annual performance test (no more than twelve (12) months following the previous performance test) using the applicable procedures and test methods listed in paragraph (3)(E)2. of this rule. If all three (3) performance tests over a three (3)-year period indicate compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for the subsequent two (2) years. At a minimum, a performance test for PM, CO, and HCl shall be conducted every third year (no more than thirty-six (36) months following the previous performance test). If a performance test conducted every third year indicates compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for an additional two (2) years. If any performance



test indicates noncompliance with the respective emission limit, a performance test for that pollutant shall be conducted annually until all annual performance tests over a three (3)-year period indicate compliance with the emission limit. The use of the bypass stack during a performance test shall invalidate the performance test; and

C. Facilities using a Continuous Emission Monitoring System (CEMS) to demonstrate compliance with any of the emission limits under section (3) of this rule shall determine compliance with the appropriate emission limit(s) using a twelve (12)-hour rolling average, calculated each hour as the average of the previous twelve (12) operating hours.

4. The owner or operator of an affected facility equipped with a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and wet scrubber shall—

A. Establish the appropriate maximum and minimum operating parameters, indicated in Table 4 of this subparagraph for each control system, as site-specific operating parameters during the initial performance test to determine compliance with the emission limits; and



Table 4—Operating Parameters to be Monitored and Minimum Measurement and Recording Frequencies

| Operating parameters to be monitored | Minimum frequency | | Control system | | |
|---|-------------------|----------------|--|--------------|---|
| | Data measurement | Data recording | Dry scrubber followed by fabric filter | Wet scrubber | Dry scrubber followed by fabric filter and wet scrubber |
| MAXIMUM OPERATING PARAMETERS | | | | | |
| Maximum charge rate | Continuous | 1 per hour | ✓ | ✓ | ✓ |
| Maximum fabric filter inlet temperature | Continuous | 1 per minute | ✓ | | ✓ |
| Maximum flue gas temperature | Continuous | 1 per minute | | ✓ | ✓ |
| MIMIMUM OPERATING PARAMETERS | | | | | |
| Minimum secondary chamber temperature | continuous | 1 per minute | ✓ | ✓ | ✓ |
| Minimum dioxin/furan sorbent flow rate | hourly | 1 per hour | ✓ | | ✓ |
| Minimum hydrogen chloride (HCl) sorbent flow rate | hourly | 1 per hour | ✓ | | ✓ |
| Minimum mercury (Hg) sorbent flow rate | hourly | 1 per hour | ✓ | | ✓ |
| Minimum pressure drop across the wet scrubber or minimum horsepower or amperage to wet scrubber | continuous | 1 per minute | | ✓ | ✓ |
| Minimum scrubber liquor flow rate | continuous | 1 per minute | | ✓ | ✓ |
| Minimum scrubber liquor pH | continuous | 1 per minute | | ✓ | ✓ |



B. Following the date on which the initial performance test is completed, ensure that the affected facility does not operate above any of the applicable maximum operating parameters or below any of the applicable minimum operating parameters listed in Table 4 and measured as three (3)-hour rolling averages (calculated each hour as the average of the previous three (3) operating hours) at all times. Operating parameter limits do not apply during performance tests. Operation above the established maximum or below the established minimum operating parameter(s) shall constitute a violation of established operating parameter(s).

5. Except as provided in paragraph (3)(E)8. of this rule, for affected facilities equipped with a dry scrubber followed by a fabric filter—

A. Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the CO emission limit;

B. Operation of the affected facility above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxin/furan sorbent flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit;

C. Operation of the affected facility above the maximum charge rate and below the minimum HCl sorbent flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit;

D. Operation of the affected facility above the maximum charge rate and below the minimum Hg sorbent flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit; or

E. Use of the bypass stack shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd, and Hg emission limits.

6. Except as provided in paragraph (3)(E)8. of this rule, for affected facilities equipped with a wet scrubber—

A. Operation of the affected facility above the maximum charge rate and below the minimum pressure drop across the wet scrubber or below the minimum horsepower or amperage to the system (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the PM emission limit;

B. Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber tempera-

ture (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the CO emission limit;

C. Operation of the affected facility above the maximum charge rate, below the minimum secondary temperature, and below the minimum scrubber liquor flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit;

D. Operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit;

E. Operation of the affected facility above the maximum flue gas temperature and above the maximum charge rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit; or

F. Use of the bypass stack shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd, and Hg emission limits.

7. Except as provided in paragraph (3)(E)8. of this rule, for affected facilities equipped with a dry scrubber followed by a fabric filter and a wet scrubber—

A. Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the CO emission limit;

B. Operation of the affected facility above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxin/furan sorbent flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit;

C. Operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit;

D. Operation of the affected facility above the maximum charge rate and below the minimum Hg sorbent flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit; or

E. Use of the bypass stack shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd, and Hg emission limits.

8. The owner or operator of an affected facility may conduct a repeat performance test within thirty (30) days of violation of applicable operating parameter(s) to demon-

strate that the affected facility is not in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to this paragraph shall be conducted using the identical operating parameters that indicated a violation under paragraphs (3)(E)5., 6., or 7. of this rule.

9. The owner or operator of an affected facility using an air pollution control device other than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber, or selective noncatalytic reduction technology, to comply with the emission limits under section (3) of this rule shall petition the administrator for other site-specific operating parameters to be established during the initial performance test and continuously monitored thereafter. The owner or operator shall not conduct the initial performance test until after the petition has been approved by the administrator.

10. The owner or operator of an affected facility may conduct a repeat performance test at any time to establish new values for the operating parameters. The department may request a repeat performance test at any time.

11. The owner or operator of an affected facility that uses an air pollution control device that includes a fabric filter and is not demonstrating compliance using PM CEMS, determines compliance with the PM emissions limit using a bag leak detection system, and meets the requirements in subparagraphs (3)(E)11.A. through L. of this rule for each bag leak detection system.

A. Each triboelectric bag leak detection system may be installed, calibrated, operated, and maintained according to the "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). This document is available from the U.S. Environmental Protection Agency (U.S. EPA), Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Measurement Policy Group (D-243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emissions Measurement Center Continuous Emissions Monitoring. Other types of bag leak detection systems shall be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

B. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PM emissions at concentrations of ten (10) milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.



C. The bag leak detection system sensor shall provide an output of relative PM loadings.

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

E. The bag leak detection system shall be equipped with an audible alarm system that will sound automatically when an increase in relative PM emissions over a pre-set level is detected. The alarm shall be located where it is easily heard by plant operating personnel.

F. For positive pressure fabric filter systems, a bag leak detector shall be installed in each baghouse compartment or cell.

G. For negative pressure or induced air fabric filters, the bag leak detector shall be installed downstream of the fabric filter.

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

I. The baseline output shall be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time according to section 5.0 of the "Fabric Filter Bag Leak Detection Guidance."

J. Following initial adjustment of the system, the sensitivity or range, averaging period, alarm set points, or alarm delay time may not be adjusted. In no case may the sensitivity be increased by more than one hundred percent (100%) or decreased more than fifty percent (50%) over a three-hundred-sixty-five (365)-day period unless such adjustment follows a complete fabric filter inspection that demonstrates that the fabric filter is in good operating condition. Each adjustment shall be recorded.

K. Record the results of each inspection, calibration, and validation check.

L. Initiate corrective action within one (1) hour of a bag leak detection system alarm; operate and maintain the fabric filter such that the alarm is not engaged for more than five percent (5%) of the total operating time in a six (6)-month block reporting period. 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 is counted as a minimum of one (1) hour. If it takes longer than one (1) hour to initiate corrective action, the alarm time is counted as the actual amount of time taken to initiate corrective action.

12. Small HMIWI subject to the emissions limits under paragraph (3)(A)2. of this rule that is not equipped with an air pollution control device shall meet the following compliance and performance testing requirements:

A. Establish 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;

B. Following the date on which the initial performance test is completed, ensure that the designated facility does not operate above the maximum charge rate or below the minimum secondary chamber temperature measured as three (3)-hour rolling averages (calculated as the average of the previous three (3) 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 of the established operating parameter(s);

C. Except as provided in subparagraph (3)(E)12.D. of this rule, operation of the designated facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the PM, CO, and dioxin/furan emission limits; and

D. The owner or operator of a designated facility may conduct a repeat performance test within thirty (30) days of the violation of applicable operating parameter(s) to demonstrate that the designated facility is not in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to this paragraph must be conducted using the identical operating parameters that indicated a violation under subparagraph (3)(E)12.C. of this rule.

13. The owner or operator of a designated facility subject to this rule may use the results of previous emissions tests to demonstrate compliance with the emissions limits, provided that the following conditions are met:

A. The designated facility's previous emissions tests must have been conducted using the applicable procedures and test methods listed in subparagraphs (3)(E)2.A.-L. of this rule. Previous emissions test results obtained using EPA-accepted voluntary consensus standards are also acceptable;

B. The HMIWI at the designated facility shall 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 HMIWI 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); and

C. The previous emissions test(s) must have been conducted in 1996 or later.

(F) Monitoring Requirements.

1. Except as provided for under paragraph (3)(F)5. of this rule, the owner or operator of an HMIWI subject to this rule shall install, calibrate (to manufacturers' specification), maintain, and operate devices (or establish methods) for monitoring the applicable maximum and minimum operating parameters listed in Table 4 of this rule (unless CEMS are used as a substitute for certain parameters as specified) such that these devices (or methods) measure and record values for these operating parameters at the frequency indicated in Table 4 of this rule at all times.

2. The owner or operator of an HMIWI 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.

3. The owner or operator of an HMIWI using something other than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber to comply with the emission limits under section (3) of this rule shall install, calibrate (to manufacturers' specifications), maintain, and operate the equipment necessary to monitor the site-specific operating parameters developed pursuant to paragraph (3)(E)9. of this rule.

4. The owner or operator of an HMIWI shall obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for seventy-five percent (75%) of the operating hours per day for ninety percent (90%) of the operating days per calendar quarter that the HMIWI is combusting hospital waste and/or medical/infectious waste.

5. Small HMIWI subject to the emission limits under paragraph (3)(A)2. of this rule not equipped with an air pollution control device shall meet the following monitoring requirements:

A. Install, calibrate (to manufacturers' specification), maintain, and operate 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;

B. Install, calibrate (to manufacturers' specification), maintain, and operate a device that automatically measures and records the



date, time, and weight of each charge fed into the HMIWI; and

C. The owner or operator of a designated facility shall obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for seventy-five percent (75%) of the operating hours per day for ninety percent (90%) of the operating days per calendar quarter that the designated facility is combusting hospital waste and/or medical/infectious waste.

(4) Reporting and Record Keeping.

(A) The owner or operator of an HMIWI subject to this rule shall maintain the following information (as applicable) for a period of at least five (5) years:

1. Calendar date of each record;
2. Records of the following data:

A. Concentrations of any pollutant listed in section (3) of this rule or measurements of opacity as determined by the continuous emission monitoring system (if applicable);

B. Results of fugitive emissions (by EPA Reference Method 22) tests, if applicable;

C. HMIWI charge dates, times, and weights and hourly charge rates;

D. Fabric filter inlet temperatures during each minute of operation, as applicable;

E. Amount and type of dioxin/furan sorbent used during each hour of operation, as applicable;

F. Amount and type of Hg sorbent used during each hour of operation, as applicable;

G. Amount and type of HCl sorbent used during each hour of operation, as applicable;

H. Amount and type of nitrogen oxides (NO_x) reagent used during each hour of operation, as applicable;

I. Secondary chamber temperatures recorded during each minute of operation;

J. Liquor flow rate to the wet scrubber inlet during each minute of operation, as applicable;

K. Horsepower or amperage to the wet scrubber during each minute of operation, as applicable;

L. Pressure drop across the wet scrubber system during each minute of operation, as applicable;

M. Temperature at the outlet from the wet scrubber during each minute of operation, as applicable;

N. pH of the scrubber liquor at the inlet to the wet scrubber during each minute of operation, as applicable;

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

P. For HMIWI complying with paragraph (3)(E)9. and paragraph (3)(F)3. of this rule, the owner or operator shall maintain all operating parameter data collected; and

Q. For affected facilities as defined in this rule, records of the annual equipment inspections, annual air pollution control device inspections, any required maintenance, and any repairs not completed within ten (10) days of an inspection or the time frame established by the director;

3. Identification of calendar days for which data on emission rates or operating parameters specified under paragraph (4)(A)2. of this rule have not been obtained, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken;

4. Identification of calendar days, times, and durations of malfunctions, a description of the malfunction, and the corrective action taken;

5. Identification of calendar days for which data on emission rates or operating parameters specified under paragraph (4)(A)2. of this rule exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken;

6. The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating parameters, as applicable, and a description, including sample calculations, of how the operating parameters were established or re-established, if applicable;

7. Records showing the names of HMIWI operators who have completed review of the information in paragraph (3)(B)8. of this rule as required by paragraph (3)(B)9. of this rule, including the date of the initial review and all subsequent annual reviews;

8. Records showing the names of the HMIWI operators who have completed the operator training requirements, including documentation of training and the dates of the training;

9. Records showing the names of the HMIWI operators who have met the criteria for qualification under subsection (3)(B) of this rule and the dates of their qualification; and

10. Records of calibration of any monitoring devices as required under paragraphs (3)(F)1. through 5. of this rule.

(B) The owner or operator of an HMIWI

shall submit to the department the information specified in paragraphs (4)(B)1. through 3. of this rule no later than sixty (60) days following the initial performance test. All reports shall be signed by the facilities manager.

1. The initial performance test data as recorded under subparagraphs (3)(E)2.A. through L. of this rule, as applicable.

2. The values for the site-specific operating parameters established pursuant to paragraph (3)(E)4. or 9. of this rule, as applicable, and a description, including sample calculations, of how the operating parameters were established during the initial performance test.

3. The waste management plan as specified in subsection (3)(C) of this rule.

(C) An annual report shall be submitted to the department one (1) year following the submission of the information in subsection (4)(B) of this rule and subsequent reports shall be submitted no more than twelve (12) months following the previous report (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator of an affected facility must submit these reports semiannually). The annual report shall include the information specified in paragraphs (4)(C)1. through 8. of this rule. All reports shall be signed by the facilities manager.

1. The values for the site-specific operating parameters established pursuant to paragraph (3)(E)4., 8., or 9. of this rule, as applicable.

2. The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded for the calendar year being reported, pursuant to paragraph (3)(E)4., 8., or 9. of this rule, as applicable.

3. The highest maximum operating parameter and the lowest minimum operating parameter, as applicable for each operating parameter recorded pursuant to paragraph (3)(E)4., 8., or 9. of this rule for the calendar year preceding the year being reported, in order to provide the department with a summary of the performance of the affected facility over a two (2)-year period.

4. Any information recorded under paragraphs (4)(A)3. through 5. of this rule for the calendar year being reported.

5. Any information recorded under paragraphs (4)(A)3. through 5. of this rule for the calendar year preceding the year being reported, in order to provide the department with a summary of the performance of the affected facility over a two (2)-year period.

6. If a performance test was conducted during the reporting period, the results of that test.



7. If no exceedances or malfunctions were reported under paragraphs (4)(A)3. through 5. of this rule for the calendar year being reported, a statement that no exceedances occurred during the reporting period.

8. Any use of the bypass stack, the duration, reason for malfunction, and corrective action taken.

(D) The owner or operator of an HMIWI shall submit to the department semiannual reports containing any information recorded under paragraphs (4)(A)3. through 5. of this rule no later than sixty (60) days following the reporting period. The first semiannual reporting period ends six (6) months following the submission of information in subsection (4)(B) of this rule. Subsequent reports shall be submitted to the department no later than six (6) calendar months following the previous report. All reports shall be signed by the facilities manager.

(E) All records specified under subsection (4)(A) of this rule shall be maintained on-site in either paper copy or computer-readable format, unless an alternative format is approved by the department.

(F) The owner or operator of an HMIWI shall submit an annual report to the department containing information recorded under subparagraph (4)(A)2.Q. of this rule no later than sixty (60) days following the year in which data were collected. Subsequent reports shall be sent no later than twelve (12) calendar months following the previous report (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator must submit these reports semiannually). The report shall be signed by the facilities manager.

(5) Test Methods. Test methods can be found in subparagraphs (3)(E)2.A. through L. of this rule.

AUTHORITY: section 643.050, RSMo Supp. 2013. Original rule filed Dec. 1, 1998, effective July 30, 1999. Amended: Filed Oct. 13, 2000, effective July 30, 2001. Amended: Filed Nov. 26, 2010, effective Aug. 30, 2011. Amended: Filed Nov. 1, 2013, effective July 30, 2014.*

**Original authority: 643.050, RSMo 1965, amended 1972, 1992, 1993, 1995, 2011.*

10 CSR 10-6.210 Confidential Information

PURPOSE: This rule provides procedures and conditions for handling confidential information.

~~(1) Application. This rule shall apply to all business information requested to be designated confidential by the Missouri Air Conservation Commission. This rule shall not apply to emission data included in the information that shall not be entitled to confidential treatment, as provided by section 643.050.4, RSMo.~~

~~(2) General. Any information submitted pursuant to this rule or other rules of the Missouri Air Conservation Commission that contains, or from which could be derived, confidential business information, shall be kept confidential by the commission and employees and agents of the Department of Natural Resources if a timely request for confidentiality is made by the person submitting the information.~~

~~(3) Definitions.~~

~~(A) Definitions for key words used in this rule may be found in 10 CSR 10-6.020(2).~~

~~(B) Additional definitions specific to this rule are as follows:~~

~~1. Confidential business information— Secret processes, secret methods of manufacture or production, trade secrets and other information possessed by a business that, under existing legal concepts, the business has a right to preserve as confidential, and to limit its use by not disclosing it to others in order that the business may obtain or retain business advantages it derives from its rights in the information; and~~

~~2. Emission data—~~

~~A. The identity, amount, frequency, concentration or other characteristics (related to air quality) of any air contaminant which—~~

~~(I) Has been emitted from an emission unit;~~

~~(II) Results from any emission by the emissions unit;~~

~~(III) Under an applicable standard or limitation, the emissions unit was authorized to emit; or~~

~~(IV) Is a combination of any of the parts (3)(B)2.A.(I), (II) or (III) of this rule;~~

~~B. The name, address (or description of the location) and the nature of the emissions unit necessary to identify the emission units including, a description of the device, equipment, or operation constituting the emissions unit; and~~

~~C. The results of any emission testing or monitoring required to be reported under this rule or other rules of the commission.~~

~~(4) Procedures.~~

~~(A) An owner or operator who wishes to claim confidentiality for any information submitted pursuant to this rule or other rules of~~

~~the commission shall submit a claim of confidentiality within ten (10) working days following the time the information is submitted. Failure to submit a claim of confidentiality within the required time shall result in a waiver of any claim to confidentiality.~~

~~(B) The claim of confidentiality shall be accompanied by a justification that the information is entitled to confidential treatment.~~

~~(C) Upon receipt of a timely claim of confidentiality, the director shall evaluate the claim and inform the owner or operator that the claim has been granted, or that a preliminary decision has been made to deny the claim in whole or in part. Until that time in which the claim is reviewed it shall be held in confidence.~~

~~(D) The owner or operator shall have fifteen (15) working days from the receipt of the preliminary decision to deny the claim in which to submit further justification or comments to the director. The director shall inform the owner or operator of his/her final decision on whether the claim will be denied in whole or in part within ten (10) working days.~~

~~(E) The owner or operator may appeal to the commission from the director's final decision to deny a claim of confidentiality in whole or part by filing a notice of appeal with the staff director within twenty (20) working days after receipt of the director's final decision. Upon the timely filing of a notice of appeal, the confidentiality of the information shall be preserved until the entry of a final order by the commission.~~

~~(F) If the commission's final decision is to deny the claim of confidentiality in whole or in part, the director shall treat the information as subject to public disclosure unless the owner or operator files a timely action for judicial review pursuant to section 536.110, RSMo. If a timely action for judicial review is filed, the confidentiality of the information shall be preserved until adjudication of the matter upon judicial review.~~

~~(G) A claim of confidentiality under this rule shall be granted if—~~

~~1. The owner or operator has asserted a business confidentiality claim that has not expired by its terms, been waived or withdrawn;~~

~~2. The owner or operator has satisfactorily shown that it has taken reasonable measures to protect the confidentiality of the information and that it intends to continue to take those measures;~~

~~3. The information is not, and has not been, reasonably obtained without the owner's or operator's consent by other persons (other than governmental bodies) by use of legitimate means (other than discovery~~

Order of Rulemaking

The Missouri Air Conservation Commission **ADOPTS** the following action on this 27th day of March, 2014:

10 CSR 10-6.200 (amendment) *Hospital, Medical, Infectious Waste Incinerators*

| | |
|--|---|
| Original signed by Commissioners: Gary J Pendergrass Mark Garnett David C. Zimmermann Jack C Baker | , Chairman , Vice Chairman , Member , Member |
| _____ | , Member |
| _____ | , Member |
| _____ | , Member |

Jay Nixon, Governor
Sara Parker Pauley, Director

Air Pollution Control Program



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Rulemakings on Public

Notice

The Missouri Department of Natural Resources filed the following proposed rulemakings with the secretary of state's office and comments are being accepted as noted at the end of the proposed rulemaking under the *Notice of Public Hearing and Notice to Submit Comments* heading. To submit comments electronically, use the links below the rule or to [submit written comments](#) see the address below.

10 CSR 10-6.200 Hospital, Medical, Infectious Waste Incinerators

This proposed amendment will remove language from the compliance and performance testing provisions that provide an exemption to the emission limits for hospital, medical, and infectious waste incinerators (HMIWI) during start-up, shutdown, or malfunction conditions. In addition, the hierarchy of definitions will clearly state that the applicable definitions in the Code of Federal Regulations take precedence over those in 10 CSR 10-6.020 Definitions and Common Reference Tables. At the same time, EPA test method references in the state rule will be revised to match how these methods are referred to in the federal HMIWI regulations.

[Proposed Rulemaking](#)- Published in September 3, 2013 *Missouri Register*

[Additional Information](#) on this rulemaking.

[Submit comments now](#)

[Submit written comments](#)

Comments will be accepted through close of business November 7, 2013.

10 CSR 10-6.020 (amendment) Definitions and Common Reference Tables

This proposed amendment will provide a maintenance update to add definitions needed for other rulemakings filed while the general definitions rule was being changed and remove obsolete definitions. In addition, several non-substantive error corrections and clarification will be made.

[Proposed Rulemaking](#)- Published in August 15, 2013 *Missouri Register*

[Additional Information](#) on this rulemaking.

[Submit comments now](#)
[Submit written comments](#)

Comments will be accepted through close of business October 3, 2013.

10 CSR 10-6.161 (new rule) Commercial and Industrial Solid Waste Incinerators

This proposed rulemaking will incorporate by reference the regulatory requirements of 40 CFR 60, subpart DDDD - Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration (CISWI) Units which was promulgated by the U.S. Environmental Protection Agency (EPA) on February 7, 2013. To meet the obligations of section 111(d) of the Clean Air Act (CAA), states must submit plans by February 7, 2014 to control certain hazardous and other air pollutants at existing solid waste incineration units. Incorporation of this federal regulation into a state rule will shift enforcement authority for existing CISWI units from EPA to the State of Missouri.

[Proposed Rulemaking](#)- Published in August 15, 2013 *Missouri Register*

[Additional Information](#) on this rulemaking.

[Submit comments now](#)
[Submit written comments](#)

Comments will be accepted through close of business October 3, 2013.

10 CSR 10-3.010 (rescission) Auto Exhaust Emission Controls

This proposed rescission will remove an outdated rule originally written in 1972. This rule was intended to control emissions from all vehicles subject to required vehicle safety inspections in areas outside of the Kansas City, Springfield, and St. Louis metropolitan areas. Since the most recent rule update in 1978, standard manufactured vehicle emissions equipment has advanced significantly beyond the requirements set forth by this rule.

[Proposed Rulemaking](#)- Published in July 1, 2013 *Missouri Register*

[Additional Information](#) on this rulemaking.

[Submit comments now](#)
[Submit written comments](#)

Comments will be accepted through close of business September 5, 2013.

[Proposed Rulemaking](#)

Submit written comments about any rule development to:

Chief, Air Quality Planning Section
Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176

[Back to top](#)

Bechtel, Cheri

From: Missouri DNR <MODNR@public.govdelivery.com>
Sent: Monday, September 30, 2013 10:37 AM
To: Bechtel, Cheri
Subject: Courtesy Copy: Missouri Air Conservation Commission - Public Hearing

This is a courtesy copy of an email bulletin sent by Cheri Bechtel.

This bulletin was sent to the following groups of people:

Subscribers of Air Public Notices (497 recipients)



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Below is a notice for items being presented for public hearing at the October 31, 2013 Missouri Air Conservation Commission meeting. If you have any questions, please contact Wendy Vit with the Air Pollution Control Program at (573) 526-3167 or wendy.vit@dnr.mo.gov.

MISSOURI AIR CONSERVATION COMMISSION WILL HOLD PUBLIC HEARING

JEFFERSON CITY, MO -- The Missouri Air Conservation Commission will hold a public hearing on Thursday, October 31, 2013 beginning at 9 a.m. at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. The commission will hear testimony related to the following proposed action(s):

- * 10 CSR 10-6.200 (amendment) Hospital, Medical, Infectious Waste Incinerators

This proposed amendment will remove language from the compliance and performance testing provisions that provide an exemption to the emission limits for hospital, medical, and infectious waste incinerators (HMIWI) during start-up, shutdown, or malfunction conditions. In addition, the hierarchy of definitions will clearly state that the applicable definitions in the Code of Federal Regulations take precedence over those in 10 CSR 10-6.020 Definitions and Common Reference Tables. At the same time, EPA test method references in the state rule will be revised to match how these methods are referred to in the federal HMIWI regulations.

The above rule action will not be submitted for inclusion in the Missouri State Implementation Plan but will be submitted for inclusion in the plan established under Clean Air Act Section 111(d) covering existing sources of noncriteria pollutants.

- * Missouri's Recommendation for Area Boundary Designations for the 2012 Annual Fine Particulate

Matter National Ambient Air Quality Standard

On December 14, 2012, the U.S. Environmental Protection Agency (EPA) promulgated a revision to the National Ambient Air Quality Standard (NAAQS) for fine particulate matter (PM_{2.5}). The new primary annual PM_{2.5} NAAQS was set at 12.0 µg/m³. The 24-hour primary and secondary standards for PM_{2.5} and the secondary annual standard for PM_{2.5} were unchanged. When a NAAQS is revised, each state is required to submit boundary designation recommendations to EPA for their state within one year after the new NAAQS is promulgated. Areas with ambient air monitoring data violating the standard and nearby areas that contribute to such violations should be designated nonattainment. All other areas should be designated attainment/unclassifiable. Based on technical evaluation of emissions data, weather patterns, and other information, the Air Program recommends for the 2012 annual PM_{2.5} NAAQS a designation of attainment/unclassifiable for the entire State of Missouri.

Documents for the above item(s) will be available for review at the Missouri Department of Natural Resources, Air Pollution Control Program, 1659 Elm Street, Jefferson City, (573) 751-4817 and in the Public Notices section of the program web site <http://dnr.mo.gov/env/apcp/public-notice.htm>. This information will be available at least 30 days prior to the public hearing date.

The Department will accept written or email comments for the record until 5 p.m. on November 7, 2013. Please send written comments to Chief, Air Quality Planning Section, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176. Email comments may be submitted via the program web site noted above. All written and email comments and public hearing testimony will be equally considered.

Citizens wishing to speak at the public hearing should notify the secretary to the Missouri Air Conservation Commission, Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, Missouri 65102-0176, or telephone (573) 526-3420. The Department requests persons intending to give verbal presentations also provide a written copy of their testimony to the commission secretary at the time of the public hearing.

Persons with disabilities requiring special services or accommodations to attend the meeting can make arrangements by calling the Program directly at (573) 751-4817, the Division of Environmental Quality's toll free number at (800) 361-4827, or by writing two weeks in advance of the meeting to: Missouri Department of Natural Resources, Air Conservation Commission Secretary, P.O. Box 176, Jefferson City, MO 65102. Hearing impaired persons may contact the program through Relay Missouri, (800) 735-2966.

Update your subscriptions, modify your password or email address, or stop subscriptions at any time on your [Subscriber Preferences Page](#). You will need to use your email address to log in. If you have questions or problems with the subscription service, please contact support@govdelivery.com.

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AIR CONSERVATION COMMISSION MEETING
PUBLIC HEARING

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1 PROCEEDINGS

2 CHAIRMAN PENDERGRASS: The hearing will
3 come to order. Let the record show the
4 following Commissioners are present: Jack
5 Baker, Mark Garnett, Gary Pendergrass, and David
6 Zimmerman.

7 The Air Conservation Commission of the
8 State Of Missouri has called this public hearing
9 pursuant to Section 643.070, Revised Statutes of
10 Missouri; EPA promulgated rule 40 CFR 51.102,
11 for the purpose of hearing testimony related to:

12 Missouri State Implementation Plan
13 Revision - Supplement/Revision to the
14 Redesignation Demonstration and Maintenance Plan
15 for the Missouri Portion of the St. Louis
16 Nonattainment Area for the 1997 Annual Fine
17 Particulate Matter National Ambient Air Quality
18 Standard.

19 Missouri State Implementation Plan
20 Revision - Americold Logistics, LLC Particulate
21 Matter (PM10) Consent Judgment.

22 Missouri State Implementation Plan
23 Revision - Limited Maintenance Plan for the St.
24 Louis Nonclassifiable Maintenance Area for the
25 8-hour Carbon Monoxide National Ambient Air

1 Quality Standard.

2 10 CSR 10-6.200 (amendment) Hospital,
3 Medical, Infectious Waste Incinerators.

4 10 CSR 10-5.240 (rescission) Additional
5 Air Quality Control Measures May be Required
6 When Sources are Clustered in a Small Land Area.

7 10 CSR 10-6.010 (amendment) Ambient Air
8 Quality Standards.

9 The hearing record will close at 5:00
10 p.m. on February 6, 2014.

11 Anyone who has not been scheduled to
12 appear, but who wishes to be heard, should
13 indicate that you wish to speak on the sign-in
14 sheets available at the door or by letting the
15 commission know by telephone after the public
16 hearing has been presented.

17 Section 643.100 of the Missouri
18 Statutes provides that all oral testimony be
19 given under oath. Accordingly, when you are
20 called to testify, please present yourself to
21 the court reporter first to be sworn in.

22 When you testify, please state your
23 name, business address and your occupation or
24 affiliation. If you have a prepared statement,
25 it will be helpful if you would provide a copy

1 proposed amendment 10 CSR 10-6.200 Hospital,
2 Medical, Infectious Waste Incinerators. The
3 rule information starts on Page 119 of the
4 briefing document.

5 The proposed rulemaking will remove
6 language from the compliance and testing
7 provisions that provide an exemption to the
8 emission limits during start-up, shutdown or
9 malfunction, known as SSM, conditions.

10 This change is precipitated by two
11 events. The first is a petition received by the
12 U.S. Environmental Protection Agency concerning
13 the treatment of excess emissions by sources
14 during SSM conditions. EPA's response to the
15 petition, published in the Federal Register on
16 February 22nd, 2013, called for revisions to the
17 state visible emission rule, and those revisions
18 are being made in the separate rulemaking.
19 However, EPA's response also noted that revision
20 to 10 CSR 10-6.200 may be the subject of a later
21 EPA action.

22 The second precipitating event is a
23 revision to the federal hospital, medical,
24 infectious waste incinerator, or HMIWI,
25 regulations promulgated by the EPA on May 13,

educatorquality@dese.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.

Title 5—DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION

Division 20—Division of Learning Services Chapter 400—Office of Educator Quality

PROPOSED RULE

5 CSR 20 400.700 Certification Requirements for Adult Education and Literacy

PURPOSE: The State Board of Education is authorized to grant certificates of license to teach in any of the public schools of the state and establish requirements and qualifications for those certificates. This rule outlines the requirements for application for a certificate of license to teach Adult Education and Literacy.

(1) An applicant for an initial Missouri certificate of license to teach Adult Education and Literacy who possesses good moral character may be granted an initial Missouri certificate of license to teach Adult Education and Literacy, valid for a period of four (4) years, subject to the certification requirements found in 5 CSR 20 400.500 and the following additional requirements specific to an initial Adult Education and Literacy certificate:

(A) Professional Requirements

1. A bachelor of arts or bachelor of science degree from a college or university approved by the Missouri Department of Elementary and Secondary Education (department);
2. Successful completion of a pre-certification workshop authorized by the department no later than three (3) months after hire date; and
3. Completion and submission of any required pre- and/or post-workshop activity to the department;

(2) Career Continuous Adult Education and Literacy Certificate

(A) A Career Continuous Adult Education and Literacy certificate may be issued to an applicant upon submission of an application for such certification and verification of the following:

1. Four (4) years of teaching experience approved by the department;
2. Participation in a two (2) year mentoring program with an experienced teacher of Adult Education and Literacy;
3. Participation in any required workshops;
4. Participation in sixty (60) hours of professional development in addition to required workshops;
5. Participation in an annual performance-based teacher evaluation (PBTE); and
6. Accumulation of a minimum of one hundred (100) Adult Education and Literacy instructional hours per year during the four (4) years of state approved teaching experience; and

(B) A Career Continuous Adult Education and Literacy certificate is valid for ninety nine (99) years; however, an applicant may be issued a High Quality Adult Education and Literacy Career Continuous Certificate after ten (10) years from date of initial certification if the following requirements are met:

1. Ten (10) years of teaching experience approved by the department;
2. Accumulation of a minimum of one hundred (100) Adult Education and Literacy instructional hours per year during the ten (10) years of state approved teaching experience; and/or
3. A masters degree from an accredited college or university.

AUTHORITY: sections 168.011, 168.405, and 168.409, RSMo 2000, and sections 161.092, 168.021, 168.071, 168.081, and 168.400, RSMo Supp. 2013. Original rule filed Oct. 29, 2013.

PUBLIC COST: This proposed rule will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rule will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rule with the Department of Elementary and Secondary Education, Attention: Paul Katnik, Assistant Commissioner, Office of Educator Quality, PO Box 480, Jefferson City, MO 65102-0480 or by email to educatorquality@dese.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.

Title 10—DEPARTMENT OF NATURAL RESOURCES Division 10—Air Conservation Commission Chapter 6—Air Quality Standards, Definitions, Sampling and Reference Methods and Air Pollution Control Regulations for the Entire State of Missouri

PROPOSED AMENDMENT

10 CSR 10-6.200 Hospital, Medical, Infectious Waste Incinerators. The commission proposes to amend subsections (1)(E), (1)(H), (2)(A), (3)(A), (3)(B), and (3)(E). If the commission adopts this rule action, it will be the department's intention to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Plan for Designated Facilities and Pollutants pursuant to section 111(d) of the Clean Air Act for hospital, medical, and infectious waste incinerators. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Environmental Regulatory Agenda website, www.dnr.mo.gov/regs/index.html.

PURPOSE: This rule establishes emission limits for existing hospital, medical, and infectious waste incinerators. The pollutants regulated include metals, particulate matter, acid gases, organic compounds, carbon monoxide, and opacity. This rule includes requirements for operator training and qualification, waste management, compliance and performance testing, monitoring, and reporting/record keeping. This amendment will remove the exemption for start-up, shutdown, and malfunction events to maintain consistency with federal regulations; clarify the hierarchy of definitions; and update the references to the test methods used to determine compliance. The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is Federal Register notices 78 FR 12460, dated February 22, 2013, and 78 FR 28052, dated May 13, 2013.

(1) Applicability.

(E) Any combustor which meets the applicability requirements under [s/Subpart Cb, Ea, or Eb of 40 CFR [part] 60] is not subject to this rule.

(H) Physical or operational changes made to an HMIWI unit solely for the purpose of complying with this rule are not considered a modification and do not result in an HMIWI unit becoming subject to the provisions of 40 CFR [part] 60, [s/Subpart Ec].

(2) Definitions.

(A) Definitions of certain terms specified in this rule, *other than those defined in this rule section, may be found in the Clean Air Act and in 40 CFR Part 60, subparts A, B, and Ec* may be found in **40 CFR 60.21 and 40 CFR 60.51c**, promulgated as of **July 1, 2012**, and are hereby incorporated by reference in this rule, as published by the Office of Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions.

(3) General Provisions.

(A) Emission Limits.

1. No owner or operator of an HMIWI subject to this rule shall cause to be discharged into the atmosphere any gases that contain stack emissions in excess of the limits presented in Table 1 of this subsection, except as provided for in paragraph (3)(A)2. of this rule.

Table 1—Emissions Limits for Small, Medium, and Large HMIWI

| Pollutant | Units (7 percent oxygen, dry basis) | Emissions limits | | | Averaging time ¹ | Method for demonstrating compliance ² |
|--------------------|---|------------------------------|--|----------------------------|--|---|
| | | 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) or 34 (.015) ³ | 25 (0.011) | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 5 of 40 CFR 60 , Appendix A-3 [of part 60] or EPA Reference Method 26A or 29 of 40 CFR 60 , Appendix A-8 [of 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 40 CFR 60 , Appendix A-4 [of part 60]. |
| Dioxins/furans | Nanograms per dry standard cubic meter total dioxins/furans (ng/dscm) (grains per billion dry standard cubic feet (gr/10 ⁹ dscf)) or ng/dscm TEQ (gr/10 ⁹ 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 40 CFR 60 , Appendix A-7 [of part 60]. |
| Hydrogen chloride | ppmv | 44 or 15 or 99% ³ | 7.7 | 6.6 | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 26 or 26A of 40 CFR 60 , Appendix A-8 [of 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 40 CFR 60 , Appendix A-4 [of 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 40 CFR 60 , Appendix A-4 [of part 60]. |
| Lead | mg/dscm (grains per thousand dry standard cubic feet (gr/10 ³ 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 40 CFR 60 , Appendix A-8 [of part 60]. |

| | | | | | | |
|---------|--------------------------------------|-------------------|-------------------|--------------------|--|--|
| Cadmium | mg/dscm (gr/10 ³ 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 40 CFR 60 , Appendix A-8 <i>[of part 60]</i> . |
| Mercury | mg/dscm (gr/10 ³ 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 40 CFR 60 , Appendix A-8 <i>[of part 60]</i> . |

- ¹ Except as allowed under section 60.56c(c) for HMIWI equipped with Continuous Emission Monitoring System (CEMS).
- ² Does not include CEMS and approved alternative non-EPA test methods allowed under section 60.56c(b).
- ³ HMIWI constructed 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 6, 2010.

2. No owner or operator of a small HMIWI constructed on or before June 20, 1996, which is located more than fifty (50) miles from the boundary of the nearest Standard Metropolitan Statistical Area and which burns less than two thousand (2,000) pounds per week of hospital waste and medical/infectious waste shall cause to be discharged into the atmosphere any gases that contain stack emissions in excess of the limits presented in Table 2 of this paragraph. The two thousand (2,000) pounds per week limitation does not apply during performance tests.

Table 2—Emissions Limits for Small HMIWI Which Meet the Criteria Under Paragraph (3)(A)2. of this Rule

| Pollutant | Units (7 percent oxygen, dry basis) | HMIWI Emissions limits | Averaging time ¹ | Method for demonstrating compliance ² |
|--------------------|---|------------------------------|--|---|
| Particulate matter | mg/dscm (gr/dscf) | 87 (0.038) | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 5 of 40 CFR 60 , Appendix A-3 <i>[of part 60]</i> or EPA Reference Method 26A or 29 of 40 CFR 60 , Appendix A-8 <i>[of part 60]</i> . |
| Carbon monoxide | ppmv | 20 | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 10 or 10B of 40 CFR 60 , Appendix A-4 <i>[of part 60]</i> . |
| Dioxins/furans | ng/dscm total dioxins/furans (gr/10 ⁹ dscf) or ng/dscm TEQ (gr/10 ⁹ dscf) | 240 (100) or 5.1 (2.2) | 3-run average (4-hour minimum sample time per run) | EPA Reference Method 23 of 40 CFR 60 , Appendix A-7 <i>[of part 60]</i> . |
| Hydrogen chloride | ppmv | 810 | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 26 or 26A of 40 CFR 60 , Appendix A-8 <i>[of part 60]</i> . |
| Sulfur dioxide | ppmv | 55 | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 6 or 6C of 40 CFR 60 , Appendix A-4 <i>[of part 60]</i> . |
| Nitrogen oxides | ppmv | 130 | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 7 or 7E of 40 CFR 60 , Appendix A-4 <i>[of part 60]</i> . |
| Lead | mg/dscm (gr/10 ³ dscf) | 0.50 (0.22) | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 29 of 40 CFR 60 , Appendix A-8 <i>[of part 60]</i> . |
| Cadmium | mg/dscm (gr/10 ³ dscf) | 0.11 (0.048) | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 29 of 40 CFR 60 , Appendix A-8 <i>[of part 60]</i> . |
| Mercury | mg/dscm (gr/10 ³ dscf) | 0.0051 (0.0022) | 3-run average (1-hour minimum sample time per run) | EPA Reference Method 29 of 40 CFR 60 , Appendix A-8 <i>[of part 60]</i> . |

¹ Except as allowed under section 60.56c(c) for HMIWI equipped with CEMS.

² Does not include CEMS and approved alternative non-EPA test methods allowed under section 60.56c(b).

3. No owner or operator of an HMIWI subject to this rule shall cause to be discharged into the atmosphere from the stack of that HMIWI any gases that exhibit greater than six percent (6%) opacity (six (6)-minute block average).

(B) Operator Training and Qualification Requirements.

1. No owner or operator of an HMIWI subject to this rule shall allow the HMIWI to operate at any time unless a fully trained and qualified HMIWI operator is accessible, either at the facility or available within one (1) hour. The trained and qualified HMIWI operator may operate the HMIWI directly or be the direct supervisor of one (1) or more HMIWI operators.

2. Operator training and qualification shall be obtained by completing the requirements included in paragraphs (3)(B)3. through 7. of this rule.

3. Training shall be obtained by completing an HMIWI operator training course that includes, at a minimum, the following provisions:

A. Twenty-four (24) hours of training on the following subjects:

(I) Environmental concerns, including pathogen destruction and types of emissions;

(II) Basic combustion principles, including products of combustion;

(III) Operation of the type of incinerator to be used by the operator, including proper start-up, waste charging, and shutdown procedures;

(IV) Combustion controls and monitoring;

(V) Operation of air pollution control equipment and factors affecting performance (if applicable);

(VI) Methods to monitor pollutants and equipment calibration procedures (where applicable);

(VII) Inspection and maintenance of the HMIWI, air pollution control devices, and continuous emission monitoring systems;

(VIII) Actions to correct malfunctions or conditions that may lead to malfunction;

(IX) Bottom and fly ash characteristics and handling procedures;

(X) Applicable federal, state, and local regulations;

(XI) Work safety procedures;

(XII) *[Pre-startup inspections]* **Inspections prior to start-up;** and

(XIII) Record-keeping requirements;

B. An examination designed and administered by the instructor; and

C. Reference material distributed to the attendees covering the course topics.

4. Qualifications shall be obtained by—

A. Completion of a training course that satisfies the criteria under paragraph (3)(B)3. of this rule; and

B. Either six (6) months experience as an HMIWI operator, six (6) months experience as a direct supervisor of an HMIWI operator, or completion of at least two (2) burn cycles under the observation of two (2) qualified HMIWI operators.

5. Qualification is valid from the date on which the examination is passed or the completion of the required experience, whichever is later.

6. To maintain qualification, the trained and qualified HMIWI operator shall complete and pass an annual review or refresher course of at least four (4) hours covering, at a minimum, the following:

A. Update of regulations;

B. Incinerator operation, including start-up and shutdown procedures;

C. Inspection and maintenance;

D. Responses to malfunctions or conditions that may lead to malfunction; and

E. Discussion of operating problems encountered by attendees.

7. A lapsed qualification shall be renewed by one (1) of the following methods:

A. For a lapse of less than three (3) years, the HMIWI operator shall complete and pass a standard annual refresher course described in paragraph (3)(B)6. of this rule; or

B. For a lapse of three (3) years or more, the HMIWI operator shall complete and pass a training course with the minimum criteria described in paragraph (3)(B)3. of this rule.

8. The owner or operator of an HMIWI shall maintain documentation at the facility that addresses the following:

A. Summary of the applicable standards under this subpart;

B. Description of basic combustion theory applicable to an HMIWI;

C. Procedures for receiving, handling, and charging waste;

D. HMIWI start-up, shutdown, and malfunction procedures;

E. Procedures for maintaining proper combustion air supply levels;

F. Procedures for operating the HMIWI and associated air pollution control systems within the standards established under this subpart;

G. Procedures for responding to periodic malfunction or conditions that may lead to malfunction;

H. Procedures for monitoring HMIWI emissions;

I. Reporting and record-keeping procedures; and

J. Procedures for handling ash.

9. The owner or operator of an HMIWI shall establish a program for reviewing the information listed in paragraph (3)(B)8. of this rule annually with each HMIWI operator.

A. The initial review of the information listed in paragraph (3)(B)8. of this rule shall be conducted prior to assumption of responsibilities affecting HMIWI operation.

B. Subsequent reviews of the information listed in paragraph (3)(B)8. of this rule shall be conducted annually.

10. The information listed in paragraph (3)(B)8. of this rule shall be kept in a readily-accessible location for all HMIWI operators. This information, along with records of training, shall be available for inspection by the department or its delegated enforcement agent upon request.

(E) Compliance and Performance Testing.

1. The emission limits under this rule apply at all times.

2. Except as provided in paragraph (3)(E)12. of this rule, the owner or operator of an HMIWI subject to this rule shall conduct an initial performance test to determine compliance with the emission limits using the procedures and test methods listed in subparagraphs (3)(E)2.A. through L. of this rule. The use of the bypass stack during a performance test shall invalidate the performance test. For small HMIWIs as defined in paragraph (3)(A)2. of this rule, the two-thousand (2,000)-pound-per-week limitation does not apply during performance tests.

A. All performance tests shall consist of a minimum of three (3) test runs conducted under representative operating conditions.

B. The minimum sample time shall be one (1) hour per test run unless otherwise indicated.

C. The sampling location and number of traverse points shall be determined using EPA Reference Method 1 of 40 CFR *[part]* 60, Appendix A-1*[, promulgated as of December 21, 1971, and incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions].*

D. Gas composition shall be analyzed and include a measurement of oxygen concentration using EPA Reference Method 3, 3A, or 3B of 40 CFR *[part]* 60, Appendix A-2*[, promulgated as of December 21, 1971, and incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions and shall be used for gas composition analysis,*

including measurement of oxygen concentration]. EPA Reference Method 3, 3A, or 3B shall be used simultaneously with each of the other EPA reference methods. [As an alternative to EPA Reference Method 3B, ASME PTC-19-10-1981-Part 10, American Society of Mechanical Engineers (ASME), PO Box 2900, 22 Law Drive, Fairfield, NJ, 07007-2900, may be used. This standard is incorporated by reference in this rule, as published by American Society for Testing and Materials (ASTM) International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959. This rule does not incorporate any subsequent amendments or additions] **As an alternative to EPA Reference Method 3B, ASME PTC-19-10-1981-Part 10 may be used.**

E. The pollutant concentrations shall be adjusted to seven percent (7%) oxygen using the following equation:

$$C_{\text{adj}} = C_{\text{meas}} (20.9 - 7) / (20.9 - \% O_2)$$

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

F. Particulate Matter (PM) emissions shall be measured using EPA Reference Method 5 of 40 CFR [part] 60, Appendix A-3[, promulgated as of December 21, 1971, and incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions]. An acceptable alternate method for measuring PM emissions is **EPA Reference Method 26A or Method 29 of 40 CFR [part] 60, Appendix A-8[, promulgated as of December 21, 1971, and incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions].** As an alternative, PM Continuous Emission Monitoring System (CEMS) may also be used as specified in subparagraph (3)(E)3.C. of this rule.

G. Stack opacity shall be measured using EPA Reference Method 9 of 40 CFR [part] 60, Appendix A-4 [promulgated as of December 21, 1971, and incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions]. As an alternative, demonstration of compliance with the PM standards using bag leak detection systems as specified in paragraph (3)(E)11. of this rule or PM CEMS as specified in subparagraph (3)(E)3.C. of this rule is considered demonstrative of compliance with the opacity requirements.

H. Carbon monoxide (CO) emissions shall be measured using EPA Reference Method 10 or 10B of 40 CFR [part] 60, Appendix A-4 [promulgated as of December 21, 1971, and incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions]. As an alternative, CO CEMS may be used as specified in subparagraph (3)(E)3.C. of this rule.

I. Total dioxin/furan emissions shall be measured using EPA Reference Method 23 of 40 CFR [part] 60, Appendix A-7 [promulgated as of December 21, 1971, and incorporated by reference in this rule, as published by the U.S. Government

Printing Office, 732 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions]. As an alternative, an owner or operator may elect to sample dioxins/furans by installing, calibrating, maintaining, and operating a continuous automated sampling system for monitoring dioxin/furan emissions. Sampling shall be done using **EPA Reference Method 23 of [Appendix A-7, of] 40 CFR [part] 60, Appendix A-7 [promulgated as of December 21, 1971, and incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions].** The minimum sample time shall be four (4) hours per test run. If the affected facility has selected the toxic equivalency standards for dioxin/furans the following procedures shall be used to determine compliance:

(I) Measure the concentration of each dioxin/furan tetra-through octa-congener emitted using EPA Reference Method 23 of 40 CFR [part] 60, **Appendix A-7 [promulgated as of December 21, 1971, and incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions];**

(II) For each dioxin/furan congener measured in accordance with part (3)(E)2.I.(I) of this rule, multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 3 of this part; and

Table 3—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 |

(III) Sum the products calculated in accordance with part (3)(E)2.I.(II) of this rule to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

J. Hydrogen chloride (HCl) shall be measured using EPA Reference Method 26 or 26A of 40 CFR [part] 60, Appendix A[-]-8 [promulgated as of December 21, 1971, and incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions]. As an alternative, HCl CEMS may be used as specified in subparagraph (3)(E)3.C. of this rule.

K. Lead (Pb), cadmium (Cd), and mercury (Hg) emissions shall be measured using EPA Reference Method 29 of 40 CFR [part] 60, Appendix A[-]-8[, promulgated as of December 21, 1971, and incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions]. As an alternative, Hg emissions may be measured using ASTM D6784-02(2008). [This standard is incorporated by reference in this rule, as published by ASTM International, 100 Barr Harbor Drive, PO

Box C700, West Conshohocken, PA 19428-2959. This rule does not incorporate any subsequent amendments or additions.] As an alternative for Pb, Cd, and Hg, multi-metals CEMS or Hg CEMS, may be used as specified in subparagraph (3)(E)3.C. of this rule. As an alternative, an owner or operator may elect to sample Hg by installing, calibrating, maintaining, and operating a continuous automated sampling system for monitoring Hg emissions.

L. Compliance for fugitive ash emissions shall be determined using EPA Reference Method 22 of 40 CFR [part] 60, Appendix A[-]-7[, promulgated as of December 21, 1971, and incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N. Capitol Street NW, Washington, DC 20401. This rule does not incorporate any subsequent amendments or additions]. The minimum observation time shall be a series of three (3) one (1)-hour observations.

3. Following the date on which the initial performance test is completed, the owner or operator of an affected facility shall—

A. Determine compliance with the opacity limit by conducting an annual performance test (no more than twelve (12) months following the previous performance test) using the applicable procedures and

test methods listed in paragraph (3)(E)2. of this rule;

B. Determine compliance with the PM, CO, and HCl emission limits by conducting an annual performance test (no more than twelve (12) months following the previous performance test) using the applicable procedures and test methods listed in paragraph (3)(E)2. of this rule. If all three (3) performance tests over a three (3)-year period indicate compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for the subsequent two (2) years. At a minimum, a performance test for PM, CO, and HCl shall be conducted every third year (no more than thirty-six (36) months following the previous performance test). If a performance test conducted every third year indicates compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for an additional two (2) years. If any performance test indicates noncompliance with the respective emission limit, a performance test for that pollutant shall be conducted annually until all annual performance tests over a three (3)-year period indicate compliance with the emission limit. The use of the bypass stack during a performance test shall invalidate the performance test; and

C. Facilities using a Continuous Emission Monitoring System (CEMS) to demonstrate compliance with any of the emission limits under section (3) of this rule shall determine compliance with the appropriate emission limit(s) using a twelve (12)-hour rolling average, calculated each hour as the average of the previous twelve (12) operating hours.

4. The owner or operator of an affected facility equipped with a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and wet scrubber shall—

A. Establish the appropriate maximum and minimum operating parameters, indicated in Table 4 of this subparagraph for each control system, as site-specific operating parameters during the initial performance test to determine compliance with the emission limits; and

Table 4—Operating Parameters to be Monitored and Minimum Measurement and Recording Frequencies

| Operating parameters to be monitored | Minimum frequency | | Control system | | |
|---|-------------------|----------------|--|--------------|---|
| | Data measurement | Data recording | Dry scrubber followed by fabric filter | Wet scrubber | Dry scrubber followed by fabric filter and wet scrubber |
| MAXIMUM OPERATING PARAMETERS | | | | | |
| Maximum charge rate | Continuous | 1 per hour | ✓ | ✓ | ✓ |
| Maximum fabric filter inlet temperature | Continuous | 1 per minute | ✓ | | ✓ |
| Maximum flue gas temperature | Continuous | 1 per minute | | ✓ | ✓ |
| MINIMUM OPERATING PARAMETERS | | | | | |
| Minimum secondary chamber temperature | continuous | 1 per minute | ✓ | ✓ | ✓ |
| Minimum dioxin/furan sorbent flow rate | hourly | 1 per hour | ✓ | | ✓ |
| Minimum hydrogen chloride (HCl) sorbent flow rate | hourly | 1 per hour | ✓ | | ✓ |
| Minimum mercury (Hg) sorbent flow rate | hourly | 1 per hour | ✓ | | ✓ |
| Minimum pressure drop across the wet scrubber or minimum horsepower or amperage to wet scrubber | continuous | 1 per minute | | ✓ | ✓ |
| Minimum scrubber liquor flow rate | continuous | 1 per minute | | ✓ | ✓ |
| Minimum scrubber liquor pH | continuous | 1 per minute | | ✓ | ✓ |

B. Following the date on which the initial performance test is completed, ensure that the affected facility does not operate above any of the applicable maximum operating parameters or below any of the applicable minimum operating parameters listed in Table 4 and measured as three (3)-hour rolling averages (calculated each hour as the average of the previous three (3) operating hours) at all times *[except during periods of startup, shutdown, and malfunction]*. Operating parameter limits do not apply during performance tests. Operation above the established maximum or below the established minimum operating parameter(s) shall constitute a violation of established operating parameter(s).

5. Except as provided in paragraph (3)(E)8. of this rule, for affected facilities equipped with a dry scrubber followed by a fabric filter—

A. Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the CO emission limit;

B. Operation of the affected facility above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxin/furan sorbent flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit;

C. Operation of the affected facility above the maximum charge rate and below the minimum HCl sorbent flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit;

D. Operation of the affected facility above the maximum charge rate and below the minimum Hg sorbent flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit; or

E. Use of the bypass stack shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd, and Hg emission limits.

6. Except as provided in paragraph (3)(E)8. of this rule, for affected facilities equipped with a wet scrubber—

A. Operation of the affected facility above the maximum charge rate and below the minimum pressure drop across the wet scrubber or below the minimum horsepower or amperage to the system (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the PM emission limit;

B. Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the CO emission limit;

C. Operation of the affected facility above the maximum charge rate, below the minimum secondary temperature, and below the minimum scrubber liquor flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit;

D. Operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit;

E. Operation of the affected facility above the maximum flue gas temperature and above the maximum charge rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit; or

F. Use of the bypass stack shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd, and Hg emission limits.

7. Except as provided in paragraph (3)(E)8. of this rule, for affected facilities equipped with a dry scrubber followed by a fabric filter and a wet scrubber—

A. Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the CO emission limit;

B. Operation of the affected facility above the maximum fabric filter inlet temperature, above the maximum charge rate, and

below the minimum dioxin/furan sorbent flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit;

C. Operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit;

D. Operation of the affected facility above the maximum charge rate and below the minimum Hg sorbent flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit; or

E. Use of the bypass stack shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd, and Hg emission limits.

8. The owner or operator of an affected facility may conduct a repeat performance test within thirty (30) days of violation of applicable operating parameter(s) to demonstrate that the affected facility is not in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to this paragraph shall be conducted using the identical operating parameters that indicated a violation under paragraphs (3)(E)5., 6., or 7. of this rule.

9. The owner or operator of an affected facility using an air pollution control device other than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber, or selective noncatalytic reduction technology, to comply with the emission limits under section (3) of this rule shall petition the administrator for other site-specific operating parameters to be established during the initial performance test and continuously monitored thereafter. The owner or operator shall not conduct the initial performance test until after the petition has been approved by the administrator.

10. The owner or operator of an affected facility may conduct a repeat performance test at any time to establish new values for the operating parameters. The department may request a repeat performance test at any time.

11. The owner or operator of an affected facility that uses an air pollution control device that includes a fabric filter and is not demonstrating compliance using PM CEMS, determines compliance with the PM emissions limit using a bag leak detection system, and meets the requirements in subparagraphs (3)(E)11.A. through L. of this rule for each bag leak detection system.

A. Each triboelectric bag leak detection system may be installed, calibrated, operated, and maintained according to the "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). This document is available from the U.S. Environmental Protection Agency (U.S. EPA), Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Measurement Policy Group (D-243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emissions Measurement Center Continuous Emissions Monitoring. Other types of bag leak detection systems shall be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

B. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PM emissions at concentrations of ten (10) milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

C. The bag leak detection system sensor shall provide an output of relative PM loadings.

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

E. The bag leak detection system shall be equipped with an audible alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected. The alarm shall be located where it is easily heard by plant operating personnel.

F. For positive pressure fabric filter systems, a bag leak detector shall be installed in each baghouse compartment or cell.

G. For negative pressure or induced air fabric filters, the bag leak detector shall be installed downstream of the fabric filter.

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

I. The baseline output shall be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time according to section 5.0 of the "Fabric Filter Bag Leak Detection Guidance."

J. Following initial adjustment of the system, the sensitivity or range, averaging period, alarm set points, or alarm delay time may not be adjusted. In no case may the sensitivity be increased by more than one hundred percent (100%) or decreased more than fifty percent (50%) over a three-hundred-sixty-five (365)-day period unless such adjustment follows a complete fabric filter inspection that demonstrates that the fabric filter is in good operating condition. Each adjustment shall be recorded.

K. Record the results of each inspection, calibration, and validation check.

L. Initiate corrective action within one (1) hour of a bag leak detection system alarm; operate and maintain the fabric filter such that the alarm is not engaged for more than five percent (5%) of the total operating time in a six (6)-month block reporting period. 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 is counted as a minimum of one (1) hour. If it takes longer than one (1) hour to initiate corrective action, the alarm time is counted as the actual amount of time taken to initiate corrective action.

12. Small HMIWI subject to the emissions limits under paragraph (3)(A)2. of this rule that is not equipped with an air pollution control device shall meet the following compliance and performance testing requirements:

A. Establish 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;

B. Following the date on which the initial performance test is completed, ensure that the designated facility does not operate above the maximum charge rate or below the minimum secondary chamber temperature measured as three (3)-hour rolling averages (calculated as the average of the previous three (3) 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 of the established operating parameter(s);

C. Except as provided in subparagraph (3)(E)12.D. of this rule, operation of the designated facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the PM, CO, and dioxin/furan emission limits; and

D. The owner or operator of a designated facility may conduct a repeat performance test within thirty (30) days of the violation of applicable operating parameter(s) to demonstrate that the designated facility is not in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to this paragraph must be conducted using the identical operating parameters that indicated a violation under subparagraph (3)(E)12.C. of this rule.

13. The owner or operator of a designated facility subject to this rule may use the results of previous emissions tests to demonstrate compliance with the emissions limits, provided that the following conditions are met:

A. The designated facility's previous emissions tests must have been conducted using the applicable procedures and test methods listed in subparagraphs (3)(E)2.A.-L. of this rule. Previous emissions test results obtained using EPA-accepted voluntary consensus standards are also acceptable;

B. The HMIWI at the designated facility shall 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 HMIWI 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); and

C. The previous emissions test(s) must have been conducted in 1996 or later.

AUTHORITY: section 643.050, RSMo [2000] Supp. 2013. Original rule filed Dec. 1, 1998, effective July 30, 1999. Amended: Filed Oct. 13, 2000, effective July 30, 2001. Amended: Filed Nov. 26, 2010, effective Aug. 30, 2011. Amended: Filed Nov. 1, 2013.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., January 30, 2014. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a written or email statement of their views until 5:00 p.m., February 6, 2014. Written comments shall be sent to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176. Email comments shall be sent to apcprulespn@dnr.mo.gov.

**Title 11 — DEPARTMENT OF PUBLIC SAFETY
Division 45 — Missouri Gaming Commission
Chapter 5 — Conduct of Gaming**

PROPOSED AMENDMENT

11 CSR 45 5.237 Shipping of Electronic Gaming Devices, Gaming Equipment or Supplies. The commission is amending the purpose statement and section (1).

PURPOSE: This amendment changes requirements for prior approval for shipping gaming equipment and supplies to reflect current procedures.

PURPOSE: This rule requires licensees to [notify the] obtain Missouri Gaming Commission approval prior to shipping electronic gaming devices into, out of, or within the state.

(1) Licensees shipping electronic gaming devices or gaming equipment/supplies as defined in 11 CSR 45 1.090, with the exception of critical program storage media as defined in 11 CSR 45 1.090, into, out of, or within Missouri, must file [on a form] a request in a format specified by the Missouri Gaming [e]Commission (MGC) [notice] at least five (5) days prior to such shipment. The licensee shall receive MGC approval of the request prior to shipping the listed items.

AUTHORITY: section[s] 313.004, RSMo 2000, and sections 313.805 and 313.807.4, RSMo Supp. 2013. Original rule filed Sept. 2, 1997, effective March 30, 1998. Amended: Filed April 3, 2001, effective Oct. 30, 2001. Amended: Filed Oct. 31, 2005, effective May 30,

| | | | | | |
|---------------|------------|---------|-------------------------------|--|------------------------------------|
| Sulfuric acid | State only | 1-hour | 30 micrograms per cubic meter | Not to be exceeded more than once in any 2 consecutive days | As specified in 10 CSR 10-6.040(6) |
| | | 24-hour | 10 micrograms per cubic meter | Not to be exceeded more than once in any 90 consecutive days | As specified in 10 CSR 10-6.040(6) |

*The 1978 lead standard remains in effect until one (1) year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

**The 1997 ozone standard remains in effect.

***The 1997 particulate matter 2.5 micron (PM_{2.5}) standard remains in effect.

****The 1971 annual and 24-hour sulfur dioxide standards remain in effect in areas until one (1) year after the area is designated for the 2010 standard, except that for areas designated nonattainment for the 1971 standards as of August 23, 2010, and for areas not meeting the requirements of a SIP call under the 1971 standards, the 1971 standards remain in effect until the area submits and the EPA approves a SIP providing for attainment of the 2010 standard.

**Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 6—Air Quality Standards, Definitions, Sampling and Reference Methods and Air Pollution Control Regulations for the Entire State of Missouri**

ORDER OF RULEMAKING

By the authority vested in the Missouri Air Conservation Commission under section 643.050, RSMo Supp. 2013, the commission amends a rule as follows:

10 CSR 10-6.200 Hospital, Medical, Infectious Waste Incinerators is amended.

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on December 2, 2013 (38 MoReg 2008–2019). No changes have been made in the text of the proposed amendment, so it is not reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: The Missouri Department of Natural Resources' Air Pollution Control Program received no comments on the proposed amendment.

**Title 12—DEPARTMENT OF REVENUE
Division 10—Director of Revenue
Chapter 109—Sales/Use Tax—Sale of Property vs. Sale of Service**

ORDER OF RULEMAKING

By the authority vested in the director of revenue under section 144.270, RSMo Supp. 2013, and section 144.705, RSMo 2000, the director amends a rule as follows:

12 CSR 10-109.050 Taxation of Software is amended.

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on February 18,

2014 (39 MoReg 495–497). No changes have been made in the text of the proposed amendment, so it is not reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

**Title 16—RETIREMENT SYSTEMS
Division 10—The Public School Retirement System of Missouri
Chapter 3—Funds of Retirement System**

ORDER OF RULEMAKING

By the authority vested in the board of trustees under section 169.020, RSMo Supp. 2013, the board of trustees hereby amends a rule of the public school retirement system of Missouri as follows:

16 CSR 10-3.010 Payment of Funds to the Retirement System is amended.

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on February 18, 2014 (39 MoReg 497). No changes have been made in the text of the proposed amendment, so it is not reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: No comments were received.

**Title 16—RETIREMENT SYSTEMS
Division 10—The Public School Retirement System of Missouri
Chapter 6—The Public Education Employee Retirement System of Missouri**

ORDER OF RULEMAKING

By the authority vested in the board of trustees under section 169.020, RSMo Supp. 2013, the board of trustees hereby amends a

10 CSR 10-6.200 Hospital, Medical, Infectious Waste Incinerators

~~(1) Applicability.~~

~~— (A) Except as provided in subsection (1)(B) through (H) of this rule, this rule applies to each individual hospital or medical/infectious waste incinerator (HMIWI) for which construction was commenced on or before June 20, 1996.~~

~~— (B) A combustor is not subject to this rule during periods when only pathological waste, low level radioactive waste, and/or chemotherapeutic waste is burned, provided the owner or operator of the combustor~~

~~— 1. Notifies the director of an exemption claim; and~~

~~— 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.~~

~~— (C) Any co-fired combustor is not subject to this rule if the owner or operator of the co-fired combustor~~

~~— 1. Notifies the director of an exemption claim;~~

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

~~— 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.~~

~~— (D) Any combustor required to have a permit under section 3005 of the Solid Waste Disposal Act is not subject to this rule.~~

~~— (E) Any combustor which meets the applicability requirements under subpart Cb, Ea, or Eb of 40 CFR part 60 is not subject to this rule.~~

~~— (F) Any pyrolysis unit is not subject to this rule.~~

~~— (G) Cement kilns firing hospital waste and/or medical/infectious waste are not subject to this rule.~~

~~(H) Physical or operational changes made to an existing HMIWI unit solely for the purpose of complying with this rule 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 Ee.~~

~~(I) Beginning September 15, 2000, designated facilities subject to this rule shall operate pursuant to a permit issued under the permitting authorities operating permit program.~~

~~(2) Definitions.~~

~~(A) Batch HMIWI means an HMIWI that is designed such that neither waste charging nor ash removal can occur during combustion.~~

~~(B) Biologicals means preparations made from living organisms and their products, including vaccines, cultures, etc., intended for use in diagnosing, immunizing, or treating humans or animals or in research pertaining thereto.~~

~~(C) Bypass stack means a device used for discharging combustion gases to avoid severe damage to the air pollution control device or other equipment.~~

~~(D) 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.~~

~~(E) Co-fired combustor means a unit combusting hospital waste and/or medical/infectious waste with other fuels or wastes and subject to an enforceable requirement limiting the unit to combusting a fuel feed stream, ten percent (10%) or less of the weight of which is comprised, in aggregate, of hospital waste and medical/infectious waste as measured on a calendar quarter basis. For purposes of this definition, pathological waste, chemotherapeutic waste, and low-level radioactive waste are considered "other wastes" when calculating the percentage of hospital waste and medical/infectious waste combusted.~~

~~(F) Continuous HMIWI means an HMIWI that is designed to allow waste charging and ash removal during combustion.~~

~~(G) Department means the Department of Natural Resources.~~

~~(H) Dioxins/furans means the combined emission of tetra-through octa chlorinated dibenzo para dioxins and dibenzofurans.~~

~~(I) Director means the director of the Department of Natural Resources.~~

~~(J) 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 gases in the HMIWI exhaust stream forming a dry powder material.~~

~~(K) Hospital means any facility which has an organized medical staff, maintains at least six (6) inpatient beds, and where the primary function of the institution is to provide diagnostic and therapeutic patient services and continuous nursing care primarily to human inpatients who are not related and who stay on average in excess of twenty-four (24) hours per admissions. This definition does not include facilities maintained for the sole purpose of providing nursing or convalescent care to human patients who generally are not acutely ill but who require continuing medical supervision.~~

~~(L) Hospital/medical/infectious waste incinerator or HMIWI or HMIWI unit means any device that combusts any amount of hospital waste and/or medical/infectious waste.~~

~~(M) Hospital waste means discards generated at a hospital, except unused items returned to the manufacturer. The definition of hospital waste does not include human corpses, remains, and anatomical parts that are intended for interment or cremation.~~

~~(N) Intermittent HMIWI means an HMIWI that is designed to allow waste charging, but not ash removal, during combustion.~~

~~(O) Large HMIWI means an HMIWI whose maximum design waste burning capacity is more than five hundred (500) pounds per hour, or a continuous or intermittent HMIWI whose maximum charge rate is more than five hundred (500) pounds per hour, or a batch HMIWI whose maximum charge rate is more than four thousand (4,000) pounds per day.~~

~~(P) 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)).~~

~~—— (Q) Maximum charge rate means for continuous and intermittent HMIWI, one hundred ten percent (110%) of the lowest three (3) hour average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits or for batch HMIWI, one hundred ten percent (110%) of the lowest daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits.~~

~~—— (R) Maximum fabric filter inlet temperature means one hundred ten percent (110%) of the lowest three (3) hour average temperature at the inlet to the fabric filter (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the dioxin/furan emission limit.~~

~~—— (S) Maximum flue gas temperature means one hundred ten percent (110%) of the lowest three (3) hour average temperature at the outlet from the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the mercury (Hg) emission limit.~~

~~—— (T) Medical/infectious waste means any waste generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals that is listed in paragraphs (2)(T)1. through (2)(T)7. below. The definition of medical/infectious waste does not include hazardous waste identified or listed under the regulations in 40 CFR part 261; household waste, as defined in 40 CFR part 261.4(b)(1); ash from incineration of medical/infectious waste, once the incineration process has been completed; human corpses, remains, and anatomical parts that are intended for interment or cremation; and domestic sewage materials identified in 40 CFR part 261.4(a)(1).~~

~~—— 1. Cultures and stocks of infectious agents and associated biologicals, including: cultures from medical and pathological laboratories; cultures and stocks of infectious agents from research and industrial laboratories; wastes from the production of biologicals; discarded live and attenuated vaccines; and culture dishes and devices used to transfer, inoculate, and mix cultures.~~

~~2. Human pathological waste, including tissues, organs, and body parts and body fluids that are removed during surgery or autopsy, or other medical procedures, and specimens of body fluids and their containers.~~

~~3. Human blood and blood products including:~~

~~A. Liquid waste human blood;~~

~~B. Products of blood;~~

~~C. Items saturated and/or dripping with human blood; and~~

~~D. Items that were saturated and/or dripping with human blood that are now caked with dried human blood; including serum, plasma, and other blood components, and their containers, which were used or intended for use in either patient care, testing and laboratory analysis or the development of pharmaceuticals. Intravenous bags are also included in this category.~~

~~4. Sharps that have been used in animal or human patient care or treatment or in medical, research, or industrial laboratories, including hypodermic needles, syringes (with or without the attached needle), pasteur pipettes, scalpel blades, blood vials, needles with attached tubing, and culture dishes (regardless of presence of infectious agents). Also included are other types of broken or unbroken glassware that were in contact with infectious agents, such as used slides and cover slips.~~

~~5. Animal waste including contaminated animal carcasses, body parts, and bedding of animals that were known to have been exposed to infectious agents during research (including research in veterinary hospitals), production of biologicals or testing of pharmaceuticals.~~

~~6. Isolation wastes including biological waste and discarded materials contaminated with blood, excretions, exudates, or secretions from humans who are isolated to protect others from certain highly communicable diseases, or isolated animals known to be infected with highly communicable diseases.~~

~~7. Unused sharps including the following unused, discarded sharps: hypodermic needles, suture needles, syringes, and scalpel blades.~~

~~(U) Medium HMIWI means an HMIWI whose maximum design waste burning capacity is more than two hundred (200) pounds per hour but less than or equal to five hundred (500) pounds per hour, or a continuous or intermittent HMIWI whose maximum charge rate is more than two hundred (200) pounds per hour but less than or equal to five hundred (500) pounds per hour, or a batch HMIWI whose maximum charge rate is more than one thousand six hundred (1,600) pounds per day but less than or equal to four thousand (4,000) pounds per day.~~

~~(V) Minimum dioxin/furan sorbent flow rate means ninety percent (90%) of the highest three (3) hour average dioxin/furan sorbent flow rate (taken, at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the dioxin/furan emission limit.~~

~~(W) Minimum Hg sorbent flow rate means ninety percent (90%) of the highest three (3) hour average Hg sorbent flow rate (taken, at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the Hg emission limit.~~

~~(X) Minimum hydrogen chloride (HCl) sorbent flow rate means ninety percent (90%) of the highest three (3) hour average HCl sorbent flow rate (taken, at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the HCl emission limit.~~

~~(Y) Minimum horsepower or amperage means ninety percent (90%) of the highest three (3) hour average horsepower or amperage to the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the applicable emission limit.~~

~~(Z) Minimum pressure drop across the wet scrubber means ninety percent (90%) of the highest three (3) hour average pressure drop across the wet scrubber particulate matter (PM) control device (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the PM emission limit.~~

~~(AA) Minimum scrubber liquor flow rate means ninety percent (90%) of the highest three (3) hour average liquor flow rate at the inlet to the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with all applicable emission limits.~~

~~(BB) Minimum scrubber liquor pH means ninety percent (90%) of the highest three (3) hour average liquor pH at the inlet to the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with all HCl emission limits.~~

~~(CC) Minimum secondary chamber temperature means ninety percent (90%) of the highest three (3) hour average secondary chamber temperature (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the PM, carbon monoxide (CO), or dioxin/furan emission limits.~~

~~(DD) 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).~~

~~(EE) Pyrolysis means the endothermic gasification of hospital waste and/or medical/infectious waste using external energy.~~

~~(FF) Small HMIWI means an HMIWI whose maximum design waste burning capacity is less than or equal to two hundred (200) pounds per hour, or a continuous or intermittent HMIWI whose maximum charge rate is less than or equal to two hundred (200) pounds per hour, or a batch HMIWI whose maximum charge rate is less than or equal to one thousand six hundred (1,600) pounds per day.~~

~~(GG) Standard Metropolitan Statistical Area or SMSA means any areas listed in Office of Management and Budget Bulletin No. 93-17 entitled "Revised Statistical Definitions for Metropolitan Areas" date June 30, 1993 (incorporated by reference).~~

~~(HH) Wet scrubber means an add-on air pollution control device that utilizes an alkaline scrubbing liquor to collect particulate matter (including nonvaporous metals and condensed organics) and/or to absorb and neutralize acid gases.~~

~~(3) General Provisions.~~

~~(A) Emission Limits.~~

~~1. On or after the date on which the initial performance test is completed or September 1, 2000, whichever~~

~~date comes first, no owner or operator of an existing HMIWI shall cause to be discharged into the atmosphere from that HMIWI any gases that contain stack emissions in excess of the limits presented in Table 1 of this subsection, except as provided for in paragraph (3)(A)2. of this rule.~~

~~TABLE 1. EMISSION LIMITS FOR SMALL, MEDIUM, AND LARGE HMIWI~~

| Pollutant | Units (7 percent oxygen, dry basis) | Emission limits | | |
|--------------------|---|-----------------------------|-----------------------------|-----------------------------|
| | | HMIWI size | | |
| | | Small | Medium | Large |
| Particulate matter | milligrams per dry standard cubic meter (grains per dry standard cubic foot) | 115 (0.05) | 69 (0.03) | 34 (0.015) |
| Carbon monoxide | parts per million by volume | 40 | 40 | 40 |
| Dioxins/furans | nanograms per dry standard cubic meter total dioxins/furans (grains per billion dry standard cubic feet) or nanograms per dry standard cubic meter TEQ (grains per billion dry standard cubic feet) | 125 (55) 2.3 (1.0) | 125 (55) 2.3 (1.0) | 125 (55) 2.3 (1.0) |
| Hydrogen chloride | parts per million by volume or percent reduction | 100 or 93% | 100 or 93% | 100 or 93% |
| Sulfur dioxide | parts per million by volume | 55 | 55 | 55 |
| Nitrogen oxides | parts per million by volume | 250 | 250 | 250 |
| Lead | milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet) or percent reduction | 1.2 (0.52) or 70% | 1.2 (0.52) or 70% | 1.2 (0.52) or 70% |
| Cadmium | milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet) or percent reduction | 0.16 (0.07) or 65% | 0.16 (0.07) or 65% | 0.16 (0.07) or 65% |
| Mercury | milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet) or percent reduction | 0.55 (0.24) or 85% | 0.55 (0.24) or 85% | 0.55 (0.24) or 85% |

~~2. Small rural HMIWI located more than fifty (50) miles from the boundary of the nearest Standard Metropolitan Statistical Area and which burns less than two thousand (2,000)~~

~~pounds per week of hospital waste and medical/infectious waste shall comply with the emission limits described in subparagraphs (3)(A)2.A. and B. of this rule. The two thousand (2,000) pounds per week limitation does not apply during performance tests.~~

~~A. On or after the date on which the initial equipment inspection is completed or September 1, 2000, whichever date comes first, no owner or operator of an existing small rural HMIWI shall cause to be discharged into the atmosphere from that HMIWI any gases that contain stack emissions in excess of the limits presented in Table 2 of this subparagraph.~~

~~**TABLE 2. EMISSION LIMITS FOR SMALL RURAL HMIWI**~~

| Pollutant | Units (7 percent oxygen, dry basis) | HMIWI Emission limits |
|-------------------------------|--|--|
| Particulate matter | milligrams per dry standard cubic meter (grains per dry standard cubic foot) | 197 (0.086) |
| Carbon monoxide | parts per million by volume | 40 |
| Dioxins/furans | nanograms per dry standard cubic meter total dioxins/furans (grains per billion dry standard cubic feet) or nanograms per dry standard cubic meter TEQ (grains per billion dry standard cubic feet) | 800 (350) or 15 (6.6) |
| Hydrogen chloride | parts per million by volume | 3100 |
| Sulfur dioxide | parts per million by volume | 55 |
| Nitrogen oxides | parts per million by volume | 250 |
| Lead | milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet) | 10 (4.4) |
| Cadmium | milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet) | 4 (1.7) |
| Mercury | milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet) | 7.5 (3.3) |

~~B. On or after the date on which the initial inspection is completed or September 1, 2000, whichever date comes first, no owner or operator of an existing small rural HMIWI shall cause to be discharged into the atmosphere from the~~

~~stack of that HMIWI any gases that exhibit greater than ten percent (10%) opacity (six (6) minute block average).~~

~~3. On or after the date on which the initial performance test is completed or September 1, 2000, whichever date comes first, no owner or operator of an existing HMIWI shall cause to be discharged into the atmosphere from the stack of that HMIWI any gases that exhibit greater than ten percent (10%) opacity (six (6) minute block average).~~

~~(B) Operator Training and Qualification Requirements.~~

~~1. No owner or operator of an existing HMIWI shall allow the HMIWI to operate at any time unless a fully trained and qualified HMIWI operator is accessible, either at the facility or available within one (1) hour. The trained and qualified HMIWI operator may operate the HMIWI directly or be the direct supervisor of one (1) or more HMIWI operators.~~

~~2. Operator training and qualification shall be obtained by completing the requirements included in paragraphs (3)(B)3. through 7. of this rule.~~

~~3. Training shall be obtained by completing an HMIWI operator training course that includes, at a minimum, the following provisions:~~

~~A. Twenty-four (24) hours of training on the following subjects:~~

~~(I) Environmental concerns, including pathogen destruction and types of emissions;~~

~~(II) Basic combustion principles, including products of combustion;~~

~~(III) Operation of the 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) Methods to monitor pollutants and equipment calibration procedures (where applicable);~~

~~(VII) Inspection and maintenance of the HMIWI, air pollution control devices, and continuous emission monitoring systems;~~

~~(VIII) Actions to correct malfunctions or conditions that may lead to malfunction;~~

~~(IX) Bottom and fly ash characteristics and handling procedures;~~

~~(X) Applicable federal, state, and local regulations;~~

~~(XI) Work safety procedures;~~

~~(XII) Pre-startup inspections; and~~

~~(XIII) Record keeping requirements;~~

~~B. An examination designed and administered by the instructor; and~~

~~C. Reference material distributed to the attendees covering the course topics.~~

~~4. Qualifications shall be obtained by—~~

~~A. Completion of a training course that satisfies the criteria under paragraph (3)(B)3. of this rule; and~~

~~B. Either six (6) months experience as an HMIWI operator, six (6) months experience as a direct supervisor of an HMIWI operator, or completion of at least two (2) burn cycles under the observation of two (2) qualified HMIWI operators.~~

~~5. Qualification is valid from the date on which the examination is passed or the completion of the required experience, whichever is later.~~

~~6. To maintain qualification, the trained and qualified HMIWI operator shall complete and pass an annual review or refresher course of at least four (4) hours covering, at a minimum, the following:~~

~~A. Update of regulations;~~

~~B. Incinerator operation, including startup and shutdown procedures;~~

~~C. Inspection and maintenance;~~

~~D. Responses to malfunctions or conditions that may lead to malfunction; and~~

~~E. Discussion of operating problems encountered by attendees.~~

~~7. A lapsed qualification shall be renewed by one (1) of the following methods:~~

~~A. For a lapse of less than three (3) years, the HMIWI operator shall complete and pass a standard annual refresher course described in paragraph (3)(B)6. of this rule; or~~

~~B. For a lapse of three (3) years or more, the HMIWI operator shall complete and pass a training course with the minimum criteria described in paragraph (3)(B)3. of this rule.~~

~~8. The owner or operator of an HMIWI shall maintain documentation at the facility that address the following:~~

~~A. Summary of the applicable standards under this subpart;~~

~~B. Description of basic combustion theory applicable to an HMIWI;~~

~~C. Procedures for receiving, handling, and charging waste;~~

~~D. HMIWI startup, shutdown, and malfunction procedures;~~

~~E. Procedures for maintaining proper combustion air supply levels;~~

~~F. Procedures for operating the HMIWI and associated air pollution control systems within the standards established under this subpart;~~

~~G. Procedures for responding to periodic malfunction or conditions that may lead to malfunction;~~

~~H. Procedures for monitoring HMIWI emissions;~~

~~I. Reporting and record keeping procedures; and~~

~~J. Procedures for handling ash.~~

~~9. The owner or operator of an HMIWI shall establish a program for reviewing the information listed in paragraph (3)(B)8. of this rule annually with each HMIWI operator.~~

~~A. The initial review of the information listed in paragraph (3)(B)8. of this rule shall be conducted within six (6) months after the effective date of this rule or prior to assumption of responsibilities affecting HMIWI operation, whichever date is later.~~

~~B. Subsequent reviews of the information listed in paragraph (3)(B)8. of this rule shall be conducted annually.~~

~~10. The information listed in paragraph (3)(B)8. of this rule shall be kept in a readily accessible location for all HMIWI operators. This information, along with records of training shall be available for inspection by the department or its delegated enforcement agent upon request.~~

~~(C) Waste Management Plan. The owner or operator of an HMIWI shall prepare a waste management plan. The waste management plan shall identify both the feasibility and the approach to separate certain components of solid waste from the health care waste stream in order to reduce the amount of toxic emissions from incinerated waste. A waste management plan may include, but is not limited to, elements such as paper, cardboard, plastics, glass, battery, or metal recycling; or purchasing recycled or recyclable products. A waste management plan may include different goals or approaches for different areas or departments of the facility and need not include new waste management goals for every waste stream. It should identify, where possible, reasonably available additional waste management measures, taking into account the effectiveness of waste management measures already in place, the costs of additional measures, the emission reductions expected to be achieved, and any other environmental or energy impacts they might have. The American Hospital Association publication entitled *An Ounce of Prevention: Waste Reduction Strategies for*~~

~~Health Care Facilities (incorporated by reference) shall be considered in the development of the waste management plan.~~

~~(D) Inspection Guidelines.~~

~~1. Each small rural HMIWI subject to the emission limits under paragraph (3)(A)2. of this rule shall undergo an initial equipment inspection by September 1, 2000.~~

~~A. At a minimum, an inspection shall include the following:~~

~~(I) Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation;~~

~~(II) Ensure proper adjustment of primary and secondary chamber combustion air;~~

~~(III) Inspect hinges and door latches;~~

~~(IV) Inspect dampers, fans and blowers for proper operation;~~

~~(V) Inspect HMIWI door and door gaskets for proper sealing;~~

~~(VI) Inspect motors for proper operation;~~

~~(VII) Inspect primary chamber refractory lining;~~

~~(VIII) Inspect incinerator shell for corrosion and/or hot spots;~~

~~(IX) Inspect secondary/tertiary chamber and stack;~~

~~(X) Inspect mechanical loader, including limit switches, for proper operation, if applicable;~~

~~(XI) Visually inspect waste bed (grates);~~

~~(XII) For the burn cycle that follows the inspection, document that the incinerator is operating properly;~~

~~(XIII) Inspect air pollution control devices for proper operation, if applicable;~~

~~(XIV) Inspect waste heat boiler systems to ensure proper operation, if applicable;~~

~~(XV) Inspect bypass stack components;~~

~~(XVI) Ensure proper calibration of thermocouples, sorbent feed systems and any other monitoring equipment; and~~

~~(XVII) Generally observe that the equipment is maintained in good operating condition.~~

~~B. Within ten (10) operating days following an equipment inspection all necessary repairs shall be completed unless the owner or operator obtains written approval from the department or local air pollution control authority establishing a date whereby all necessary repairs of the designated facility shall be completed.~~

~~2. Each small rural HMIWI subject to the emission limits under paragraph (3)(A)2. of this rule shall undergo an equipment inspection annually (no more than twelve (12) months following the previous annual equipment inspection), as outlined in subparagraphs (3)(D)1.A. and B. of this rule.~~

~~(E) Compliance and Performance Testing.~~

~~1. The emission limits under this rule apply at all times except during periods of startup, shutdown, or malfunction, provided that no hospital waste or medical/infectious waste is charged to the HMIWI during startup, shutdown, or malfunction.~~

~~2. Except as provided in paragraph (3)(E)11. of this rule, the owner or operator of an HMIWI shall conduct an initial performance test to determine compliance with the emission limits using the procedures and test methods listed in subparagraphs (3)(E)2.A. through K. of this rule. The use of the bypass stack during a performance test shall invalidate the performance test.~~

~~A. All performance tests shall consist of a minimum of three (3) test runs conducted under representative operating conditions.~~

~~B. The minimum sample time shall be one (1) hour per test run unless otherwise indicated.~~

~~C. EPA Reference Method 1 of 40 CFR part 60, appendix A (incorporated by reference) shall be used to select the sampling location and number of traverse points.~~

~~D. EPA Reference Method 3 or 3A of 40 CFR part 60, appendix A (incorporated by reference) shall be used for gas composition analysis, including measurement of oxygen concentration. EPA Reference Method 3 or 3A shall be used simultaneously with each reference method.~~

~~E. The pollutant concentrations shall be adjusted to seven percent (7%) oxygen using the following equation:~~

$$~~C_{adj} = C_{meas} (20.9 - 7) / (20.9 - \% O_2)~~$$

~~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~~

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

~~F. EPA Reference Method 5 or 29 of 40 CFR part 60, appendix A (incorporated by reference) shall be used to measure the PM emissions.~~

~~G. EPA Reference Method 9 of 40 CFR part 60, appendix A (incorporated by reference) shall be used to measure stack opacity.~~

~~H. EPA Reference Method 10 or 10B of 40 CFR part 60, appendix A (incorporated by reference) shall be used to measure the CO emissions.~~

~~I. EPA Reference Method 23 of 40 CFR part 60, appendix A (incorporated by reference) shall be used to measure total dioxin/furan emissions. The minimum sample time shall be~~

~~four (4) hours per test run. If the affected facility has selected the toxic equivalency standards for dioxin/furans the following procedures shall be used to determine compliance:~~

~~(I) Measure the concentration of each dioxin/furan tetra through octa congener emitted using EPA Reference Method 23;~~

~~(II) For each dioxin/furan congener measured in accordance with part (3)(E)2.I.(I) of this rule, multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 3 of this part; and~~

~~**TABLE 3. 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 |

~~(III) Sum the products calculated in accordance with part (3)(E)2.I.(II) of this rule to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.~~

~~J. EPA Reference Method 26 of 40 CFR part 60, appendix A (incorporated by reference) shall be used to measure HCl emissions. If the affected facility has selected the percentage reduction standards for HCl under section (3) of this rule, the percentage reduction in HCl emissions (%RHCl) is computed using the following formula:~~

$$\text{(\%RHCl)} = \frac{(E_i - E_o)}{E_i} \times 100$$

where:

~~%RHCl = percentage reduction of HCl emission achieved~~

~~E_i = HCl emission concentration measured at the control device inlet, corrected to 7 percent oxygen (dry basis)~~

~~E_o = HCl emission concentration measured at the control device outlet, corrected to 7 percent oxygen (dry basis)~~

~~K. EPA Reference Method 29 shall be used to measure Lead (Pb), Cadmium (Cd), and Hg emissions. If the affected facility has selected the percentage reduction standards for metals under section (3) of this rule, the percentage reduction in emissions (%R_{metal}) is computed using the following formula:~~

$$\text{(\%R}_{\text{metal}}\text{)} = \frac{(E_i - E_o)}{E_i} \times 100$$

where:

~~%R_{metal} = percentage reduction of metal emission (Pb, Cd, or Hg) achieved~~

~~E_i = metal emission concentration (Pb, Cd, or Hg) measured at the control device inlet, corrected to 7 percent oxygen (dry basis)~~

~~E_o = metal emission concentration (Pb, Cd, or Hg) measured at the control device outlet, corrected to 7 percent oxygen (dry basis)~~

~~3. Following the date on which the initial performance test is completed or September 1, 2000, whichever~~

~~date comes first, the owner or operator of an affected facility shall~~

~~_____ A. Determine compliance with the opacity limit by conducting an annual performance test (no more than twelve (12) months following the previous performance test) using the applicable procedures and test methods listed in paragraph (3)(E)2. of this rule;~~

~~_____ B. Determine compliance with the PM, CO, and HCl emission limits by conducting an annual performance test (no more than twelve (12) months following the previous performance test) using the applicable procedures and test methods listed in paragraph (3)(E)2. of this rule. If all three (3) performance tests over a three (3) year period indicate compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for the subsequent two (2) years. At a minimum, a performance test for PM, CO, and HCl shall be conducted every third year (no more than thirty-six (36) months following the previous performance test). If a performance test conducted every third year indicates compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for an additional two (2) years. If any performance test indicates noncompliance with the respective emission limit, a performance test for that pollutant shall be conducted annually until all annual performance tests over a three (3) year period indicate compliance with the emission limit. The use of the bypass stack during a performance test shall invalidate the performance test; and~~

~~_____ C. Facilities using a Continuous Emission Monitoring System (CEMS) to demonstrate compliance with any of the emission limits under section (3) of this rule shall~~

~~_____ (I) Determine compliance with the appropriate emission limit(s) using a twelve (12) hour rolling average, calculated each hour as the average of the previous twelve (12) operating hours (not including startup, shutdown, or malfunction); and~~

~~_____ (II) Operate all CEMS in accordance with the applicable procedures under appendices B and F of 40 CFR part 60 (incorporated by reference).~~

~~_____ 4. The owner or operator of an affected facility equipped with a dry scrubber followed by a fabric filter, a wet~~

~~scrubber, or a dry scrubber followed by a fabric filter and wet scrubber shall~~

~~A. Establish the appropriate maximum and minimum operating parameters, indicated in Table 4 of this subparagraph for each control system, as site specific operating parameters during the initial performance test to determine compliance with the emission limits; and during the initial performance test to determine compliance with the emission limits; and~~

~~TABLE 4. OPERATING PARAMETERS TO BE MONITORED AND MINIMUM MEASUREMENT AND RECORDING FREQUENCIES~~

| | Minimum frequency | | Control system | | |
|--|-----------------------|-------------------------|--|--------------|---|
| | Data measurement | Data recording | Dry scrubber followed by fabric filter | Wet scrubber | Dry scrubber followed by fabric filter and wet scrubber |
| Operating parameters to be monitored | | | | | |
| MAXIMUM OPERATING PARAMETERS | | | | | |
| Maximum charge rate | Continuous | 1 per hour | ✓ | ✓ | ✓ |
| Maximum fabric filter inlet temperature | Continuous | 1 per minute | ✓ | | ✓ |
| Maximum flue gas temperature | Continuous | 1 per minute | | ✓ | ✓ |
| MINIMUM OPERATING PARAMETERS | | | | | |
| Minimum secondary chamber temperature | continuous | 1 per minute | ✓ | ✓ | ✓ |
| Minimum dioxin/furan sorbent flow rate | hourly | 1 per hour | ✓ | | ✓ |
| Minimum HCl sorbent flow rate | hourly | 1 per hour | ✓ | | ✓ |
| Minimum mercury (Hg) sorbent flow rate | hourly | 1 per hour | ✓ | | ✓ |
| Minimum pressure drop across the wet scrubber or minimum horsepower or amperage to wet scrubber | continuous | 1 per minute | | ✓ | ✓ |
| Minimum scrubber liquor flow rate | continuous | 1 per minute | | ✓ | ✓ |
| Minimum scrubber liquor pH | continuous | 1 per minute | | ✓ | ✓ |

~~B. Following the date on which the initial performance test is completed or September 1, 2000, whichever date comes first, ensure that the affected facility does not operate above any of the applicable maximum operating parameters or below any of the applicable minimum operating parameters listed in Table 4 and measured as three (3) hour rolling averages (calculated each hour as the average of the previous three (3) operating hours) at all times except during periods of startup, shutdown and malfunction. Operating parameter limits do not apply during performance tests. Operation above the established maximum or below the established minimum operating parameter(s) shall constitute a violation of established operating parameter(s).~~

~~5. Except as provided in paragraph (3)(E)8. of this rule, for affected facilities equipped with a dry scrubber followed by a fabric filter-~~

~~A. Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three (3) hour rolling average) simultaneously shall constitute a violation of the CO emission limit;~~

~~B. Operation of the affected facility above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxin/furan sorbent flow rate (each measured on a three (3) hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit;~~

~~C. Operation of the affected facility above the maximum charge rate and below the minimum HCl sorbent flow rate (each measured on a three (3) hour rolling average) simultaneously shall constitute a violation of the HCl emission limit;~~

~~D. Operation of the affected facility above the maximum charge rate and below the minimum Hg sorbent flow rate (each measured on a three (3) hour rolling average) simultaneously shall constitute a violation of the Hg emission limit; or~~

~~E. Use of the bypass stack (except during startup, shutdown, or malfunction) shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd and Hg emission limits.~~

~~6. Except as provided in paragraph (3)(E)8. of this rule, for affected facilities equipped with a wet scrubber~~

~~A. Operation of the affected facility above the maximum charge rate and below the minimum pressure drop across the wet scrubber or below the minimum horsepower or amperage to the system (each measured on a three (3) hour rolling average) simultaneously shall constitute a violation of the PM emission limit;~~

~~B. Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three (3) hour rolling average) simultaneously shall constitute a violation of the CO emission limit;~~

~~C. Operation of the affected facility above the maximum charge rate, below the minimum secondary temperature, and below the minimum scrubber liquor flow rate (each measured on a three (3) hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit;~~

~~D. Operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a three (3) hour rolling average) simultaneously shall constitute a violation of the HCl emission limit;~~

~~E. Operation of the affected facility above the maximum flue gas temperature and above the maximum charge rate (each measured on a three (3) hour rolling average) simultaneously shall constitute a violation of the Hg emission limit; or~~

~~F. Use of the bypass stack (except during startup, shutdown, or malfunction) shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd and Hg emission limits.~~

~~7. Except as provided in paragraph (3)(E)8. of this rule, for affected facilities equipped with a dry scrubber followed by a fabric filter and a wet scrubber~~

~~A. Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three (3) hour rolling average) simultaneously shall constitute a violation of the CO emission limit;~~

~~B. Operation of the affected facility above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxin/furan sorbent flow rate (each measured on a three (3) hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit;~~

~~C. Operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a three (3) hour rolling average) simultaneously shall constitute a violation of the HCl emission limit;~~

~~D. Operation of the affected facility above the maximum charge rate and below the minimum Hg sorbent flow rate (each measured on a three (3) hour rolling average) simultaneously shall constitute a violation of the Hg emission limit; or~~

~~E. Use of the bypass stack (except during startup, shutdown, or malfunction) shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd and Hg emission limits.~~

~~8. The owner or operator of an affected facility may conduct a repeat performance test within thirty (30) days of violation of applicable operating parameter(s) to demonstrate that the affected facility is not in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to this paragraph shall be conducted using the identical operating parameters that indicated a violation under paragraphs (3)(E)5., 6., or 7. of this rule.~~

~~9. The owner or operator of an affected facility using an air pollution control device other than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber to comply with the emission limits under section (3) of this rule shall petition the administrator for other site specific operating parameters to be established during the initial performance test and continuously monitored thereafter. The owner or operator shall not conduct the initial performance test until after the petition has been approved by the administrator.~~

~~10. The owner or operator of an affected facility may conduct a repeat performance test at any time to establish new~~

~~values for the operating parameters. The department may request a repeat performance test at any time.~~

~~11. Small rural HMIWI subject to the emission limits under paragraph (3)(A)2. of this rule shall meet the following compliance and performance testing requirements:~~

~~A. Conduct the performance testing requirements in paragraph (3)(E)1., subparagraphs (3)(E)2.A. through I., (3)(E)2.K. (Hg only), and (3)(E)3.A. of this rule. The two thousand (2,000) pound per week limitation does not apply during performance tests;~~

~~B. Establish 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;~~

~~C. Following the date on which the initial performance test is completed or September 1, 2000, whichever date comes first, ensure that the designated facility does not operate above the maximum charge rate or below the minimum secondary chamber temperature measured as three (3) hour rolling averages (calculated as the average of the previous three (3) operating hours) at all times except during periods of startup, shutdown and malfunction. 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 of the established operating parameter(s);~~

~~D. Except as provided in subparagraph (3)(E)11.E. of this rule, operation of the designated facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three (3) hour rolling average) simultaneously shall constitute a violation of the PM, CO, and dioxin/furan emission limits; and~~

~~E. The owner or operator of a designated facility may conduct a repeat performance test within thirty (30) days of the violation of applicable operating parameter(s) to demonstrate that the designated facility is not in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to this paragraph must be conducted using the identical operating parameters that indicated a violation under subparagraph (3)(E)11.D. of this rule.~~

~~(F) Monitoring Requirements.~~

~~1. Except as provided for under paragraph (3)(F)5. of this rule, the owner or operator of an HMIWI shall install, calibrate (to manufacturers' specification), maintain, and operate devices (or establish methods) for monitoring the applicable maximum and minimum operating parameters listed in Table 4 of subparagraph (3)(E)4.A. of this rule such that these devices (or methods) measure and record values for these operating parameters at the frequency indicated in Table 4 of subparagraph (3)(E)4.A. at all times except during periods of startup and shutdown.~~

~~2. The owner or operator of an HMIWI 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.~~

~~3. The owner or operator of an HMIWI using something other than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber to comply with the emission limits under section (3) of this rule shall install, calibrate (to manufacturers' specifications), maintain, and operate the equipment necessary to monitor the site specific operating parameters developed pursuant to paragraph (3)(E)9. of this rule.~~

~~4. The owner or operator of an HMIWI shall obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for seventy five percent (75%) of the operating hours per day for ninety percent (90%) of the operating days per calendar quarter that the HMIWI is combusting hospital waste and/or medical/infectious waste.~~

~~5. Small rural HMIWI subject to the emission limits under paragraph (3)(A)2. of this rule shall meet the following monitoring requirements:~~

~~A. Install, calibrate (to manufacturers' specification), maintain, and operate 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;~~

~~B. Install, calibrate (to manufacturers' specification), maintain, and operate a device that automatically measures and records the date, time, and weight of each charge fed into the HMIWI; and~~

~~C. The owner or operator of a designated facility shall obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for seventy five percent (75%) of the operating hours per day for ninety percent (90%) of the operating days per calendar quarter that the designated facility is combusting hospital waste and/or medical/infectious waste.~~

~~(4) Reporting and Record Keeping.~~

~~(A) Except as provided for under subsection (4)(F) of this rule, the owner or operator of an HMIWI shall maintain the following information (as applicable) for a period of at least five (5) years:~~

~~1. Calendar date of each record;~~

~~2. Records of the following data:~~

~~A. Concentrations of any pollutant listed in section (3) of this rule or measurements of opacity as determined by the continuous emission monitoring system (if applicable);~~

~~B. HMIWI charge dates, times, and weights and hourly charge rates;~~

~~C. Fabric filter inlet temperatures during each minute of operation, as applicable;~~

~~D. Amount and type of dioxin/furan sorbent used during each hour of operation, as applicable;~~

~~E. Amount and type of Hg sorbent used during each hour of operation, as applicable;~~

~~F. Amount and type of HCl sorbent used during each hour of operation, as applicable;~~

~~G. Secondary chamber temperatures recorded during each minute of operation;~~

~~H. Liquor flow rate to the wet scrubber inlet during each minute of operation, as applicable;~~

~~I. Horsepower or amperage to the wet scrubber during each minute of operation, as applicable;~~

~~J. Pressure drop across the wet scrubber system during each minute of operation, as applicable;~~

~~K. Temperature at the outlet from the wet scrubber during each minute of operation, as applicable;~~

~~L. pH of the scrubber liquor at the inlet to the wet scrubber during each minute of operation, as applicable;~~

~~M. Records indicating use of the bypass stack, including dates, times, and durations; and~~

~~N. For HMIWI complying with paragraph (3)(E)9. and paragraph (3)(F)3. of this rule, the owner or operator shall maintain all operating parameter data collected;~~

~~3. Identification of calendar days for which data on emission rates or operating parameters specified under paragraph (4)(A)2. of this rule have not been obtained, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken;~~

~~4. Identification of calendar days, times and durations of malfunctions, a description of the malfunction and the corrective action taken;~~

~~5. Identification of calendar days for which data on emission rates or operating parameters specified under paragraph (4)(A)2. of this rule exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken;~~

~~6. The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating parameters, as applicable;~~

~~7. Records showing the names of HMIWI operators who have completed review of the information in paragraph (3)(B)8.~~

~~of this rule as required by paragraph (3)(B)9. of this rule, including the date of the initial review and all subsequent annual reviews;~~

~~8. Records showing the names of the HMIWI operators who have completed the operator training requirements, including documentation of training and the dates of the training;~~

~~9. Records showing the names of the HMIWI operators who have met the criteria for qualification under subsection (3)(B) of this rule and the dates of their qualification; and~~

~~10. Records of calibration of any monitoring devices as required under paragraphs (3)(F)1., 2., and 3. of this rule.~~

~~(B) The owner or operator of an HMIWI shall submit to the department the information specified in paragraphs (4)(B)1. through 3. of this rule no later than sixty (60) days following the initial performance test. All reports shall be signed by the facilities manager.~~

~~1. The initial performance test data as recorded under subparagraphs (3)(E)2.A. through K. of this rule, as applicable.~~

~~2. The values for the site specific operating parameters established pursuant to paragraph (3)(E)4. or 9. of this rule, as applicable.~~

~~3. The waste management plan as specified in subsection (3)(C) of this rule.~~

~~(C) An annual report shall be submitted to the department one (1) year following the submission of the information in subsection (4)(B) of this rule and subsequent reports shall be submitted no more than twelve (12) months following the previous report (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator of an affected facility must submit these reports semiannually). The annual report shall include the information specified in paragraphs (4)(C)1. through 8. of this rule. All reports shall be signed by the facilities manager.~~

~~1. The values for the site specific operating parameters established pursuant to paragraph (3)(E)4. or 9. of this rule, as applicable.~~

~~2. The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded for the calendar year being reported, pursuant to paragraph (3)(E)4. or 9. of this rule, as applicable.~~

~~3. The highest maximum operating parameter and the lowest minimum operating parameter, as applicable for each operating parameter recorded pursuant to paragraph (3)(E)4. or 9. of this rule for the calendar year preceding the year being reported, in order to provide the department with a summary of the performance of the affected facility over a two (2) year period.~~

~~4. Any information recorded under paragraphs (4)(A)3. through 5. of this rule for the calendar year being reported.~~

~~5. Any information recorded under paragraphs (4)(A)3. through 5. of this rule for the calendar year preceding the year being reported, in order to provide the department with a summary of the performance of the affected facility over a two (2) year period.~~

~~6. If a performance test was conducted during the reporting period, the results of that test.~~

~~7. If no exceedances or malfunctions were reported under paragraphs (4)(A)3. through 5. of this rule for the calendar year being reported, a statement that no exceedances occurred during the reporting period.~~

~~8. Any use of the bypass stack, the duration, reason for malfunction, and corrective action taken.~~

~~(D) The owner or operator of an HMIWI shall submit to the department semiannual reports containing any information recorded under paragraphs (4)(A)3. through 5. of this rule no later than sixty (60) days following the reporting period. The first semiannual reporting period ends six (6) months following the submission of information in subsection (4)(B) of this rule. Subsequent reports shall be submitted to the department no later than six (6) calendar months following the previous report. All reports shall be signed by the facilities manager.~~

~~(E) All records specified under subsection (4)(A) of this rule shall be maintained on site in either paper copy or~~

~~computer-readable format, unless an alternative format is approved by the department.~~

~~(F) The owner or operator of a small rural HMIWI subject to the emission limits under paragraph (3)(A)2. of this rule shall~~

~~1. Maintain records of the annual equipment inspections, any required maintenance, and any repairs not completed within ten (10) days of an inspection or the time frame established by the inspector; and~~

~~2. Submit an annual report to the department containing information recorded under paragraph (4)(F)1. of this rule no later than sixty (60) days following the year in which data were collected. Subsequent reports shall be sent no later than twelve (12) calendar months following the previous report (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator must submit these reports semiannually). The report shall be signed by the facilities manager.~~

~~(5) Test Methods. Test methods can be found in subparagraphs (3)(E)2.A. through (3)(E)2.K. of this rule.~~

(1) Applicability.

(A) Except as provided in subsection (1)(B) through (H) of this rule, this rule applies to each individual hospital or medical/infectious waste incinerator (HMIWI)-

1. For which construction was commenced after June 20, 1996, but no later than December 1, 2008; or

2. For which modification is commenced after March 16, 1998, but no later than April 6, 2010.

(B) A combustor is not subject to this rule during periods when only pathological waste, low-level radioactive waste, and/or chemotherapeutic waste is burned, provided the owner or operator of the combustor-

1. Notifies the director of an exemption claim; and

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.

(C) Any co-fired combustor is not subject to this rule if the owner or operator of the co-fired combustor-

1. Notifies the director of an exemption claim;

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

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.

(D) Any combustor required to have a permit under section 3005 of the Solid Waste Disposal Act is not subject to this rule.

(E) Any combustor which meets the applicability requirements under Subpart Cb, Ea, or Eb of 40 CFR 60 is not subject to this rule.

(F) Any pyrolysis unit is not subject to this rule.

(G) Cement kilns firing hospital waste and/or medical/infectious waste are not subject to this rule.

(H) Physical or operational changes made to an HMIWI unit solely for the purpose of complying with this rule are not considered a modification and do not result in an HMIWI unit becoming subject to the provisions of 40 CFR 60, Subpart Ec.

(I) Facilities subject to this rule shall operate pursuant to a permit issued under the permitting authorities operating permit program.

(2) Definitions.

(A) Definitions of certain terms specified in this rule may be found in 40 CFR 60.21 and 40 CFR 60.51c, promulgated as of July 1, 2012, and are hereby incorporated by reference in this rule, as published by the Office of Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions.

(B) Definitions of certain terms specified in this rule, other than those defined in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions.

(A) Emission Limits.

1. No owner or operator of an HMIWI subject to this rule shall cause to be discharged into the atmosphere any gases that contain stack emissions in excess of the limits presented in Table 1 of this subsection, except as provided for in paragraph (3)(A)2. of this rule.

Table 1-Emissions Limits for Small, Medium, and Large HMIWI

| <u>Pollutant</u> | <u>Units (7 percent oxygen, dry basis)</u> | <u>Emissions limits</u> | | | <u>Averaging time¹</u> | <u>Method for demonstrating compliance²</u> |
|-------------------------------|--|--|--|---|---|--|
| | | <u>HMIWI size</u> | | | | |
| | | <u>Small</u> | <u>Medium</u> | <u>Large</u> | | |
| <u>Particulate matter</u> | <u>Milligrams per dry standard cubic meter (mg/dscm) (grains per dry standard cubic foot (gr/dscf))</u> | <u>66 (0.029)</u> | <u>46 (0.020) or 34 (.015)³</u> | <u>25 (0.011)</u> | <u>3-run average (1-hour minimum sample time per run)</u> | <u>EPA Reference Method 5 of 40 CFR 60, Appendix A-3 or EPA Reference Method 26A or 29 of 40 CFR 60, Appendix A-8.</u> |
| <u>Carbon monoxide</u> | <u>Parts per million by volume (ppmv)</u> | <u>20</u> | <u>5.5</u> | <u>11</u> | <u>3-run average (1-hour minimum sample time per run)</u> | <u>EPA Reference Method 10 or 10B of 40 CFR 60, Appendix A-4.</u> |
| <u>Dioxins/furans</u> | <u>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)</u> | <u>16 (7.0) or 0.013 (0.0057)</u> | <u>0.85 (0.37) or 0.020 (0.0087)</u> | <u>9.3 (4.1) or 0.054 (0.024)</u> | <u>3-run average (4-hour minimum sample time per run)</u> | <u>EPA Reference Method 23 of 40 CFR 60, Appendix A-7.</u> |
| <u>Hydrogen chloride</u> | <u>ppmv</u> | <u>44 or 15 or 99%³</u> | <u>7.7</u> | <u>6.6</u> | <u>3-run average (1-hour minimum sample time per run)</u> | <u>EPA Reference Method 26 or 26A of 40 CFR 60, Appendix A-8.</u> |
| <u>Sulfur dioxide</u> | <u>ppmv</u> | <u>4.2</u> | <u>4.2</u> | <u>9.0</u> | <u>3-run average</u> | <u>EPA Reference Method 6 or 6C</u> |

| | | | | | | |
|------------------------|--|-----------------------|-----------------------|------------------------|---|---|
| | | | | | (1-hour minimum sample time per run) | of 40 CFR 60, Appendix A-4. |
| <u>Nitrogen oxides</u> | <u>ppmv</u> | <u>190</u> | <u>190</u> | <u>140</u> | <u>3-run average (1-hour minimum sample time per run)</u> | <u>EPA Reference Method 7 or 7E of 40 CFR 60, Appendix A-4.</u> |
| <u>Lead</u> | <u>mg/dscm (grains per thousand dry standard cubic feet (gr/10³dscf))</u> | <u>0.31 (0.14)</u> | <u>0.018 (0.0079)</u> | <u>0.036 (0.016)</u> | <u>3-run average (1-hour minimum sample time per run)</u> | <u>EPA Reference Method 29 of 40 CFR 60, Appendix A-8.</u> |
| <u>Cadmium</u> | <u>mg/dscm (gr/10³dscf)</u> | <u>0.017 (0.0074)</u> | <u>0.013 (0.0057)</u> | <u>0.0092 (0.0040)</u> | <u>3-run average (1-hour minimum sample time per run)</u> | <u>EPA Reference Method 29 of 40 CFR 60, Appendix A-8.</u> |
| <u>Mercury</u> | <u>mg/dscm (gr/10³dscf)</u> | <u>0.014 (0.0061)</u> | <u>0.025 (0.011)</u> | <u>0.018 (0.0079)</u> | <u>3-run average (1-hour minimum sample time per run)</u> | <u>EPA Reference Method 29 of 40 CFR 60, Appendix A-8.</u> |

¹ Except as allowed under section 60.56c(c) for HMIWI equipped with Continuous Emission Monitoring System (CEMS).

² Does not include CEMS and approved alternative non-EPA test methods allowed under section 60.56c(b).

³ HMIWI constructed 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 6, 2010.

2. No owner or operator of a small HMIWI constructed on or before June 20, 1996, which is located more than fifty (50) miles from the boundary of the nearest Standard Metropolitan Statistical Area and which burns less than two thousand (2,000) pounds per week of hospital waste and medical/infectious waste shall cause to be discharged into the atmosphere any gases that contain stack emissions in excess of the limits presented in Table 2 of this paragraph. The two thousand (2,000) pounds per week limitation does not apply during performance tests.

Table 2—Emissions Limits for Small HMIWI Which Meet
the Criteria Under Paragraph (3)(A)2. of this Rule

| <u>Pollutant</u> | <u>Units (7 percent oxygen, dry basis)</u> | <u>HMIWI Emissions limits</u> | <u>Averaging time¹</u> | <u>Method for demonstrating compliance²</u> |
|-------------------------------|--|---------------------------------------|---|--|
| <u>Particulate matter</u> | <u>mg/dscm (gr/dscf)</u> | <u>87 (0.038)</u> | <u>3-run average (1-hour minimum sample time per run)</u> | <u>EPA Reference Method 5 of 40 CFR 60, Appendix A-3 or EPA Reference Method 26A or 29 of 40 CFR 60, Appendix A-8.</u> |
| <u>Carbon monoxide</u> | <u>ppmv</u> | <u>20</u> | <u>3-run average (1-hour minimum sample time per run)</u> | <u>EPA Reference Method 10 or 10B of 40 CFR 60, Appendix A-4.</u> |
| <u>Dioxins/furans</u> | <u>ng/dscm total dioxins/furans (gr/10⁹dscf) or ng/dscm TEQ (gr/10⁹dscf)</u> | <u>240 (100) or 5.1 (2.2)</u> | <u>3-run average (4-hour minimum sample time per run)</u> | <u>EPA Reference Method 23 of 40 CFR 60, Appendix A-7.</u> |
| <u>Hydrogen chloride</u> | <u>ppmv</u> | <u>810</u> | <u>3-run average (1-hour minimum sample time per run)</u> | <u>EPA Reference Method 26 or 26A of 40 CFR 60, Appendix A-8.</u> |
| <u>Sulfur dioxide</u> | <u>ppmv</u> | <u>55</u> | <u>3-run average (1-hour minimum sample time per run)</u> | <u>EPA Reference Method 6 or 6C of 40 CFR 60, Appendix A-4.</u> |
| <u>Nitrogen oxides</u> | <u>ppmv</u> | <u>130</u> | <u>3-run average (1-hour minimum sample time per run)</u> | <u>EPA Reference Method 7 or 7E of 40 CFR 60, Appendix A-4.</u> |
| <u>Lead</u> | <u>mg/dscm (gr/10³dscf)</u> | <u>0.50 (0.22)</u> | <u>3-run average (1-hour minimum sample time per run)</u> | <u>EPA Reference Method 29 of 40 CFR 60, Appendix A-8.</u> |
| <u>Cadmium</u> | <u>mg/dscm (gr/10³dscf)</u> | <u>0.11 (0.048)</u> | <u>3-run average (1-hour minimum sample time per run)</u> | <u>EPA Reference Method 29 of 40 CFR 60, Appendix A-8.</u> |
| <u>Mercury</u> | <u>mg/dscm (gr/10³dscf)</u> | <u>0.0051 (0.0022)</u> | <u>3-run average (1-hour minimum sample time per run)</u> | <u>EPA Reference Method 29 of 40 CFR 60, Appendix A-8.</u> |

1 Except as allowed under section 60.56c(c) for HMIWI
equipped with CEMS.

2 Does not include CEMS and approved alternative non-EPA test
methods allowed under section 60.56c(b).

3. No owner or operator of an HMIWI subject to this rule shall cause to be discharged into the atmosphere from the stack of that HMIWI any gases that exhibit greater than six percent (6%) opacity (six (6)-minute block average).

(B) Operator Training and Qualification Requirements.

1. No owner or operator of an HMIWI subject to this rule shall allow the HMIWI to operate at any time unless a fully trained and qualified HMIWI operator is accessible, either at the facility or available within one (1) hour. The trained and qualified HMIWI operator may operate the HMIWI directly or be the direct supervisor of one (1) or more HMIWI operators.

2. Operator training and qualification shall be obtained by completing the requirements included in paragraphs (3)(B)3. through 7. of this rule.

3. Training shall be obtained by completing an HMIWI operator training course that includes, at a minimum, the following provisions:

A. Twenty-four (24) hours of training on the following subjects:

(I) Environmental concerns, including pathogen destruction and types of emissions;

(II) Basic combustion principles, including products of combustion;

(III) Operation of the type of incinerator to be used by the operator, including proper start-up, waste charging, and shutdown procedures;

(IV) Combustion controls and monitoring;

(V) Operation of air pollution control equipment and factors affecting performance (if applicable);

(VI) Methods to monitor pollutants and equipment calibration procedures (where applicable);

(VII) Inspection and maintenance of the HMIWI, air pollution control devices, and continuous emission monitoring systems;

(VIII) Actions to correct malfunctions or conditions that may lead to malfunction;

(IX) Bottom and fly ash characteristics and handling procedures;

(X) Applicable federal, state, and local regulations;

(XI) Work safety procedures;

(XII) Inspections prior to start-up; and

(XIII) Record-keeping requirements;

B. An examination designed and administered by the instructor; and

C. Reference material distributed to the attendees covering the course topics.

4. Qualifications shall be obtained by—

A. Completion of a training course that satisfies the criteria under paragraph (3)(B)3. of this rule; and

B. Either six (6) months experience as an HMIWI operator, six (6) months experience as a direct supervisor of an HMIWI operator, or completion of at least two (2) burn cycles under the observation of two (2) qualified HMIWI operators.

5. Qualification is valid from the date on which the examination is passed or the completion of the required experience, whichever is later.

6. To maintain qualification, the trained and qualified HMIWI operator shall complete and pass an annual review or refresher course of at least four (4) hours covering, at a minimum, the following:

A. Update of regulations;

B. Incinerator operation, including start-up and shutdown procedures;

C. Inspection and maintenance;

D. Responses to malfunctions or conditions that may lead to malfunction; and

E. Discussion of operating problems encountered by attendees.

7. A lapsed qualification shall be renewed by one (1) of the following methods:

A. For a lapse of less than three (3) years, the HMIWI operator shall complete and pass a standard annual refresher course described in paragraph (3)(B)6. of this rule; or

B. For a lapse of three (3) years or more, the HMIWI operator shall complete and pass a training course with the minimum criteria described in paragraph (3)(B)3. of this rule.

8. The owner or operator of an HMIWI shall maintain documentation at the facility that addresses the following:

A. Summary of the applicable standards under this subpart;

B. Description of basic combustion theory applicable to an HMIWI;

C. Procedures for receiving, handling, and charging waste;

D. HMIWI start-up, shutdown, and malfunction procedures;

E. Procedures for maintaining proper combustion air supply levels;

F. Procedures for operating the HMIWI and associated air pollution control systems within the standards established under this subpart;

G. Procedures for responding to periodic malfunction or conditions that may lead to malfunction;

H. Procedures for monitoring HMIWI emissions;

I. Reporting and record-keeping procedures; and

J. Procedures for handling ash.

9. The owner or operator of an HMIWI shall establish a program for reviewing the information listed in paragraph (3)(B)8. of this rule annually with each HMIWI operator.

A. The initial review of the information listed in paragraph (3)(B)8. of this rule shall be conducted prior to assumption of responsibilities affecting HMIWI operation.

B. Subsequent reviews of the information listed in paragraph (3)(B)8. of this rule shall be conducted annually.

10. The information listed in paragraph (3)(B)8. of this rule shall be kept in a readily-accessible location for all HMIWI operators. This information, along with records of training, shall be available for inspection by the department or its delegated enforcement agent upon request.

(C) Waste Management Plan. The owner or operator of an HMIWI shall prepare a waste management plan. The waste management plan shall identify both the feasibility and the approach to separate certain components of solid waste from the health care waste stream in order to reduce the amount of toxic emissions from incinerated waste. A waste management plan may include, but is not limited to, elements such as segregation and recycling of paper, cardboard, plastics, glass, batteries, food waste, and metals (e.g., aluminum cans, metals-containing devices); segregation of non-recyclable wastes (e.g., polychlorinated biphenyl-containing waste, pharmaceutical waste, and mercury-containing waste, such as dental waste); and purchasing recycled or recyclable products. A waste management plan may include different goals or approaches for different areas or departments of the facility and need not include new waste management goals for every waste stream. It should identify, where possible, reasonably available additional waste management measures, taking into account the effectiveness of waste management measures already in place, the costs of additional measures, the emission reductions expected to be achieved, and any other environmental or energy impacts they might have. The development of the waste management plan shall

consider the publication entitled An Ounce of Prevention: Waste Reduction Strategies for Health Care Facilities (Catalog No. 057007), copyright year 1993, and hereby incorporated by reference in this rule, as published by the American Hospital Association Services, Inc., PO Box 92683, Chicago, IL 60675-2683. This rule does not incorporate any subsequent amendments or additions to this publication. The owner or operator of each commercial HMIWI company shall conduct training and education programs in waste segregation for each of the company's waste generator clients and ensure that each client prepares its own waste management plan that includes, but is not limited to, the provisions listed previously in this subsection.

(D) Inspection Guidelines.

1. Each HMIWI subject to the emission limits under paragraph (3)(A)1. of this rule and each small HMIWI subject to the emission limits under paragraph (3)(A)2. of this rule shall undergo an initial equipment inspection that is at least as protective as the following:

A. At a minimum, an inspection shall include the following:

(I) Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation, and clean pilot flame sensor, as necessary;

(II) Ensure proper adjustment of primary and secondary chamber combustion air, and adjust as necessary;

(III) Inspect hinges and door latches and lube as necessary;

(IV) Inspect dampers, fans, and blowers for proper operation;

(V) Inspect HMIWI door and door gaskets for proper sealing;

(VI) Inspect motors for proper operation;

(VII) Inspect primary chamber refractory lining and clean and repair/replace as necessary;

(VIII) Inspect incinerator shell for corrosion and/or hot spots;

(IX) Inspect secondary/tertiary chamber and stack; clean as necessary;

(X) Inspect mechanical loader, including limit switches, for proper operation, if applicable;

(XI) Visually inspect waste bed (grates) and repair/seal, as necessary;

(XII) For the burn cycle that follows the inspection, document that the incinerator is operating properly and make any necessary adjustments;

(XIII) Inspect air pollution control devices for proper operation, if applicable;

(XIV) Inspect waste heat boiler systems to ensure proper operation, if applicable;

(XV) Inspect bypass stack components;

(XVI) Ensure proper calibration of thermocouples, sorbent feed systems, and any other monitoring equipment; and

(XVII) Generally observe that the equipment is maintained in good operating condition; and

B. Within ten (10) operating days following an equipment inspection all necessary repairs shall be completed unless the owner or operator obtains written approval from the department or local air pollution control authority establishing a date whereby all necessary repairs of the designated facility shall be completed.

2. Each HMIWI subject to the emissions limits under paragraph (3)(A)1. of this rule and each small HMIWI subject to the emission limits under paragraph (3)(A)2. of this rule shall undergo an equipment inspection annually (no more than twelve (12) months following the previous annual equipment inspection), as outlined in paragraph (3)(D)1. of this rule.

3. Each HMIWI subject to the emissions limits under paragraph (3)(A)1. of this rule and each small HMIWI subject to

the emissions limits under paragraph (3)(A)2. of this rule shall undergo an initial air pollution control device inspection, as applicable, that is at least as protective as the following:

A. At a minimum, an inspection shall include the following:

(I) Inspect air pollution control device(s) for proper operation, if applicable;

(II) Ensure proper calibration of thermocouples, sorbent feed systems, and any other monitoring equipment; and

(III) Generally observe that the equipment is maintained in good operating condition; and

B. Within ten (10) operating days following an air pollution control device inspection, all necessary repairs shall be completed unless the owner or operator obtains written approval from the Missouri Department of Natural Resources' Air Pollution Control Program establishing a date whereby all necessary repairs of the designated facility shall be completed.

4. Each HMIWI subject to the emissions limits under paragraph (3)(A)1. of this rule and each small HMIWI subject to the emissions limits under paragraph (3)(A)2. of this rule shall undergo an air pollution control device inspection, as applicable, annually (no more than twelve (12) months following the previous annual air pollution control device inspection), as outlined in paragraph (3)(D)3. of this rule.

(E) Compliance and Performance Testing.

1. The emission limits under this rule apply at all times.

2. Except as provided in paragraph (3)(E)12. of this rule, the owner or operator of an HMIWI subject to this rule shall conduct an initial performance test to determine compliance with the emission limits using the procedures and test methods listed in subparagraphs (3)(E)2.A. through L. of this rule. The use of the bypass stack during a performance test shall invalidate the performance test. For small HMIWIs as defined in paragraph (3)(A)2. of this rule, the two-thousand (2,000)-pound-per-week limitation does not apply during performance tests.

A. All performance tests shall consist of a minimum of three (3) test runs conducted under representative operating conditions.

B. The minimum sample time shall be one (1) hour per test run unless otherwise indicated.

C. The sampling location and number of traverse points shall be determined using EPA Reference Method 1 of 40 CFR 60, Appendix A-1.

D. Gas composition shall be analyzed and include a measurement of oxygen concentration using EPA Reference Method 3, 3A, or 3B of 40 CFR 60, Appendix A-2. EPA Reference Method 3, 3A, or 3B shall be used simultaneously with each of the other EPA reference methods. As an alternative to EPA Reference Method 3B, ASME PTC-19-10-1981-Part 10 may be used.

E. The pollutant concentrations shall be adjusted to seven percent (7%) oxygen using the following equation:

$$\text{C}_{\text{adj}} = \text{C}_{\text{meas}} (20.9 - 7) / (20.9 - \% \text{O}_2)$$

where:

C_{adj} = pollutant concentration adjusted to 7 percent oxygen

C_{mea} = 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

% O₂ = oxygen concentration measured on a dry basis,
percent

F. Particulate Matter (PM) emissions shall be measured using EPA Reference Method 5 of 40 CFR 60, Appendix A-3. An acceptable alternate method for measuring PM emissions is EPA Reference Method 26A or Method 29 of 40 CFR 60, Appendix A-8. As an alternative, PM Continuous Emission Monitoring System (CEMS) may also be used as specified in subparagraph (3)(E)3.C. of this rule.

G. Stack opacity shall be measured using EPA Reference Method 9 of 40 CFR 60, Appendix A-4. As an alternative, demonstration of compliance with the PM standards using bag leak detection systems as specified in paragraph (3)(E)11. of this rule or PM CEMS as specified in subparagraph (3)(E)3.C. of this rule is considered demonstrative of compliance with the opacity requirements.

H. Carbon monoxide (CO) emissions shall be measured using EPA Reference Method 10 or 10B of 40 CFR 60, Appendix A-4. As an alternative, CO CEMS may be used as specified in subparagraph (3)(E)3.C. of this rule.

I. Total dioxin/furan emissions shall be measured using EPA Reference Method 23 of 40 CFR 60, Appendix A-

7. As an alternative, an owner or operator may elect to sample dioxins/furans by installing, calibrating, maintaining, and operating a continuous automated sampling system for monitoring dioxin/furan emissions. Sampling shall be done using EPA Reference Method 23 of 40 CFR 60, Appendix A-7. The minimum sample time shall be four (4) hours per test run. If the affected facility has selected the toxic equivalency standards for dioxin/furans the following procedures shall be used to determine compliance:

(I) Measure the concentration of each dioxin/furan tetra- through octa-congener emitted using EPA Reference Method 23 of 40 CFR 60, Appendix A-7;

(II) For each dioxin/furan congener measured in accordance with part (3)(E)2.I.(I) of this rule, multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 3 of this part; and

Table 3–Toxic Equivalency Factors

| <u>Dioxin/furan congener</u> | <u>Toxic equivalency factor</u> |
|---|---------------------------------|
| <u>2,3,7,8-tetrachlorinated dibenzo-p-dioxin</u> | <u>1</u> |
| <u>1,2,3,7,8-pentachlorinated dibenzo-p-dioxin</u> | <u>0.5</u> |
| <u>1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin</u> | <u>0.1</u> |
| <u>1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin</u> | <u>0.1</u> |

| | |
|--|--------------|
| <u>1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin</u> | <u>0.1</u> |
| <u>1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin</u> | <u>0.01</u> |
| <u>octachlorinated dibenzo-p-dioxin</u> | <u>0.001</u> |
| <u>2,3,7,8-tetrachlorinated dibenzofuran</u> | <u>0.1</u> |
| <u>2,3,4,7,8-pentachlorinated dibenzofuran</u> | <u>0.5</u> |
| <u>1,2,3,7,8-pentachlorinated dibenzofuran</u> | <u>0.05</u> |
| <u>1,2,3,4,7,8-hexachlorinated dibenzofuran</u> | <u>0.1</u> |
| <u>1,2,3,6,7,8-hexachlorinated dibenzofuran</u> | <u>0.1</u> |
| <u>1,2,3,7,8,9-hexachlorinated dibenzofuran</u> | <u>0.1</u> |
| <u>2,3,4,6,7,8-hexachlorinated dibenzofuran</u> | <u>0.1</u> |
| <u>1,2,3,4,6,7,8-heptachlorinated dibenzofuran</u> | <u>0.01</u> |
| <u>1,2,3,4,7,8,9-heptachlorinated dibenzofuran</u> | <u>0.01</u> |
| <u>octachlorinated dibenzofuran</u> | <u>0.001</u> |

(III) Sum the products calculated in accordance with part (3)(E)2.I.(II) of this rule to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

J. Hydrogen chloride (HCl) shall be measured using EPA Reference Method 26 or 26A of 40 CFR 60, Appendix A-8. As an alternative, HCl CEMS may be used as specified in subparagraph (3)(E)3.C. of this rule.

K. Lead (Pb), cadmium (Cd), and mercury (Hg) emissions shall be measured using EPA Reference Method 29 of 40 CFR 60, Appendix A-8. As an alternative, Hg emissions may be measured using ASTM D6784-02(2008). As an alternative for Pb, Cd, and Hg, multi-metals CEMS or Hg CEMS, may be used as specified in subparagraph (3)(E)3.C. of this rule. As an alternative, an owner or operator may elect to sample Hg by installing, calibrating, maintaining, and operating a continuous automated sampling system for monitoring Hg emissions.

L. Compliance for fugitive ash emissions shall be determined using EPA Reference Method 22 of 40 CFR 60, Appendix A-7. The minimum observation time shall be a series of three (3) one (1)-hour observations.

3. Following the date on which the initial performance test is completed, the owner or operator of an affected facility shall—

A. Determine compliance with the opacity limit by conducting an annual performance test (no more than twelve (12) months following the previous performance test) using the applicable procedures and test methods listed in paragraph (3)(E)2. of this rule;

B. Determine compliance with the PM, CO, and HCl emission limits by conducting an annual performance test (no more than twelve (12) months following the previous performance test) using the applicable procedures and test methods listed in paragraph (3)(E)2. of this rule. If all three (3) performance tests over a three (3)-year period indicate compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for the subsequent two (2) years. At a minimum, a performance test for PM, CO, and HCl shall be conducted every third year (no more than thirty-six (36) months following the previous performance test). If a performance test conducted every third year indicates compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for an additional two (2) years. If any performance test indicates noncompliance with the respective emission limit, a performance test for that pollutant shall be conducted annually until all annual performance tests over a three (3)-year period indicate compliance with the emission limit. The use of the bypass stack during a performance test shall invalidate the performance test; and

C. Facilities using a Continuous Emission Monitoring System (CEMS) to demonstrate compliance with any of the emission limits under section (3) of this rule shall determine compliance with the appropriate emission limit(s) using a twelve (12)-hour rolling average, calculated each hour as the average of the previous twelve (12) operating hours.

4. The owner or operator of an affected facility equipped with a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and wet scrubber shall—

A. Establish the appropriate maximum and minimum operating parameters, indicated in Table 4 of this subparagraph for each control system, as site-specific operating parameters during the initial performance test to determine compliance with the emission limits; and

Table 4—Operating Parameters to be Monitored and Minimum Measurement and Recording Frequencies

| <u>Operating parameters to be monitored</u> | <u>Minimum frequency</u> | | <u>Control system</u> | | |
|--|--------------------------|-----------------------|---|---------------------|--|
| | <u>Data measurement</u> | <u>Data recording</u> | <u>Dry scrubber followed by fabric filter</u> | <u>Wet scrubber</u> | <u>Dry scrubber followed by fabric filter and wet scrubber</u> |
| <u>MAXIMUM OPERATING PARAMETERS</u> | | | | | |
| <u>Maximum charge rate</u> | <u>Continuous</u> | <u>1 per hour</u> | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| <u>Maximum fabric filter inlet temperature</u> | <u>Continuous</u> | <u>1 per minute</u> | <u>✓</u> | | <u>✓</u> |
| <u>Maximum flue gas temperature</u> | <u>Continuous</u> | <u>1 per minute</u> | | <u>✓</u> | <u>✓</u> |
| <u>MIMUMUM OPERATING PARAMETERS</u> | | | | | |
| <u>Minimum secondary chamber temperature</u> | <u>continuous</u> | <u>1 per minute</u> | <u>✓</u> | <u>✓</u> | <u>✓</u> |
| <u>Minimum dioxin/furan sorbent flow rate</u> | <u>hourly</u> | <u>1 per hour</u> | <u>✓</u> | | <u>✓</u> |
| <u>Minimum hydrogen chloride (HCl) sorbent flow rate</u> | <u>hourly</u> | <u>1 per hour</u> | <u>✓</u> | | <u>✓</u> |
| <u>Minimum mercury (Hg) sorbent flow rate</u> | <u>hourly</u> | <u>1 per hour</u> | <u>✓</u> | | <u>✓</u> |
| <u>Minimum pressure drop across the wet scrubber or minimum horsepower or amperage to wet scrubber</u> | <u>continuous</u> | <u>1 per minute</u> | | <u>✓</u> | <u>✓</u> |
| <u>Minimum scrubber liquor flow rate</u> | <u>continuous</u> | <u>1 per minute</u> | | <u>✓</u> | <u>✓</u> |
| <u>Minimum scrubber liquor pH</u> | <u>continuous</u> | <u>1 per minute</u> | | <u>✓</u> | <u>✓</u> |

B. Following the date on which the initial performance test is completed, ensure that the affected facility does not operate above any of the applicable maximum operating parameters or below any of the applicable minimum operating parameters listed in Table 4 and measured as three (3)-hour

rolling averages (calculated each hour as the average of the previous three (3) operating hours) at all times. Operating parameter limits do not apply during performance tests. Operation above the established maximum or below the established minimum operating parameter(s) shall constitute a violation of established operating parameter(s).

5. Except as provided in paragraph (3)(E)8. of this rule, for affected facilities equipped with a dry scrubber followed by a fabric filter—

A. Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the CO emission limit;

B. Operation of the affected facility above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxin/furan sorbent flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit;

C. Operation of the affected facility above the maximum charge rate and below the minimum HCl sorbent flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit;

D. Operation of the affected facility above the maximum charge rate and below the minimum Hg sorbent flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit; or

E. Use of the bypass stack shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd, and Hg emission limits.

6. Except as provided in paragraph (3)(E)8. of this rule, for affected facilities equipped with a wet scrubber—

A. Operation of the affected facility above the maximum charge rate and below the minimum pressure drop across the wet scrubber or below the minimum horsepower or amperage to the system (each measured on a three (3)-hour rolling average)

simultaneously shall constitute a violation of the PM emission limit;

B. Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the CO emission limit;

C. Operation of the affected facility above the maximum charge rate, below the minimum secondary temperature, and below the minimum scrubber liquor flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit;

D. Operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit;

E. Operation of the affected facility above the maximum flue gas temperature and above the maximum charge rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit; or

F. Use of the bypass stack shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd, and Hg emission limits.

7. Except as provided in paragraph (3)(E)8. of this rule, for affected facilities equipped with a dry scrubber followed by a fabric filter and a wet scrubber-

A. Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the CO emission limit;

B. Operation of the affected facility above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxin/furan sorbent flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit;

C. Operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit;

D. Operation of the affected facility above the maximum charge rate and below the minimum Hg sorbent flow rate (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit; or

E. Use of the bypass stack shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd, and Hg emission limits.

8. The owner or operator of an affected facility may conduct a repeat performance test within thirty (30) days of violation of applicable operating parameter(s) to demonstrate that the affected facility is not in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to this paragraph shall be conducted using the identical operating parameters that indicated a violation under paragraphs (3)(E)5., 6., or 7. of this rule.

9. The owner or operator of an affected facility using an air pollution control device other than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber, or selective noncatalytic reduction technology, to comply with the emission limits under section (3) of this rule shall petition the administrator for other site-specific operating parameters to be established during the initial performance test and continuously monitored thereafter. The owner or operator shall not conduct the initial performance test until after the petition has been approved by the administrator.

10. The owner or operator of an affected facility may conduct a repeat performance test at any time to establish new values for the operating parameters. The department may request a repeat performance test at any time.

11. The owner or operator of an affected facility that uses an air pollution control device that includes a fabric filter and is not demonstrating compliance using PM CEMS, determines compliance with the PM emissions limit using a bag

leak detection system, and meets the requirements in subparagraphs (3)(E)11.A. through L. of this rule for each bag leak detection system.

A. Each triboelectric bag leak detection system may be installed, calibrated, operated, and maintained according to the "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). This document is available from the U.S. Environmental Protection Agency (U.S. EPA), Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Measurement Policy Group (D-243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emissions Measurement Center Continuous Emissions Monitoring. Other types of bag leak detection systems shall be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

B. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PM emissions at concentrations of ten (10) milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

C. The bag leak detection system sensor shall provide an output of relative PM loadings.

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

E. The bag leak detection system shall be equipped with an audible alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected. The alarm shall be located where it is easily heard by plant operating personnel.

F. For positive pressure fabric filter systems, a bag leak detector shall be installed in each baghouse compartment or cell.

G. For negative pressure or induced air fabric filters, the bag leak detector shall be installed downstream of the fabric filter.

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

I. The baseline output shall be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time according to section 5.0 of the "Fabric Filter Bag Leak Detection Guidance."

J. Following initial adjustment of the system, the sensitivity or range, averaging period, alarm set points, or alarm delay time may not be adjusted. In no case may the sensitivity be increased by more than one hundred percent (100%) or decreased more than fifty percent (50%) over a three-hundred-sixty-five (365)-day period unless such adjustment follows a complete fabric filter inspection that demonstrates that the fabric filter is in good operating condition. Each adjustment shall be recorded.

K. Record the results of each inspection, calibration, and validation check.

L. Initiate corrective action within one (1) hour of a bag leak detection system alarm; operate and maintain the fabric filter such that the alarm is not engaged for more than five percent (5%) of the total operating time in a six (6)-month block reporting period. 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 is counted as a minimum of one (1) hour. If it takes longer than one (1) hour to initiate corrective action, the alarm time is counted as the actual amount of time taken to initiate corrective action.

12. Small HMIWI subject to the emissions limits under paragraph (3)(A)2. of this rule that is not equipped with an air pollution control device shall meet the following compliance and performance testing requirements:

A. Establish 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;

B. Following the date on which the initial performance test is completed, ensure that the designated facility does not operate above the maximum charge rate or below the minimum secondary chamber temperature measured as three (3)-hour rolling averages (calculated as the average of the previous

three (3) 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 of the established operating parameter(s);

C. Except as provided in subparagraph (3)(E)12.D. of this rule, operation of the designated facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three (3)-hour rolling average) simultaneously shall constitute a violation of the PM, CO, and dioxin/furan emission limits; and

D. The owner or operator of a designated facility may conduct a repeat performance test within thirty (30) days of the violation of applicable operating parameter(s) to demonstrate that the designated facility is not in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to this paragraph must be conducted using the identical operating parameters that indicated a violation under subparagraph (3)(E)12.C. of this rule.

13. The owner or operator of a designated facility subject to this rule may use the results of previous emissions tests to demonstrate compliance with the emissions limits, provided that the following conditions are met:

A. The designated facility's previous emissions tests must have been conducted using the applicable procedures and test methods listed in subparagraphs (3)(E)2.A.-L. of this rule. Previous emissions test results obtained using EPA-accepted voluntary consensus standards are also acceptable;

B. The HMIWI at the designated facility shall 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 HMIWI 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); and

C. The previous emissions test(s) must have been conducted in 1996 or later.

(F) Monitoring Requirements.

1. Except as provided for under paragraph (3)(F)5. of this rule, the owner or operator of an HMIWI subject to this rule shall install, calibrate (to manufacturers' specification), maintain, and operate devices (or establish methods) for monitoring the applicable maximum and minimum operating parameters listed in Table 4 of this rule (unless CEMS are used as a substitute for certain parameters as specified) such that these devices (or methods) measure and record values for these operating parameters at the frequency indicated in Table 4 of this rule at all times.

2. The owner or operator of an HMIWI 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.

3. The owner or operator of an HMIWI using something other than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber to comply with the emission limits under section (3) of this rule shall install, calibrate (to manufacturers' specifications), maintain, and operate the equipment necessary to monitor the site-specific operating parameters developed pursuant to paragraph (3)(E)9. of this rule.

4. The owner or operator of an HMIWI shall obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for seventy-five percent (75%) of the operating hours per day for ninety percent (90%) of the operating days per calendar quarter that the HMIWI is combusting hospital waste and/or medical/infectious waste.

5. Small HMIWI subject to the emission limits under paragraph (3)(A)2. of this rule not equipped with an air pollution control device shall meet the following monitoring requirements:

A. Install, calibrate (to manufacturers' specification), maintain, and operate 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;

B. Install, calibrate (to manufacturers' specification), maintain, and operate a device that

automatically measures and records the date, time, and weight of each charge fed into the HMIWI; and

C. The owner or operator of a designated facility shall obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for seventy-five percent (75%) of the operating hours per day for ninety percent (90%) of the operating days per calendar quarter that the designated facility is combusting hospital waste and/or medical/infectious waste.

(4) Reporting and Record Keeping.

(A) The owner or operator of an HMIWI subject to this rule shall maintain the following information (as applicable) for a period of at least five (5) years:

1. Calendar date of each record;

2. Records of the following data:

A. Concentrations of any pollutant listed in section (3) of this rule or measurements of opacity as determined by the continuous emission monitoring system (if applicable);

B. Results of fugitive emissions (by EPA Reference Method 22) tests, if applicable;

C. HMIWI charge dates, times, and weights and hourly charge rates;

D. Fabric filter inlet temperatures during each minute of operation, as applicable;

E. Amount and type of dioxin/furan sorbent used during each hour of operation, as applicable;

F. Amount and type of Hg sorbent used during each hour of operation, as applicable;

G. Amount and type of HCl sorbent used during each hour of operation, as applicable;

H. Amount and type of nitrogen oxides (NO_x) reagent used during each hour of operation, as applicable;

I. Secondary chamber temperatures recorded during each minute of operation;

J. Liquor flow rate to the wet scrubber inlet during each minute of operation, as applicable;

K. Horsepower or amperage to the wet scrubber during each minute of operation, as applicable;

L. Pressure drop across the wet scrubber system during each minute of operation, as applicable;

M. Temperature at the outlet from the wet scrubber during each minute of operation, as applicable;

N. pH of the scrubber liquor at the inlet to the wet scrubber during each minute of operation, as applicable;

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

P. For HMIWI complying with paragraph (3)(E)9. and paragraph (3)(F)3. of this rule, the owner or operator shall maintain all operating parameter data collected; and

Q. For affected facilities as defined in this rule, records of the annual equipment inspections, annual air pollution control device inspections, any required maintenance, and any repairs not completed within ten (10) days of an inspection or the time frame established by the director;

3. Identification of calendar days for which data on emission rates or operating parameters specified under paragraph (4)(A)2. of this rule have not been obtained, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken;

4. Identification of calendar days, times, and durations of malfunctions, a description of the malfunction, and the corrective action taken;

5. Identification of calendar days for which data on emission rates or operating parameters specified under paragraph (4)(A)2. of this rule exceeded the applicable limits, with a

description of the exceedances, reasons for such exceedances, and a description of corrective actions taken;

6. The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating parameters, as applicable, and a description, including sample calculations, of how the operating parameters were established or re-established, if applicable;

7. Records showing the names of HMIWI operators who have completed review of the information in paragraph (3)(B)8. of this rule as required by paragraph (3)(B)9. of this rule, including the date of the initial review and all subsequent annual reviews;

8. Records showing the names of the HMIWI operators who have completed the operator training requirements, including documentation of training and the dates of the training;

9. Records showing the names of the HMIWI operators who have met the criteria for qualification under subsection (3)(B) of this rule and the dates of their qualification; and

10. Records of calibration of any monitoring devices as required under paragraphs (3)(F)1. through 5. of this rule.

(B) The owner or operator of an HMIWI shall submit to the department the information specified in paragraphs (4)(B)1. through 3. of this rule no later than sixty (60) days following the initial performance test. All reports shall be signed by the facilities manager.

1. The initial performance test data as recorded under subparagraphs (3)(E)2.A. through L. of this rule, as applicable.

2. The values for the site-specific operating parameters established pursuant to paragraph (3)(E)4. or 9. of this rule, as applicable, and a description, including sample calculations, of how the operating parameters were established during the initial performance test.

3. The waste management plan as specified in subsection (3)(C) of this rule.

(C) An annual report shall be submitted to the department one (1) year following the submission of the information in subsection (4)(B) of this rule and subsequent reports shall be submitted no more than twelve (12) months following the previous report (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator of an affected facility must submit these reports semiannually). The annual report shall include the information specified in paragraphs (4)(C)1. through 8. of this rule. All reports shall be signed by the facilities manager.

1. The values for the site-specific operating parameters established pursuant to paragraph (3)(E)4., 8., or 9. of this rule, as applicable.

2. The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded for the calendar year being reported, pursuant to paragraph (3)(E)4., 8., or 9. of this rule, as applicable.

3. The highest maximum operating parameter and the lowest minimum operating parameter, as applicable for each operating parameter recorded pursuant to paragraph (3)(E)4., 8., or 9. of this rule for the calendar year preceding the year being reported, in order to provide the department with a summary of the performance of the affected facility over a two (2)-year period.

4. Any information recorded under paragraphs (4)(A)3. through 5. of this rule for the calendar year being reported.

5. Any information recorded under paragraphs (4)(A)3. through 5. of this rule for the calendar year preceding the year being reported, in order to provide the department with a summary of the performance of the affected facility over a two (2)-year period.

6. If a performance test was conducted during the reporting period, the results of that test.

7. If no exceedances or malfunctions were reported under paragraphs (4)(A)3. through 5. of this rule for the calendar year being reported, a statement that no exceedances occurred during the reporting period.

8. Any use of the bypass stack, the duration, reason for malfunction, and corrective action taken.

(D) The owner or operator of an HMIWI shall submit to the department semiannual reports containing any information recorded under paragraphs (4)(A)3. through 5. of this rule no later than sixty (60) days following the reporting period. The first semiannual reporting period ends six (6) months following the submission of information in subsection (4)(B) of this rule. Subsequent reports shall be submitted to the department no later than six (6) calendar months following the previous report. All reports shall be signed by the facilities manager.

(E) All records specified under subsection (4)(A) of this rule shall be maintained on-site in either paper copy or computer-readable format, unless an alternative format is approved by the department.

(F) The owner or operator of an HMIWI shall submit an annual report to the department containing information recorded under subparagraph (4)(A)2.Q. of this rule no later than sixty (60) days following the year in which data were collected. Subsequent reports shall be sent no later than twelve (12) calendar months following the previous report (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator must submit these reports semiannually). The report shall be signed by the facilities manager.

(5) Test Methods. Test methods can be found in subparagraphs (3)(E)2.A. through L. of this rule