

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 60**

[AD-FRL-6899-5]

RIN 2060-A151

**Emission Guidelines for Existing Small Municipal Waste Combustion Units**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** This action reestablishes emission guidelines for existing small municipal waste combustion (MWC) units. The emission guidelines contain stringent emission limits for organics (dioxins/furans), metals (cadmium, lead, mercury, and particulate matter), and acid gases (hydrogen chloride, sulfur dioxide, and nitrogen oxides). Some of those pollutants can cause toxic effects such as eye, nose, throat, and skin irritation, and blood cell, heart, liver, and kidney damage. Emission guidelines for small MWC units were originally promulgated in December 1995, but were vacated by the U.S. Court of Appeals for the District of Columbia Circuit in March 1997. In response to the 1997 vacature, on August 30, 1999, EPA proposed to reestablish emission guidelines for small MWC units. The emission guidelines contained in this final rule are equivalent to the 1995 emission guidelines for small MWC units.

**DATES:** *Effective date.* February 5, 2001.

The incorporation by reference of certain publications listed in this rule are approved by the Director of the Office of the Federal Register as of February 5, 2001.

*Applicability date.* The emission guidelines apply to small MWC units that commenced construction on or before August 30, 1999.

**ADDRESSES:** Docket No. A-98-18 and associated Docket Nos. A-90-45 and A-89-08 contain supporting information for the emission guidelines. The dockets are available for public inspection and copying between 8:00 a.m. and 5:30 p.m., Monday through Friday, at EPA's Air and Radiation Docket and Information Center (Mail Code-6102), 401 M Street SW, Washington, DC 20460, or by calling (202) 260-7548. The dockets are located at the above address in Room M-1500, Waterside Mall (ground floor). A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** Mr. Rick Copland at (919) 541-5265, Combustion Group, Emission Standards Division (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, e-mail: copland.rick@epa.gov.

**SUPPLEMENTARY INFORMATION:**

**Public Comments**

Emission guidelines and companion new source performance standards (NSPS) for small MWC units were proposed on August 30, 1999 (64 FR 47276), and 48 comment letters were received on the proposals. Verbal comments were also received at the

October 5, 1999 public hearing. The comment letters and a transcript of the public hearing are available in Docket No. A-98-18. A summary of and responses to the public comments are contained in "Small Municipal Waste Combustors: Background Information Document for New Source Performance Standards and Emission Guidelines-Public Comments and Responses (EPA-453/R-00-001)." In response to the public comments, EPA adjusted the final emission guidelines where appropriate. A copy of the background information document is located in Docket No. A-98-18.

**World Wide Web**

Electronic versions of this action, the regulatory text, and other background information, including the response to comments document, are available at the Technology Transfer Network web site (TTN Web) that EPA has established for the emission guidelines for small MWC units: "http://www.epa.gov/ttn/uatw/129/mwc/rimwc2.html." For assistance in downloading files, call the EPA's TTN Web Help Line at (919) 541-5384.

**Regulated Entities**

No entities are directly regulated by this action because these are emission guidelines. Additional State or Federal action is required for implementation of the emission guidelines. However, adoption of State or Federal plans implementing the emission guidelines will affect the following categories of sources:

Category	NAICS codes	SIC codes	Examples of regulated entities
Industry, Federal government, and State/local/tribal governments.	562213, 92411	4953 9511	Solid waste combustors or incinerators at waste-to-energy facilities that generate electricity or steam from the combustion of garbage (typically municipal waste); and solid waste combustors or incinerators at facilities that combust garbage (typically municipal waste) and do not recover energy from the waste.

The above list is not intended to be exhaustive, but rather provides a guide regarding the entities EPA expects to be regulated by applicable State or Federal plans implementing the emission guidelines for small MWC units. Not all facilities classified under the NAICS and SIC codes will be affected. Other types of entities not listed could also be affected. To determine whether your facility will be regulated by State or Federal plans implementing the emission guidelines, carefully examine the applicability criteria in §§ 60.1550 through 60.1565 of the emission guidelines.

**Judicial Review**

Today's action of adopting a final rule for small MWC units constitutes final administrative action on the proposed emission guidelines for small MWC units. Under section 307(b)(1) of the Clean Air Act (CAA), judicial review of this final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by February 5, 2001. Under section 307(d)(7)(B) of the CAA, only an objection to this final rule that was raised with reasonable specificity during the period for public comment

can be raised during judicial review. Moreover, under section 307(b)(2) of the CAA, the requirements established by today's final action may not be challenged separately in any civil or criminal proceeding brought by EPA to enforce the requirements.

**Organization of This Document**

The following outline is provided to aid in locating information in this preamble.

- I. Background Information
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  - D. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks
  - E. Unfunded Mandates Reform Act
  - F. Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 *et seq.*
  - G. Paperwork Reduction Act
  - H. National Technology Transfer and Advancement Act
  - I. Congressional Review Act

#### Abbreviations and Acronyms Used in This Document

- ASME American Society of Mechanical Engineers
- CFR Code of Federal Regulations
- EIA Economic Impact Analysis
- EPA U.S. Environmental Protection Agency
- FR **Federal Register**
- ICR Information Collection Request
- kg/year Kilograms per year
- MACT Maximum achievable control technology
- Mg/year Megagrams per year
- MSW Municipal solid waste
- MWC Municipal waste combustion
- NAICS North American Industrial Classification System
- NSPS New source performance standards
- NTTAA National Technology Transfer and Advancement Act
- OAQPS Office of Air Quality Planning and Standards
- OMB Office of Management and Budget
- OP Office of Policy
- Pub. L. Public Law
- RFA Regulatory Flexibility Act
- SBREFA Small Business Regulatory Enforcement Fairness Act
- SIC Standard Industrial Classification
- TTN Technology Transfer Network
- UMRA Unfunded Mandates Reform Act
- U.S. United States
- U.S.C. United States Code

#### I. Background Information

On December 19, 1995, EPA promulgated emission guidelines for large and small MWC units under 40 CFR part 60, subpart Cb. The emission guidelines covered existing MWC units located at plants with an aggregate plant combustion capacity greater than 35

megagrams per day of municipal solid waste (MSW)(approximately 39 tons per day of MSW). The 1995 emission guidelines divided the MWC unit population into MWC units located at large MWC plants and MWC units located at small MWC plants. Plant size was based on the total aggregate capacity of all individual MWC units at a MWC plant.

Litigation followed the promulgation of the 1995 emission guidelines. In 1997, the U.S. Court of Appeals for the District of Columbia Circuit ruled that EPA must develop regulations for small MWC units (units with an individual MWC capacity of 250 tons per day or less) separately from regulations for large MWC units (units with an individual MWC unit capacity greater than 250 tons per day), indicating that the 1995 emission guidelines were not consistent with section 129 of the CAA. The court directed EPA to revise the 1995 emission guidelines so that they applied only to large MWC units, and the court vacated the 1995 emission guidelines as they applied to small MWC units. In response to the court ruling, EPA amended the 1995 emission guidelines on August 25, 1997 so that they applied only to existing large MWC units. Then, on August 30, 1999, EPA proposed emission guidelines for small MWC units with an individual unit capacity of 35 to 250 tons per day.

Today's final rule reestablishes emission guidelines for existing small MWC units with capacities of 35 to 250 tons per day of MSW under 40 CFR part 60, subpart BBBB.

#### II. Summary of the Emission Guidelines

The following summarizes the final emission guidelines for small MWC units, including identification of the subcategories used in the final emission guidelines. Overall, the emission guidelines for small MWC units are equivalent to the 1995 emission guidelines for small MWC units.

##### A. Sources Regulated by the Emission Guidelines

Today's emission guidelines do not directly regulate any MWC units, but they require States to develop plans to limit air emissions from existing small MWC units. In subpart BBBB and in associated State plans, the emission limits and requirements will apply to each existing small MWC unit that has a design combustion capacity of 35 to 250 tons per day of MSW and commenced construction on or before August 30, 1999. Small MWC units that commenced construction after August 30, 1999 are not covered under the emission guidelines (subpart BBBB).

Those units will be subject to the NSPS for new small MWC units (subpart AAAA) which are published separately in today's **Federal Register**.

##### B. Subcategorization of the Small MWC Unit Population

Within the emission guidelines, the small MWC unit population is subcategorized based on aggregate capacity of the plant where the individual small MWC unit is located. The resulting subcategories are as follows: Class I units are small MWC units located at plants with an aggregate plant capacity greater than 250 tons per day of MSW; Class II units are small MWC units located at plants with an aggregate plant capacity less than or equal to 250 tons per day of MSW.

##### C. Pollutants Regulated by the Emission Guidelines

Section 129 of the CAA requires EPA to establish numerical emission limits for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, sulfur dioxide, hydrogen chloride, nitrogen oxides, and carbon monoxide. Section 129 specifies that EPA may also:

\* \* \* promulgate numerical emission limitations or provide for the monitoring of post-combustion concentrations of surrogate substances, parameters, or periods of residence times in excess of stated temperatures with respect to pollutants other than those listed [above] \* \* \*.

Therefore, in addition to emission limits, EPA is establishing requirements for MWC unit operating load, flue gas temperature at the particulate matter control device inlet, and carbon feed rate as part of the good combustion practice requirements. The EPA is also establishing requirements for the control of fugitive ash emissions. All of those requirements were contained in the 1995 emission guidelines.

##### D. Format of the Emission Limits

The format of the emission limits is identical to the format of the emission limits in the 1995 emission guidelines: emission limits based on pollutant concentration. Alternative percentage reduction requirements are provided for mercury, sulfur dioxide, and hydrogen chloride. Opacity and fugitive ash requirements are the same as the 1995 emission guidelines. In addition to controlling stack emissions, the emission guidelines incorporate good combustion practice requirements (*i.e.*, operator training, operator certification, and MWC unit operating requirements).

*E. Summary of the Emission Guidelines*

A concise summary of the emission guidelines can be found in Tables 2 through 4 of subpart BBBB.

**III. Changes to the Emission Guidelines**

For the majority of small MWC units that will be subject to emission guideline requirements, the final emission guidelines are identical to the emission guidelines proposed in August 1999. However, one change made in the final emission guidelines affects requirements for about five MWC plants. That change is summarized in the following three paragraphs and is also discussed in the background information document described earlier under "Public Comments."

In the proposal, different emission limits were proposed for MWC units in Class A and Class B. Class A MWC units were nonrefractory MWC units located at MWC plants with an aggregate plant capacity greater than 250 tons per day. Class B MWC units were refractory units located at MWC plants with an aggregate plant capacity greater than 250 tons per day. The 1999 proposal included different emission limits for Class A and Class B units because it had been brought to EPA's attention that different flue gas flow rates per ton of MSW combusted were expected to occur at Class A and Class B units. The 1995 emission guidelines did not make the distinction in flue gas flow rates and treated Class A and Class B units as a combined class with the same requirements.

Some comments on the proposal indicated that the proposed subcategorization with different control requirements for Class A and Class B was appropriate. However, other comments on the proposal indicated that the technical bases for the Class A and Class B subcategorization was no longer valid for today's MWC units and the subcategory was inappropriate. The EPA reanalyzed the issue and has concluded that the flue gas flow rates for Class A and Class B MWC units are not significantly different. As a result, the Class A units and the Class B units are combined into a single Class I category in the final emission guidelines as had been done in the 1995 emission guidelines.

Maximum achievable control technology (MACT) floors were then calculated for the Class I units, and then new MACT limits were selected. Uniform emission limits now apply to all Class I MWC units. With the exception of nitrogen oxides, the final emission limits for Class I units are identical to the 1995 emission limits for

Class I units. The full set of final emission limits for Class I and Class II can be found in Tables 2, 3 and 4 of Subpart BBBB. See the background information document for a discussion of other comments on the proposed emission guidelines.

**IV. Impacts of the Emission Guidelines**

The following describes the impacts (*i.e.*, air, water, solid waste, energy, cost, and economic impacts) of the emission guidelines for small MWC units. The impact analysis conducted to evaluate the 1995 emission guidelines still applies because the air pollution control requirements in the final emission guidelines are the same as the 1995 emission guidelines. The 1995 analysis is available at 59 FR 48228. The discussion in this preamble focuses only on the air, cost, and economic impacts of the final emission guidelines.

As discussed in the preamble for the 1995 emission guidelines, EPA determined that the water, solid waste, and energy impacts associated with the emission guidelines were not significant. Today's action affects only a subset of the MWC units that were addressed in the earlier impact analysis. Accordingly, EPA has concluded that the water, solid waste, and energy impacts associated with today's action are not significant.

For further information on the impacts of the emission guidelines, refer to "Economic Impact Analysis (EIA): Small Municipal Waste Combustion Units—Emission Guidelines and New Source Performance Standards" March 2000 (EPA-452/R-00-001).

*A. Air Impacts*

As discussed in the EIA, the EPA estimates that 90 small MWC units operating at 41 plants will be affected by the emission guidelines. The total MSW combustion capacity of the 90 units was 8,551 tons per day in 1998.

Table 1 of this preamble presents the national air emission reductions for existing small MWC units that will result from full implementation of the emission guidelines compared to 1998 baseline levels without the emission guidelines.

TABLE 1.—NATIONAL AIR EMISSION IMPACTS OF THE EMISSION GUIDELINES FOR SMALL MWC UNITS

Pollutant	Air emissions reduction	Emission level <sup>a</sup>
Dioxins/ Furans <sup>b</sup>	2.7 kg/year .....	97
Cadmium .....	310 kg/year .....	85
Lead .....	12.9 Mg/year ....	92
Mercury .....	4.1 Mg/year .....	95

TABLE 1.—NATIONAL AIR EMISSION IMPACTS OF THE EMISSION GUIDELINES FOR SMALL MWC UNITS—Continued

Pollutant	Air emissions reduction	Emission level <sup>a</sup>
Particulate Matter.	369 Mg/year .....	77
Sulfur Dioxide	1,368 Mg/year ..	56
Hydrogen Chloride.	2,456 Mg/year ..	88
Nitrogen Oxides.	384 Mg/year .....	9

<sup>a</sup>Percent reduction from 1998 baseline.  
<sup>b</sup>Percent national emission reduction relative to national baseline emissions that would occur in the absence of the emission guidelines.  
<sup>c</sup>Total mass of tetra-through octachlorinated dibenzo-p-dioxins and dibenzofurans.

*B. Cost and Economic Impacts*

To estimate the costs of the emission guidelines, EPA has taken into account all of the existing air pollution control equipment currently in operation at small MWC units. The cost estimates presented here are incremental costs over the control equipment already in use. For more details on the cost and economic analysis, refer to the EIA.

The total annual cost (including annualized capital and operating costs) of the final emission guidelines would be approximately \$68 million, which is equivalent to \$25.30 per ton of MSW combusted.

**V. Companion Rule for New Small MWC Units**

A companion rule to reestablish NSPS for new small MWC units is being published separately in today's **Federal Register**. The NSPS for new small MWC units are contained in 40 CFR part 60, subpart AAAA.

**VI. Amendments to 40 CFR Part 60, Subpart B**

Also included in today's **Federal Register** is a rule to amend subpart B of part 60, "Adoption and Submittal of State Plans for Designated Facilities." The EPA proposed two amendments to subpart B, which are fully described in the proposal to reestablish emission guidelines for small MWC units (64 FR 47241). The EPA received no comments on the amendments to subpart B; therefore, the amendments are being promulgated as proposed.

**VII. Administrative Requirements**

*A. Executive Order 12866: Regulatory Planning and Review*

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the EPA must determine whether the regulatory action

is "significant," and, therefore, subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Executive Order defines "significant regulatory action" as one that is likely to lead to a rule that may:

(1) Have an annual effect on the economy of \$100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs, or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, EPA has determined that this final rule is not a "significant regulatory action" and, therefore, is not subject to OMB review. The EPA submitted the 1995 rulemaking package (which included requirements for new and existing large MWC units and requirements for new and existing small MWC units) to OMB for review (60 FR 65405, December 19, 1995) and OMB approved the rulemaking package for adoption. The emission guidelines promulgated today only apply to small MWC units and are projected to have an impact of approximately \$68 million annually.

#### *B. Executive Order 13132: Federalism*

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" are defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

Under Section 6 of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and

local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. The EPA also may not issue a regulation that has federalism implications and that preempts State law, unless EPA consults with State and local officials early in the process of developing the proposed regulation.

This final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132, because State plans are used to implement the rule. Thus, the requirements of section 6 of the Executive Order do not apply to this final rule. Although section 6 of Executive Order 13132 does not apply to this final rule, EPA did consult with State and local officials in developing this final rule. A list of those consultations is provided in the preamble to the 1995 emission guidelines (60 FR 65405-65412, December 19, 1995).

#### *C. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments*

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to OMB, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

Today's final rule does not significantly or uniquely affect the communities of Indian tribal governments. The EPA is not aware of any small MWC units located in Indian

territory. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this final rule.

#### *D. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks*

Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), applies to any rule that: (1) Is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, EPA must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by EPA.

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5-501 of the Executive Order has the potential to influence the regulation. This final rule is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866. Further, it is based on technology performance and not on health and safety risks.

#### *E. Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, or tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, or tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any 1 year. Before promulgating a rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final

rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

The EPA has determined that the emission guidelines do not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, or tribal governments, in the aggregate, or the private sector in any 1 year. The EIA shows that the total annual costs of the emission guidelines is about \$68 million per year, starting on the 5th year after the rule is promulgated. Thus, today's emission guidelines are not subject to the requirements of sections 202 and 205 of the UMRA. Although the emission guidelines are not subject to UMRA, EPA prepared a cost-benefit analysis under section 202 of the UMRA for the 1995 emission guidelines. For a discussion of how EPA complied with the UMRA for the 1995 emission guidelines, including its extensive consultations with State and local governments, see the preamble to the 1995 emission guidelines. Because today's final emission guidelines are equivalent to the 1995 emission guidelines, no additional consultations were necessary.

*F. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.*

The RFA generally requires Federal agencies to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's final rule on small entities, a small entity is defined as: (1) A small business in the regulated industry that has a gross annual revenue less than \$6 million; (2) a small governmental

jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; or (3) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, EPA has determined that this action will not have a significant economic impact on a substantial number of small entities. The EPA has determined in a regulatory flexibility analysis that eight existing small MWC units (operated by one small business and seven small governments) that would be subject to the emission guidelines are considered "small entities" according to the Small Business Administration's definitions for the affected industries. Also in the initial analysis, EPA calculated compliance costs as a percentage of sales for business and a percentage of income (total household income) for the relevant population of owning governments for the MWC units that are considered small entities. The estimated annual compliance cost as a percentage of income is 0.03 percent for the seven small potentially affected government entities and 39 percent for the one small business. For the seven potentially affected government entities, the maximum compliance cost was 0.25 percent. None of the governmental impacts are considered significant. The impact on the one small business is considered significant but one small business is not a substantial number of entities.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA has tried to reduce the impact of this final rule on small entities by establishing different requirements for Class I and Class II MWC units and establishing provisions for less frequent testing for Class II MWC units. In addition, EPA involved representatives of small entities in the development of the emission guidelines.

*G. Paperwork Reduction Act*

The OMB has approved the information collection requirements in the emission guidelines under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* and has assigned OMB control number 2060-0424.

The information will be used to ensure that the small MWC unit requirements are implemented properly and are complied with on a continuous basis. Records and reports are necessary to identify small MWC units that might

not be in compliance with the emission guidelines. Based on reported information, the implementing agency will decide which small MWC units should be inspected and what records or processes should be inspected. Records that owners and operators of small MWC units maintain indicate whether personnel are operating and maintaining control equipment properly.

The recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to the EPA for which a claim of confidentiality is made will be safeguarded according to EPA policies in 40 CFR part 2, subpart B, Confidentiality of Business Information.

The emission guidelines are projected to affect approximately 90 small MWC units located at 41 plants. The estimated average annual burden for industry for the first 3 years after promulgation of the emission guidelines would be 1,297 person-hours annually. There will be no capital costs for monitoring or recordkeeping during the first 3 years. The estimated average annual burden, over the first 3 years, for the implementing agency would be 773 hours with a cost of \$30,869 (including travel expenses) per year.

Burden means total time, effort, or financial resources expended by persons to generate, maintain, retain, disclose, or provide information to or for a Federal agency. That includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15. The EPA is amending the table in 40 CFR part 9 of currently approved information collection request (ICR) control numbers issued by OMB for various regulations to list the information collection requirements contained in this final rule.

### H. National Technology Transfer and Advancement Act

As noted in the proposed rule, section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law No. 104-113, section 12(d) (15 U.S.C. 272 note), directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through annual reports to OMB, explanations when EPA decides not to use available and applicable voluntary consensus standards.

Consistent with the NTTAA, EPA conducted searches to identify voluntary consensus standards applicable to the small MWC emission guidelines that could be used in process and emissions monitoring. The search for emissions monitoring procedures identified 29 voluntary consensus standards that initially appeared to have possible use in lieu of EPA standard reference methods. After reviewing the available standards, EPA determined that 21 of the candidate consensus standards identified for measuring emissions or surrogates subject to emission standards in the final rule would not be practical due to lack of equivalency, documentation, validation data and other important technical and policy considerations. The seven remaining candidate consensus standards are under development or currently under EPA review. The EPA plans to follow, review and consider adopting those standards after their development and further review by EPA is completed.

One consensus standard, American Society for Testing and Materials (ASTM) D6216-98, is practical for EPA use in EPA Performance Specification 1 (PS-1) (40 CFR part 60, appendix B). The ASTM D6216 can best be used in place of the design specification verification procedures currently in sections 5 and 6 of PS-1. On September 23, 1998, EPA proposed incorporating by reference ASTM D6216-98 under a separate rulemaking (63 FR 50824). Comments from the proposal have been addressed, and EPA expects to complete that action in the near future. For the above reasons, EPA does not in this final rulemaking adopt ASTM D6216-98 in lieu of PS-1 requirements as it would

be impractical for EPA to act independently from another rulemaking activity already undergoing promulgation, and because ASTM D6216 does not address all of the requirements specified in PS-1.

The EPA also conducted searches to identify voluntary consensus standards for process monitoring and process operation. Candidate voluntary consensus standards for process monitoring and process operation were identified for MWC unit load level (steam output); designing, constructing, installing, calibrating, and using nozzles and orifices; and MWC plant operator certification requirements.

One consensus standard by the American Society of Mechanical Engineers (ASME) was identified for potential use in this final rule for the measurement of MWC unit load level (steam output). The EPA believes the standard is practical to use in this final rule as the method to measure MWC unit load. The EPA has already incorporated by reference "ASME Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1-1964 (R1991)" in 40 CFR 60.17(h)(3).

A second consensus standard by ASME was identified for potential use in this final rule for designing, constructing, installing, calibrating, and using nozzles and orifices. The EPA believes the standard is practical to use for the design, construction, installation, calibration, and use of nozzles and orifices. The EPA has already incorporated by reference "American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters, 6th edition (1971)" in 40 CFR 60.17(h)(3).

A third consensus standard by ASME (QRO-1-1994) was identified for potential use in this final rule for MWC plant operator certification requirements instead of developing new operator certification procedures. The EPA believes the standard is practical to use in the emission guidelines that require a chief facility operator and shift supervisor to successfully complete the operator certification procedures developed by ASME. The EPA has already incorporated by reference (QRO-1-1994) in 40 CFR 60.17(h)(1).

Tables 5, 6 and 7 of subpart BBBB list the EPA testing methods and performance standards included in this final rule. Most of the standards have been used by States and industry for more than 10 years. Nevertheless, under § 60.8 of subpart A of part 60, the standard also allows any State or source to apply to EPA for permission to use

alternative methods in place of any of the EPA testing methods or performance standards listed in the final rule.

### I. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801, *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the final rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This final rule will be effective February 5, 2001.

### List of Subjects in 40 CFR Part 60

Environmental protection, Administrative practice and procedure, Air pollution control, Incorporation by reference, Municipal waste combustion, Reporting and recordkeeping requirements.

Dated: November 3, 2000.

**Carol M. Browner,**  
Administrator.

For the reasons stated in the preamble, title 40, chapter I, part 60 of the Code of Federal Regulations is amended as follows:

### PART 60—[AMENDED]

1. The authority citation for part 60 continues to read as follows:

**Authority:** 42 U.S.C. 7401-7601.

### Subpart A—General Provisions

2. Section 60.17 is amended by revising paragraphs (h)(1), (h)(2) and (h)(3) to read as follows:

#### § 60.17 Incorporations by reference.

\* \* \* \* \*

(h) \* \* \*

(1) ASME QRO-1-1994, Standard for the Qualification and Certification of Resource Recovery Facility Operators, IBR approved for §§ 60.56a, 60.54b(a), 60.54b(b), 60.1675(a), and 60.1675(c)(2).

(2) ASME PTC 4.1-1964 (Reaffirmed 1991), Power Test Codes: Test Code for Steam Generating Units (with 1968 and 1969 Addenda), IBR approved for §§ 60.46b, 60.58a(h)(6)(ii), 60.58b(i)(6)(ii), and 60.1810(a)(3).

(3) ASME Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters, 6th Edition (1971), IBR approved for §§ 60.58a(h)(6)(ii), 60.58b(i)(6)(ii), and 60.1810(a)(4).

\* \* \* \* \*

### Subpart B—Adoption and Submittal of State Plans for Designated Facilities

3. Section 60.24 is amended by revising paragraph (e)(1) to read as follows:

#### § 60.24 Emission standards and compliance schedules.

\* \* \* \* \*

(e)(1) Any compliance schedule extending more than 12 months from the date required for submittal of the plan must include legally enforceable increments of progress to achieve compliance for each designated facility or category of facilities. Unless otherwise specified in the applicable subpart, increments of progress must include, where practicable, each increment of progress specified in § 60.21(h) and must include such additional increments of progress as may be necessary to permit close and effective supervision of progress toward final compliance.

\* \* \* \* \*

4. Section 60.27 is amended by revising paragraph (f) to read as follows:

#### § 60.27 Actions by the Administrator.

\* \* \* \* \*

(f) Prior to promulgation of a plan under paragraph (d) of this section, the Administrator will provide the opportunity for at least one public hearing in either:

(1) Each State that failed to hold a public hearing as required by § 60.23(c); or

(2) Washington, DC or an alternate location specified in the **Federal Register**.

4. Part 60 is amended by adding a new subpart BBBB to read as follows:

### Subpart BBBB—Emission Guidelines and Compliance Times for Small Municipal Waste Combustion Units Constructed on or Before August 30, 1999

#### Introduction

Sec.

- 60.1500 What is the purpose of this subpart?  
 60.1505 Am I affected by this subpart?  
 60.1510 Is a State plan required for all States?  
 60.1515 What must I include in my State plan?

- 60.1520 Is there an approval process for my State plan?  
 60.1525 What if my State plan is not approvable?  
 60.1530 Is there an approval process for a negative declaration letter?  
 60.1535 What compliance schedule must I include in my State plan?  
 60.1540 Are there any State plan requirements for this subpart that supersede the requirements specified in subpart B?  
 60.1545 Does this subpart directly affect municipal waste combustion unit owners and operators in my State?

#### Applicability of State Plans

- 60.1550 What municipal waste combustion units must I address in my State plan?  
 60.1555 Are any small municipal waste combustion units exempt from my State plan?  
 60.1560 Can an affected municipal waste combustion unit reduce its capacity to less than 35 tons per day rather than comply with my State plan?  
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#### Use of Model Rule

- 60.1570 What is the “model rule” in this subpart?  
 60.1575 How does the model rule relate to the required elements of my State plan?  
 60.1580 What are the principal components of the model rule?

#### Model Rule—Increments of Progress

- 60.1585 What are my requirements for meeting increments of progress and achieving final compliance?  
 60.1590 When must I complete each increment of progress?  
 60.1595 What must I include in the notifications of achievement of my increments of progress?  
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 60.1605 What if I do not meet an increment of progress?  
 60.1610 How do I comply with the increment of progress for submittal of a control plan?  
 60.1615 How do I comply with the increment of progress for awarding contracts?  
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- 60.1645 What types of training must I do?  
 60.1650 Who must complete the operator training course? By when?  
 60.1655 Who must complete the plant-specific training course?  
 60.1660 What plant-specific training must I provide?  
 60.1665 What information must I include in the plant-specific operating manual?  
 60.1670 Where must I keep the plant-specific operating manual?

#### Model Rule—Good Combustion Practices: Operator Certification

- 60.1675 What types of operator certification must the chief facility operator and shift supervisor obtain and by when must they obtain it?  
 60.1680 After the required date for operator certification, who may operate the municipal waste combustion unit?  
 60.1685 What if all the certified operators must be temporarily offsite?

#### Model Rule—Good Combustion Practices: Operating Requirements

- 60.1690 What are the operating practice requirements for my municipal waste combustion unit?  
 60.1695 What happens to the operating requirements during periods of startup, shutdown, and malfunction?

#### Model Rule—Emission Limits

- 60.1700 What pollutants are regulated by this subpart?  
 60.1705 What emission limits must I meet? By when?  
 60.1710 What happens to the emission limits during periods of startup, shutdown, and malfunction?

#### Model Rule—Continuous Emission Monitoring

- 60.1715 What types of continuous emission monitoring must I perform?  
 60.1720 What continuous emission monitoring systems must I install for gaseous pollutants?  
 60.1725 How are the data from the continuous emission monitoring systems used?  
 60.1730 How do I make sure my continuous emission monitoring systems are operating correctly?  
 60.1735 Am I exempt from any appendix B or appendix F requirements to evaluate continuous emission monitoring systems?  
 60.1740 What is my schedule for evaluating continuous emission monitoring systems?  
 60.1745 What must I do if I choose to monitor carbon dioxide instead of oxygen as a diluent gas?  
 60.1750 What is the minimum amount of monitoring data I must collect with my continuous emission monitoring systems and is the data collection requirement enforceable?  
 60.1755 How do I convert my 1-hour arithmetic averages into appropriate averaging times and units?

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- 60.1765 What additional requirements must I meet for the operation of my continuous emission monitoring systems and continuous opacity monitoring system?
- 60.1770 What must I do if any of my continuous emission monitoring systems are temporarily unavailable to meet the data collection requirements?

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- 60.1775 What types of stack tests must I conduct?
- 60.1780 How are the stack test data used?
- 60.1785 What schedule must I follow for the stack testing?
- 60.1790 What test methods must I use to stack test?
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- 60.1800 May I deviate from the 13-month testing schedule if unforeseen circumstances arise?

#### Model Rule—Other Monitoring Requirements

- 60.1805 Must I meet other requirements for continuous monitoring?
- 60.1810 How do I monitor the load of my municipal waste combustion unit?
- 60.1815 How do I monitor the temperature of flue gases at the inlet of my particulate matter control device?
- 60.1820 How do I monitor the injection rate of activated carbon?
- 60.1825 What is the minimum amount of monitoring data I must collect with my continuous parameter monitoring systems and is the data collection requirement enforceable?

#### Model Rule—Recordkeeping

- 60.1830 What records must I keep?
- 60.1835 Where must I keep my records and for how long?
- 60.1840 What records must I keep for operator training and certification?
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#### Model Rule—Reporting

- 60.1860 What reports must I submit and in what form?
- 60.1865 What are the appropriate units of measurement for reporting my data?
- 60.1870 When must I submit the initial report?
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- 60.1880 When must I submit the annual report?
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- 60.1890 What must I do if I am out of compliance with the requirements of this subpart?
- 60.1895 If a semiannual report is required, when must I submit it?

- 60.1900 What must I include in the semiannual out-of-compliance reports?
- 60.1905 Can reporting dates be changed?

#### Model Rule—Air Curtain Incinerators That Burn 100 Percent Yard Waste

- 60.1910 What is an air curtain incinerator?
- 60.1915 What is yard waste?
- 60.1920 What are the emission limits for air curtain incinerators that burn 100 percent yard waste?
- 60.1925 How must I monitor opacity for air curtain incinerators that burn 100 percent yard waste?
- 60.1930 What are the recordkeeping and reporting requirements for air curtain incinerators that burn 100 percent yard waste?

#### Equations

- 60.1935 What equations must I use?

#### Definitions

- 60.1940 What definitions must I know?

#### Tables

- Table 1 of Subpart BBBB—Model Rule—Compliance Schedules and Increments of Progress
- Table 2 of Subpart BBBB—Model Rule—Class I Emission Limits For Existing Small Municipal Waste Combustion Units
- Table 3 of Subpart BBBB—Model Rule—Class I Nitrogen Oxides Emission Limits For Existing Small Municipal Waste Combustion Units
- Table 4 of Subpart BBBB—Model Rule—Class II Emission Limits For Existing Small Municipal Waste Combustion Units
- Table 5 of Subpart BBBB—Model Rule—Carbon Monoxide Emission Limits For Existing Small Municipal Waste Combustion Units
- Table 6 of Subpart BBBB—Model Rule—Requirements for Validating Continuous Emission Monitoring Systems (CEMS)
- Table 7 of Subpart BBBB—Model Rule—Requirements for Continuous Emission Monitoring Systems (CEMS)
- Table 8 of Subpart BBBB—Model Rule—Requirements for Stack Tests

#### Introduction

##### § 60.1500 What is the purpose of this subpart?

This subpart establishes emission guidelines and compliance schedules for the control of emissions from existing small municipal waste combustion units. The pollutants addressed by the emission guidelines are listed in Tables 2, 3, 4, and 5 of this subpart. The emission guidelines are developed in accordance with sections 111(d) and 129 of the Clean Air Act (CAA) and subpart B of this part.

##### § 60.1505 Am I affected by this subpart?

(a) If you are the Administrator of an air quality program in a State or United States protectorate with one or more existing small municipal waste combustion units that commenced construction on or before August 30, 1999, you must submit a State plan to the U.S. Environmental Protection Agency (EPA) that implements the emission guidelines contained in this subpart.

(b) You must submit the State plan to EPA by December 6, 2001.

##### § 60.1510 Is a State plan required for all States?

No, you are not required to submit a State plan if there are no existing small municipal waste combustion units in your State and you submit a negative declaration letter in place of the State plan.

##### § 60.1515 What must I include in my State plan?

- (a) Include nine items:
- (1) Inventory of affected municipal waste combustion units, including those that have ceased operation but have not been dismantled.
  - (2) Inventory of emissions from affected municipal waste combustion units in your State.
  - (3) Compliance schedules for each affected municipal waste combustion unit.
  - (4) Good combustion practices and emission limits for affected municipal waste combustion units that are at least as protective as the emission guidelines contained in this subpart.
  - (5) Stack testing, continuous emission monitoring, recordkeeping, and reporting requirements.
  - (6) Certification that the hearing on the State plan was held, a list of witnesses and their organizational affiliations, if any, appearing at the hearing, and a brief written summary of each presentation or written submission.
  - (7) Provision for State progress reports to EPA.
  - (8) Identification of enforceable State mechanisms that you selected for implementing the emission guidelines of this subpart.
  - (9) Demonstration of your State's legal authority to carry out the CAA sections 111(d) and 129 State plan.
- (b) Your State plan can deviate from the format and content of the emission guidelines contained in this subpart. However, if your State plan does deviate, you must demonstrate that your State plan is as protective as the emission guidelines contained in this subpart. Your State plan must address

regulatory applicability, increments of progress for retrofit, operator training and certification, operating practice, emission limits, continuous emission monitoring, stack testing, recordkeeping, reporting, and air curtain incinerator requirements.

(c) Follow the requirements of subpart B of this part in your State plan.

**§ 60.1520 Is there an approval process for my State plan?**

The EPA will review your State plan according to § 60.27.

**§ 60.1525 What if my State plan is not approvable?**

If you do not submit an approvable State plan (or a negative declaration letter), EPA will develop a Federal plan, according to § 60.27 to implement the emission guidelines contained in this subpart. Owners and operators of municipal waste combustion units not covered by an approved and currently effective State plan must comply with the Federal plan. The Federal plan is an interim action and, by its own terms, will cease to apply when your State plan is approved and becomes effective.

**§ 60.1530 Is there an approval process for a negative declaration letter?**

No, the EPA has no formal review process for negative declaration letters. Once your negative declaration letter has been received, EPA will place a copy in the public docket and publish a notice in the **Federal Register**. If, at a later date, an existing small municipal waste combustion unit is identified in your State, the Federal plan implementing the emission guidelines contained in this subpart will automatically apply to that municipal waste combustion unit until your State plan is approved.

**§ 60.1535 What compliance schedule must I include in my State plan?**

(a) Your State plan must include compliance schedules that require small municipal waste combustion units to achieve final compliance or cease operation as expeditiously as practicable but not later than the earlier of two dates:

(1) December 6, 2005.

(2) Three years after the effective date of State plan approval.

(b) For compliance schedules longer than 1 year after the effective date of State plan approval, State plans must include two items:

(1) Dates for enforceable increments of progress as specified in § 60.1590.

(2) For Class I units (see definition in § 60.1940), dioxins/furans stack test results for at least one test conducted during or after 1990. The stack tests

must have been conducted according to the procedures specified under § 60.1790.

(c) Class I units that commenced construction after June 26, 1987 must comply with the dioxins/furans and mercury limits specified in Tables 2 and 3 of this subpart by the later of two dates:

(1) One year after the effective date of State plan approval.

(2) One year following the issuance of a revised construction or operation permit, if a permit modification is required.

**§ 60.1540 Are there any State plan requirements for this subpart that supersede the requirements specified in subpart B?**

Subpart B of this part establishes general requirements for developing and processing CAA section 111(d) plans. This subpart applies instead of the requirements in subpart B of this part, for two items:

(a) *Option for case-by-case less stringent emission standards and longer compliance schedules.* State plans developed to implement this subpart must be as protective as the emission guidelines contained in this subpart. State plans must require all municipal waste combustion units to comply no later than December 6, 2005. That requirement applies instead of the option for case-by-case less stringent emission standards and longer compliance schedules in § 60.24(f).

(b) *Increments of progress requirements.* For Class II units (see definition in § 60.1940), a State plan must include at least two increments of progress for the affected municipal waste combustion units. The two minimum increments are the final control plan submittal date and final compliance date in § 60.21(h)(1) and (5). That requirement applies instead of the requirement of § 60.24(e)(1) that would require a State plan to include all five increments of progress for all municipal waste combustion units. For Class I units under this subpart, the final control plan must contain the five increments of progress in § 60.24(e)(1).

**§ 60.1545 Does this subpart directly affect municipal waste combustion unit owners and operators in my State?**

(a) No, this subpart does not directly affect municipal waste combustion unit owners and operators in your State. However, municipal waste combustion unit owners and operators must comply with the State plan you developed to implement the emission guidelines contained in this subpart. Some States may incorporate the emission guidelines contained in this subpart into their State

plans by direct incorporation by reference. Others may include the model rule text directly in their State plan.

(b) All municipal waste combustion units must be in compliance with the requirements established in this subpart by December 6, 2005, whether the municipal waste combustion unit is regulated under a State or Federal plan.

**Applicability of State Plans**

**§ 60.1550 What municipal waste combustion units must I address in my State plan?**

(a) Your State plan must address all existing small municipal waste combustion units in your State that meet two criteria:

(1) The municipal waste combustion unit has the capacity to combust at least 35 tons per day of municipal solid waste but no more than 250 tons per day of municipal solid waste or refuse-derived fuel.

(2) The municipal waste combustion unit commenced construction on or before August 30, 1999.

(b) If an owner or operator of a municipal waste combustion unit makes changes that meet the definition of modification or reconstruction after June 6, 2001 for subpart AAAA of this part, the municipal waste combustion unit becomes subject to subpart AAAA of this part and the State plan no longer applies to that unit.

(c) If an owner or operator of a municipal waste combustion unit makes physical or operational changes to an existing municipal waste combustion unit primarily to comply with your State plan, subpart AAAA of this part (New Source Performance Standards for New Small Municipal Waste Combustion Units) does not apply to that unit. Such changes do not constitute modifications or reconstructions under subpart AAAA of this part.

**§ 60.1555 Are any small municipal waste combustion units exempt from my State plan?**

(a) *Small municipal waste combustion units that combust less than 11 tons per day.* Units are exempt from your State plan if four requirements are met:

(1) The municipal waste combustion unit is subject to a federally enforceable permit limiting the amount of municipal solid waste combusted to less than 11 tons per day.

(2) You are notified by the owner or operator that the unit qualifies for the exemption.

(3) You receive from the owner or operator of the unit a copy of the federally enforceable permit.

(4) The owner or operator of the unit keeps daily records of the amount of municipal solid waste combusted.

(b) *Small power production units.* Units are exempt from your State plan if four requirements are met:

(1) The unit qualifies as a small power production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)).

(2) The unit combusts homogeneous waste (excluding refuse-derived fuel) to produce electricity.

(3) You are notified by the owner or operator that the unit qualifies for the exemption.

(4) You receive documentation from the owner or operator that the unit qualifies for the exemption.

(c) *Cogeneration units.* Units are exempt from your State plan if four requirements are met:

(1) The unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)).

(2) The unit combusts homogeneous waste (excluding refuse-derived fuel) to produce electricity and steam or other forms of energy used for industrial, commercial, heating, or cooling purposes.

(3) You are notified by the owner or operator that the unit qualifies for the exemption.

(4) You receive documentation from the owner or operator that the unit qualifies for the exemption.

(d) *Municipal waste combustion units that combust only tires.* Units are exempt from your State plan if three requirements are met:

(1) The municipal waste combustion unit combusts a single-item waste stream of tires and no other municipal waste (the unit can co-fire coal, fuel oil, natural gas, or other nonmunicipal solid waste).

(2) You are notified by the owner or operator that the unit qualifies for the exemption.

(3) You receive documentation from the owner or operator that the unit qualifies for the exemption.

(e) *Hazardous waste combustion units.* Units are exempt from your State plan if the units have received a permit under section 3005 of the Solid Waste Disposal Act.

(f) *Materials recovery units.* Units are exempt from your State plan if the units combust waste mainly to recover metals. Primary and secondary smelters may qualify for the exemption.

(g) *Co-fired units.* Units are exempt from your State plan if four requirements are met:

(1) The unit has a federally enforceable permit limiting municipal

solid waste combustion to 30 percent of the total fuel input by weight.

(2) You are notified by the owner or operator that the unit qualifies for the exemption.

(3) You receive from the owner or operator of the unit a copy of the federally enforceable permit.

(4) The owner or operator records the weights, each quarter, of municipal solid waste and of all other fuels combusted.

(h) *Plastics/rubber recycling units.* Units are exempt from your State plan if four requirements are met:

(1) The pyrolysis/combustion unit is an integrated part of a plastics/rubber recycling unit as defined under "Definitions" (§ 60.1940).

(2) The owner or operator of the unit records the weight, each quarter, of plastics, rubber, and rubber tires processed.

(3) The owner or operator of the unit records the weight, each quarter, of feed stocks produced and marketed from chemical plants and petroleum refineries.

(4) The owner or operator of the unit keeps the name and address of the purchaser of the feed stocks.

(i) *Units that combust fuels made from products of plastics/rubber recycling plants.* Units are exempt from your State plan if two requirements are met:

(1) The unit combusts gasoline, diesel fuel, jet fuel, fuel oils, residual oil, refinery gas, petroleum coke, liquified petroleum gas, propane, or butane produced by chemical plants or petroleum refineries that use feed stocks produced by plastics/rubber recycling units.

(2) The unit does not combust any other municipal solid waste.

(j) *Cement kilns.* Cement kilns that combust municipal solid waste are exempt from your State plan.

(k) *Air curtain incinerators.* If an air curtain incinerator (see § 60.1940 for definition) combusts 100 percent yard waste, then those units must only meet the requirements under "Model Rule—Air Curtain Incinerators That Burn 100 Percent Yard Waste" (§§ 60.1910 through 60.1930).

**§ 60.1560 Can an affected municipal waste combustion unit reduce its capacity to less than 35 tons per day rather than comply with my State plan?**

(a) Yes, an owner or operator of an affected municipal waste combustion unit may choose to reduce, by your final compliance date, the maximum combustion capacity of the unit to less than 35 tons per day of municipal solid waste rather than comply with your

State plan. They must submit a final control plan and the notifications of achievement of increments of progress as specified in § 60.1610.

(b) The final control plan must, at a minimum, include two items:

(1) A description of the physical changes that will be made to accomplish the reduction.

(2) Calculations of the current maximum combustion capacity and the planned maximum combustion capacity after the reduction. Use the equations specified under § 60.1935(d) and (e) to calculate the combustion capacity of a municipal waste combustion unit.

(c) A permit restriction or a change in the method of operation does not qualify as a reduction in capacity. Use the equations specified under § 60.1935(d) and (e) to calculate the combustion capacity of a municipal waste combustion unit.

**§ 60.1565 What subcategories of small municipal waste combustion units must I include in my State plan?**

This subpart specifies different requirements for different subcategories of municipal waste combustion units. You must use those same two subcategories in your State plan. Those two subcategories are based on the aggregate capacity of the municipal waste combustion plant as follows:

(a) *Class I units.* Class I units are small municipal waste combustion units that are located at municipal waste combustion plants with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste. (See the definition of "municipal waste combustion plant capacity" in § 60.1940 for specification of which units at a plant are included in the aggregate capacity calculation.)

(b) *Class II units.* Class II units are small municipal waste combustion units that are located at municipal waste combustion plants with an aggregate plant combustion capacity less than or equal to 250 tons per day of municipal solid waste. (See the definition of "municipal waste combustion plant capacity" in § 60.1940 for specification of which units at a plant are included in the aggregate capacity calculation.)

**Use of Model Rule**

**§ 60.1570 What is the "model rule" in this subpart?**

(a) The model rule is the portion of the emission guidelines (§§ 60.1585 through 60.1905) that addresses the regulatory requirements applicable to small municipal waste combustion units. The model rule provides the requirements in a regulation format.

(b) In the model rule, "you" means the owner or operator of a small municipal waste combustion unit.

**§ 60.1575 How does the model rule relate to the required elements of my State plan?**

The model rule may be used to satisfy the State plan requirements specified in § 60.1515(a)(4) and (5). Alternative language may be used in your State plan, but only if you can demonstrate that the alternative language is as protective as the model rule.

**§ 60.1580 What are the principal components of the model rule?**

The model rule contains five major components:

- (a) Increments of progress toward compliance.
- (b) Good combustion practices:
  - (1) Operator training.
  - (2) Operator certification.
  - (3) Operating requirements.
- (c) Emission limits.
- (d) Monitoring and stack testing.
- (e) Recordkeeping and reporting.

**Model Rule—Increments of Progress**

**§ 60.1585 What are my requirements for meeting increments of progress and achieving final compliance?**

(a) *Class I units.* If you plan to achieve compliance more than 1 year following the effective date of State plan approval and a permit modification is not required, or more than 1 year following the date of issuance of a revised construction or operation permit if a permit modification is required, you must meet five increments of progress:

- (1) Submit a final control plan.
- (2) Submit a notification of retrofit contract award.
- (3) Initiate onsite construction.
- (4) Complete onsite construction.
- (5) Achieve final compliance.

(b) *Class II units.* If you plan to achieve compliance more than 1 year following the effective date of State plan approval and a permit modification is not required, or more than 1 year following the date of issuance of a revised construction or operation permit if a permit modification is required, you must meet two increments of progress:

- (1) Submit a final control plan.
- (2) Achieve final compliance.

**§ 60.1590 When must I complete each increment of progress?**

Table 1 of this subpart specifies compliance dates for each of the increments of progress for Class I and II units. (See § 60.1940 for definitions of classes.)

**§ 60.1595 What must I include in the notifications of achievement of my increments of progress?**

Your notification of achievement of increments of progress must include three items:

- (a) Notification that the increment of progress has been achieved.
- (b) Any items required to be submitted with the increment of progress (§§ 60.1610 through 60.1630).
- (c) The notification must be signed by the owner or operator of the municipal waste combustion unit.

**§ 60.1600 When must I submit the notifications of achievement of increments of progress?**

Notifications of the achievement of increments of progress must be postmarked no later than 10 days after the compliance date for the increment.

**§ 60.1605 What if I do not meet an increment of progress?**

If you fail to meet an increment of progress, you must submit a notification to the Administrator postmarked within 10 business days after the specified date in Table 1 of this subpart for achieving that increment of progress. The notification must inform the Administrator that you did not meet the increment. You must include in the notification an explanation of why the increment of progress was not met and your plan for meeting the increment as expeditiously as possible. You must continue to submit reports each subsequent month until the increment of progress is met.

**§ 60.1610 How do I comply with the increment of progress for submittal of a control plan?**

For your control plan increment of progress, you must complete two items:

- (a) Submit the final control plan, including a description of the devices for air pollution control and process changes that you will use to comply with the emission limits and other requirements of this subpart.
- (b) You must maintain an onsite copy of the final control plan.

**§ 60.1615 How do I comply with the increment of progress for awarding contracts?**

You must submit a signed copy of the contracts awarded to initiate onsite construction, initiate onsite installation of emission control equipment, and incorporate process changes. Submit the copy of the contracts with the notification that the increment of progress has been achieved. You do not need to include documents incorporated by reference or the attachments to the contracts.

**§ 60.1620 How do I comply with the increment of progress for initiating onsite construction?**

You must initiate onsite construction and installation of emission control equipment and initiate the process changes outlined in the final control plan.

**§ 60.1625 How do I comply with the increment of progress for completing onsite construction?**

You must complete onsite construction and installation of emission control equipment and complete process changes outlined in the final control plan.

**§ 60.1630 How do I comply with the increment of progress for achieving final compliance?**

For the final compliance increment of progress, you must complete two items:

- (a) Complete all process changes and complete retrofit construction as specified in the final control plan.
- (b) Connect the air pollution control equipment with the municipal waste combustion unit identified in the final control plan and complete process changes to the municipal waste combustion unit so that if the affected municipal waste combustion unit is brought online, all necessary process changes and air pollution control equipment are operating as designed.

**§ 60.1635 What must I do if I close my municipal waste combustion unit and then restart my municipal waste combustion unit?**

(a) If you close your municipal waste combustion unit but will reopen it prior to the final compliance date in your State plan, you must meet the increments of progress specified in § 60.1585.

(b) If you close your municipal waste combustion unit but will restart it after your final compliance date, you must complete emission control retrofit and meet the emission limits and good combustion practices on the date your municipal waste combustion unit restarts operation.

**§ 60.1640 What must I do if I plan to permanently close my municipal waste combustion unit and not restart it?**

(a) If you plan to close your municipal waste combustion unit rather than comply with the State plan, you must submit a closure notification, including the date of closure, to the Administrator by the date your final control plan is due.

(b) If the closure date is later than 1 year after the effective date of State plan approval, you must enter into a legally binding closure agreement with the

Administrator by the date your final control plan is due. The agreement must specify the date by which operation will cease.

#### **Model Rule—Good Combustion Practices: Operator Training**

##### **§ 60.1645 What types of training must I do?**

There are two types of required training:

(a) Training of operators of municipal waste combustion units using the EPA or a State-approved training course.

(b) Training of plant personnel using a plant-specific training course.

##### **§ 60.1650 Who must complete the operator training course? By when?**

(a) Three types of employees must complete the EPA or State-approved operator training course:

(1) Chief facility operators.

(2) Shift supervisors.

(3) Control room operators.

(b) Those employees must complete the operator training course by the later of three dates:

(1) One year after the effective date of State plan approval.

(2) Six months after your municipal waste combustion unit starts up.

(3) The date before an employee assumes responsibilities that affect operation of the municipal waste combustion unit.

(c) The requirement in paragraph (a) of this section does not apply to chief facility operators, shift supervisors, and control room operators who have obtained full certification from the American Society of Mechanical Engineers on or before the effective date of State plan approval.

(d) You may request that the EPA Administrator waive the requirement in paragraph (a) of this section for chief facility operators, shift supervisors, and control room operators who have obtained provisional certification from the American Society of Mechanical Engineers on or before the effective date of State plan approval.

##### **§ 60.1655 Who must complete the plant-specific training course?**

All employees with responsibilities that affect how a municipal waste combustion unit operates must complete the plant-specific training course. Include at least six types of employees:

(a) Chief facility operators.

(b) Shift supervisors.

(c) Control room operators.

(d) Ash handlers.

(e) Maintenance personnel.

(f) Crane or load handlers.

##### **§ 60.1660 What plant-specific training must I provide?**

For plant-specific training, you must do four things:

(a) For training at a particular plant, develop a specific operating manual for that plant by the later of two dates:

(1) Six months after your municipal waste combustion unit starts up.

(2) One year after the effective date of State plan approval.

(b) Establish a program to review the plant-specific operating manual with people whose responsibilities affect the operation of your municipal waste combustion unit. Complete the initial review by the later of three dates:

(1) One year after the effective date of State plan approval.

(2) Six months after your municipal waste combustion unit starts up.

(3) The date before an employee assumes responsibilities that affect operation of the municipal waste combustion unit.

(c) Update your manual annually.

(d) Review your manual with staff annually.

##### **§ 60.1665 What information must I include in the plant-specific operating manual?**

You must include 11 items in the operating manual for your plant:

(a) A summary of all applicable requirements in this subpart.

(b) A description of the basic combustion principles that apply to municipal waste combustion units.

(c) Procedures for receiving, handling, and feeding municipal solid waste.

(d) Procedures to be followed during periods of startup, shutdown, and malfunction of the municipal waste combustion unit.

(e) Procedures for maintaining a proper level of combustion air supply.

(f) Procedures for operating the municipal waste combustion unit in compliance with the requirements contained in this subpart.

(g) Procedures for responding to periodic upset or off-specification conditions.

(h) Procedures for minimizing carryover of particulate matter.

(i) Procedures for handling ash.

(j) Procedures for monitoring emissions from the municipal waste combustion unit.

(k) Procedures for recordkeeping and reporting.

##### **§ 60.1670 Where must I keep the plant-specific operating manual?**

You must keep your operating manual in an easily accessible location at your plant. It must be available for review or inspection by all employees who must review it and by the Administrator.

#### **Model Rule—Good Combustion Practices: Operator Certification**

##### **§ 60.1675 What types of operator certification must the chief facility operator and shift supervisor obtain and by when must they obtain it?**

(a) Each chief facility operator and shift supervisor must obtain and keep a current provisional operator certification from the American Society of Mechanical Engineers (QRO-1-1994) (incorporated by reference in § 60.17(h)(1)) or a current provisional operator certification from your State certification program.

(b) Each chief facility operator and shift supervisor must obtain a provisional certification by the later of three dates:

(1) For Class I units, 12 months after the effective date of State plan approval. For Class II units, 18 months after the effective date of State plan approval.

(2) Six months after the municipal waste combustion unit starts up.

(3) Six months after they transfer to the municipal waste combustion unit or 6 months after they are hired to work at the municipal waste combustion unit.

(c) Each chief facility operator and shift supervisor must take one of three actions:

(1) Obtain a full certification from the American Society of Mechanical Engineers or a State certification program in your State.

(2) Schedule a full certification exam with the American Society of Mechanical Engineers (QRO-1-1994) (incorporated by reference in § 60.17(h)(1)).

(3) Schedule a full certification exam with your State certification program.

(d) The chief facility operator and shift supervisor must obtain the full certification or be scheduled to take the certification exam by the later of the following dates:

(1) For Class I units, 12 months after the effective date of State plan approval. For Class II units, 18 months after the effective date of State plan approval.

(2) Six months after the municipal waste combustion unit starts up.

(3) Six months after they transfer to the municipal waste combustion unit or 6 months after they are hired to work at the municipal waste combustion unit.

##### **§ 60.1680 After the required date for operator certification, who may operate the municipal waste combustion unit?**

After the required date for full or provisional certification, you must not operate your municipal waste combustion unit unless one of four employees is on duty:

(a) A fully certified chief facility operator.

(b) A provisionally certified chief facility operator who is scheduled to take the full certification exam.

(c) A fully certified shift supervisor.

(d) A provisionally certified shift supervisor who is scheduled to take the full certification exam.

**§ 60.1685 What if all the certified operators must be temporarily offsite?**

If the certified chief facility operator and certified shift supervisor both are unavailable, a provisionally certified control room operator at the municipal waste combustion unit may fulfill the certified operator requirement.

Depending on the length of time that a certified chief facility operator and certified shift supervisor are away, you must meet one of three criteria:

(a) When the certified chief facility operator and certified shift supervisor are both offsite for 12 hours or less and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator.

(b) When the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for 2 weeks or less, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator. However, you must record the periods when the certified chief facility operator and certified shift supervisor are offsite and include the information in the annual report as specified under § 60.1885(l).

(c) When the certified chief facility operator and certified shift supervisor are offsite for more than 2 weeks, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator. However, you must take two actions:

(1) Notify the Administrator in writing. In the notice, state what caused the absence and what you are doing to ensure that a certified chief facility operator or certified shift supervisor is onsite.

(2) Submit a status report and corrective action summary to the Administrator every 4 weeks following the initial notification. If the Administrator notifies you that your status report or corrective action summary is disapproved, the municipal waste combustion unit may continue operation for 90 days, but then must cease operation. If corrective actions are taken in the 90-day period such that the Administrator withdraws the

disapproval, municipal waste combustion unit operation may continue.

**Model Rule—Good Combustion Practices: Operating Requirements**

**§ 60.1690 What are the operating practice requirements for my municipal waste combustion unit?**

(a) You must not operate your municipal waste combustion unit at loads greater than 110 percent of the maximum demonstrated load of the municipal waste combustion unit (4-hour block average), as specified under “Definitions” (§ 60.1940).

(b) You must not operate your municipal waste combustion unit so that the temperature at the inlet of the particulate matter control device exceeds 17°C above the maximum demonstrated temperature of the particulate matter control device (4-hour block average), as specified under “Definitions” (§ 60.1940).

(c) If your municipal waste combustion unit uses activated carbon to control dioxins/furans or mercury emissions, you must maintain an 8-hour block average carbon feed rate at or above the highest average level established during the most recent dioxins/furans or mercury test.

(d) If your municipal waste combustion unit uses activated carbon to control dioxins/furans or mercury emissions, you must evaluate total carbon usage for each calendar quarter. The total amount of carbon purchased and delivered to your municipal waste combustion plant must be at or above the required quarterly usage of carbon. At your option, you may choose to evaluate required quarterly carbon usage on a municipal waste combustion unit basis for each individual municipal waste combustion unit at your plant. Calculate the required quarterly usage of carbon using equation 4 or 5 in § 60.1935(f).

(e) Your municipal waste combustion unit is exempt from limits on load level, temperature at the inlet of the particulate matter control device, and carbon feed rate during any of five situations:

(1) During your annual tests for dioxins/furans.

(2) During your annual mercury tests (for carbon feed rate requirements only).

(3) During the 2 weeks preceding your annual tests for dioxins/furans.

(4) During the 2 weeks preceding your annual mercury tests (for carbon feed rate requirements only).

(5) Whenever the Administrator or delegated State authority permits you to do any of five activities:

(i) Evaluate system performance.

(ii) Test new technology or control technologies.

(iii) Perform diagnostic testing.

(iv) Perform other activities to improve the performance of your municipal waste combustion unit.

(v) Perform other activities to advance the state of the art for emission controls for your municipal waste combustion unit.

**§ 60.1695 What happens to the operating requirements during periods of startup, shutdown, and malfunction?**

(a) The operating requirements of this subpart apply at all times except during periods of municipal waste combustion unit startup, shutdown, or malfunction.

(b) Each startup, shutdown, or malfunction must not last for longer than 3 hours.

**Model Rule—Emission Limits**

**§ 60.1700 What pollutants are regulated by this subpart?**

Eleven pollutants, in four groupings, are regulated:

(a) *Organics*. Dioxins/furans.

(b) *Metals*.

(1) Cadmium.

(2) Lead.

(3) Mercury.

(4) Opacity.

(5) Particulate matter.

(c) *Acid gases*.

(1) Hydrogen chloride.

(2) Nitrogen oxides.

(3) Sulfur dioxide.

(d) *Other*.

(1) Carbon monoxide.

(2) Fugitive ash.

**§ 60.1705 What emission limits must I meet? By when?**

(a) After the date the initial stack test and continuous emission monitoring system evaluation are required or completed (whichever is earlier), you must meet the applicable emission limits specified in the four tables of this subpart:

(1) For Class I units, see Tables 2 and 3 of this subpart.

(2) For Class II units, see Table 4 of this subpart.

(3) For carbon monoxide emission limits for both classes of units, see Table 5 of this subpart.

(b) If your Class I municipal waste combustion unit began construction, reconstruction, or modification after June 26, 1987, then you must comply with the dioxins/furans and mercury emission limits specified in Table 2 of this subpart as applicable by the later of the following two dates:

(1) One year after the effective date of State plan approval.

(2) One year after the issuance of a revised construction or operating

permit, if a permit modification is required. Final compliance with the dioxins/furans limits must be achieved no later than December 6, 2005, even if the date 1 year after the issuance of a revised construction or operation permit is later than December 6, 2005.

**§ 60.1710 What happens to the emission limits during periods of startup, shutdown, and malfunction?**

(a) The emission limits of this subpart apply at all times except during periods of municipal waste combustion unit startup, shutdown, or malfunction.

(b) Each startup, shutdown, or malfunction must not last for longer than 3 hours.

(c) A maximum of 3 hours of test data can be dismissed from compliance calculations during periods of startup, shutdown, or malfunction.

(d) During startup, shutdown, or malfunction periods longer than 3 hours, emissions data cannot be discarded from compliance calculations and all provisions under § 60.11(d) apply.

**Model Rule—Continuous Emission Monitoring**

**§ 60.1715 What types of continuous emission monitoring must I perform?**

To continuously monitor emissions, you must perform four tasks:

(a) Install continuous emission monitoring systems for certain gaseous pollutants.

(b) Make sure your continuous emission monitoring systems are operating correctly.

(c) Make sure you obtain the minimum amount of monitoring data.

(d) Install a continuous opacity monitoring system.

**§ 60.1720 What continuous emission monitoring systems must I install for gaseous pollutants?**

(a) You must install, calibrate, maintain, and operate continuous emission monitoring systems for oxygen (or carbon dioxide), sulfur dioxide, and carbon monoxide. If you operate a Class I municipal waste combustion unit, also install, calibrate, maintain, and operate a continuous emission monitoring system for nitrogen oxides. Install the continuous emission monitoring systems for sulfur dioxide, nitrogen oxides, and oxygen (or carbon dioxide) at the outlet of the air pollution control device.

(b) You must install, evaluate, and operate each continuous emission monitoring system according to the "Monitoring Requirements" in § 60.13.

(c) You must monitor the oxygen (or carbon dioxide) concentration at each

location where you monitor sulfur dioxide and carbon monoxide. Additionally, if you operate a Class I municipal waste combustion unit, you must also monitor the oxygen (or carbon dioxide) concentration at the location where you monitor nitrogen oxides.

(d) You may choose to monitor carbon dioxide instead of oxygen as a diluent gas. If you choose to monitor carbon dioxide, then an oxygen monitor is not required and you must follow the requirements in § 60.1745.

(e) If you choose to demonstrate compliance by monitoring the percent reduction of sulfur dioxide, you must also install continuous emission monitoring systems for sulfur dioxide and oxygen (or carbon dioxide) at the inlet of the air pollution control device.

(f) If you prefer to use an alternative sulfur dioxide monitoring method, such as parametric monitoring, or cannot monitor emissions at the inlet of the air pollution control device to determine percent reduction, you can apply to the Administrator for approval to use an alternative monitoring method under § 60.13(i).

**§ 60.1725 How are the data from the continuous emission monitoring systems used?**

You must use data from the continuous emission monitoring systems for sulfur dioxide, nitrogen oxides, and carbon monoxide to demonstrate continuous compliance with the applicable emission limits specified in Tables 2, 3, 4, and 5 of this subpart. To demonstrate compliance for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash, see § 60.1780.

**§ 60.1730 How do I make sure my continuous emission monitoring systems are operating correctly?**

(a) Conduct initial, daily, quarterly, and annual evaluations of your continuous emission monitoring systems that measure oxygen (or carbon dioxide), sulfur dioxide, nitrogen oxides (Class I municipal waste combustion units only), and carbon monoxide.

(b) Complete your initial evaluation of the continuous emission monitoring systems within 180 days after your final compliance date.

(c) For initial and annual evaluations, collect data concurrently (or within 30 to 60 minutes) using your oxygen (or carbon dioxide) continuous emission monitoring system, your sulfur dioxide, nitrogen oxides, or carbon monoxide continuous emission monitoring systems, as appropriate, and the appropriate test methods specified in

Table 6 of this subpart. Collect the data during each initial and annual evaluation of your continuous emission monitoring systems following the applicable performance specifications in appendix B of this part. Table 7 of this subpart shows the performance specifications that apply to each continuous emission monitoring system.

(d) Follow the quality assurance procedures in Procedure 1 of appendix F of this part for each continuous emission monitoring system. The procedures include daily calibration drift and quarterly accuracy determinations.

**§ 60.1735 Am I exempt from any appendix B or appendix F requirements to evaluate continuous emission monitoring systems?**

Yes, the accuracy tests for your sulfur dioxide continuous emission monitoring system require you to also evaluate your oxygen (or carbon dioxide) continuous emission monitoring system. Therefore, your oxygen (or carbon dioxide) continuous emission monitoring system is exempt from two requirements:

(a) Section 2.3 of Performance Specification 3 in appendix B of this part (relative accuracy requirement).

(b) Section 5.1.1 of appendix F of this part (relative accuracy test audit).

**§ 60.1740 What is my schedule for evaluating continuous emission monitoring systems?**

(a) Conduct annual evaluations of your continuous emission monitoring systems no more than 13 months after the previous evaluation was conducted.

(b) Evaluate your continuous emission monitoring systems daily and quarterly as specified in appendix F of this part.

**§ 60.1745 What must I do if I choose to monitor carbon dioxide instead of oxygen as a diluent gas?**

You must establish the relationship between oxygen and carbon dioxide during the initial evaluation of your continuous emission monitoring systems. You may reestablish the relationship during annual evaluations. To establish the relationship use three procedures:

(a) Use EPA Reference Method 3A or 3B in appendix A of this part to determine oxygen concentration at the location of your carbon dioxide monitor.

(b) Conduct at least three test runs for oxygen. Make sure each test run represents a 1-hour average and that sampling continues for at least 30 minutes in each hour.

(c) Use the fuel-factor equation in EPA Reference Method 3B in appendix A of this part to determine the relationship between oxygen and carbon dioxide.

**§ 60.1750 What is the minimum amount of monitoring data I must collect with my continuous emission monitoring systems and is the data collection requirement enforceable?**

(a) Where continuous emission monitoring systems are required, obtain 1-hour arithmetic averages. Make sure the averages for sulfur dioxide, nitrogen oxides (Class I municipal waste combustion units only), and carbon monoxide are in parts per million by dry volume at 7 percent oxygen (or the equivalent carbon dioxide level). Use the 1-hour averages of oxygen (or carbon dioxide) data from your continuous emission monitoring system to determine the actual oxygen (or carbon dioxide) level and to calculate emissions at 7 percent oxygen (or the equivalent carbon dioxide level).

(b) Obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average. Section 60.13(e)(2) requires your continuous emission monitoring systems to complete at least one cycle of operation (sampling, analyzing, and data recording) for each 15-minute period.

(c) Obtain valid 1-hour averages for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel.

(d) If you do not obtain the minimum data required in paragraphs (a) through (c) of this section, you are in violation of the data collection requirement regardless of the emission level monitored, and you must notify the Administrator according to § 60.1885(e).

(e) If you do not obtain the minimum data required in paragraphs (a) through (c) of this section, you must still use all valid data from the continuous emission monitoring systems in calculating emission concentrations and percent reductions in accordance with § 60.1755.

**§ 60.1755 How do I convert my 1-hour arithmetic averages into appropriate averaging times and units?**

(a) Use the equation in § 60.1935(a) to calculate emissions at 7 percent oxygen.

(b) Use EPA Reference Method 19 in appendix A of this part, section 4.3, to calculate the daily geometric average concentrations of sulfur dioxide emissions. If you are monitoring the percent reduction of sulfur dioxide, use EPA Reference Method 19 in appendix A of this part, section 5.4, to determine the daily geometric average percent reduction of potential sulfur dioxide emissions.

(c) If you operate a Class I municipal waste combustion unit, use EPA

Reference Method 19 in appendix A of this part, section 4.1, to calculate the daily arithmetic average for concentrations of nitrogen oxides.

(d) Use EPA Reference Method 19 in appendix A of this part, section 4.1, to calculate the 4-hour or 24-hour daily block averages (as applicable) for concentrations of carbon monoxide.

**§ 60.1760 What is required for my continuous opacity monitoring system and how are the data used?**

(a) Install, calibrate, maintain, and operate a continuous opacity monitoring system.

(b) Install, evaluate, and operate each continuous opacity monitoring system according to § 60.13.

(c) Complete an initial evaluation of your continuous opacity monitoring system according to Performance Specification 1 in appendix B of this part. Complete the evaluation by 180 days after your final compliance date.

(d) Complete each annual evaluation of your continuous opacity monitoring system no more than 13 months after the previous evaluation.

(e) Use tests conducted according to EPA Reference Method 9 in appendix A of this part, as specified in § 60.1790, to determine compliance with the opacity limit in Table 2 or 4 of this subpart. The data obtained from your continuous opacity monitoring system are not used to determine compliance with the opacity limit.

**§ 60.1765 What additional requirements must I meet for the operation of my continuous emission monitoring systems and continuous opacity monitoring system?**

Use the required span values and applicable performance specifications in Table 8 of this subpart.

**§ 60.1770 What must I do if any of my continuous emission monitoring systems are temporarily unavailable to meet the data collection requirements?**

Refer to Table 8 of this subpart. It shows alternate methods for collecting data when systems malfunction or when repairs, calibration checks, or zero and span checks keep you from collecting the minimum amount of data.

**Model Rule—Stack Testing****§ 60.1775 What types of stack tests must I conduct?**

Conduct initial and annual stack tests to measure the emission levels of dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash.

**§ 60.1780 How are the stack test data used?**

You must use results of stack tests for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash to demonstrate compliance with the applicable emission limits in Tables 2 and 4 of this subpart. To demonstrate compliance for carbon monoxide, nitrogen oxides, and sulfur dioxide, see § 60.1725.

**§ 60.1785 What schedule must I follow for the stack testing?**

(a) Conduct initial stack tests for the pollutants listed in § 60.1775 by 180 days after your final compliance date.

(b) Conduct annual stack tests for the same pollutants after the initial stack test. Conduct each annual stack test no later than 13 months after the previous stack test.

**§ 60.1790 What test methods must I use to stack test?**

(a) Follow Table 8 of this subpart to establish the sampling location and to determine pollutant concentrations, number of traverse points, individual test methods, and other specific testing requirements for the different pollutants.

(b) Make sure that stack tests for all the pollutants consist of at least three test runs, as specified in § 60.8. Use the average of the pollutant emission concentrations from the three test runs to determine compliance with the applicable emission limits in Tables 2 and 4 of this subpart.

(c) Obtain an oxygen (or carbon dioxide) measurement at the same time as your pollutant measurements to determine diluent gas levels, as specified in § 60.1720.

(d) Use the equations in § 60.1935(a) to calculate emission levels at 7 percent oxygen (or an equivalent carbon dioxide basis), the percent reduction in potential hydrogen chloride emissions, and the reduction efficiency for mercury emissions. See the individual test methods in Table 6 of this subpart for other required equations.

(e) You can apply to the Administrator for approval under § 60.8(b) to use a reference method with minor changes in methodology, use an equivalent method, use an alternative method the results of which the Administrator has determined are adequate for demonstrating compliance, waive the requirement for a performance test because you have demonstrated by other means that you are in compliance, or use a shorter sampling time or smaller sampling volume.

**§ 60.1795 May I conduct stack testing less often?**

(a) You may test less often if you own or operate a Class II municipal waste combustion unit and if all stack tests for a given pollutant over 3 consecutive years show you comply with the emission limit. In that case, you are not required to conduct a stack test for that pollutant for the next 2 years. However, you must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows you comply with the emission limit. Thereafter, you must perform stack tests every 3rd year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, you must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for that pollutant. The provision applies to all pollutants subject to stack testing requirements: dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash.

(b) You can test less often for dioxins/furans emissions if you own or operate a municipal waste combustion plant that meets two conditions. First, you have multiple municipal waste combustion units onsite that are subject to this subpart. Second, all those municipal waste combustion units have demonstrated levels of dioxins/furans emissions less than or equal to 15 nanograms per dry standard cubic meter (total mass) for Class I units, or 30 nanograms per dry standard cubic meter (total mass) for Class II units, for 2 consecutive years. In that case, you may choose to conduct annual stack tests on only one municipal waste combustion unit per year at your plant. The provision only applies to stack testing for dioxins/furans emissions.

(1) Conduct the stack test no more than 13 months following a stack test on any municipal waste combustion unit subject to this subpart at your plant. Each year, test a different municipal waste combustion unit subject to this subpart and test all municipal waste combustion units subject to this subpart in a sequence that you determine. Once you determine a testing sequence, it must not be changed without approval by the Administrator.

(2) If each annual stack test shows levels of dioxins/furans emissions less than or equal to 15 nanograms per dry standard cubic meter (total mass) for Class I units, or 30 nanograms per dry standard cubic meter (total mass) for Class II units, you may continue stack tests on only one municipal waste

combustion unit subject to this subpart per year.

(3) If any annual stack test indicates levels of dioxins/furans emissions greater than 15 nanograms per dry standard cubic meter (total mass) for Class I units, or 30 nanograms per dry standard cubic meter (total mass) for Class II units, conduct subsequent annual stack tests on all municipal waste combustion units subject to this subpart at your plant. You may return to testing one municipal waste combustion unit subject to this subpart per year if you can demonstrate dioxins/furans emissions levels less than or equal to 15 nanograms per dry standard cubic meter (total mass) for Class I units, or 30 nanograms per dry standard cubic meter (total mass) for Class II units, for all municipal waste combustion units at your plant subject to this subpart for 2 consecutive years.

**§ 60.1800 May I deviate from the 13-month testing schedule if unforeseen circumstances arise?**

You may not deviate from the 13-month testing schedules specified in §§ 60.1785(b) and 60.1795(b)(1) unless you apply to the Administrator for an alternative schedule, and the Administrator approves your request for alternate scheduling prior to the date on which you would otherwise have been required to conduct the next stack test.

**Model Rule—Other Monitoring Requirements****§ 60.1805 Must I meet other requirements for continuous monitoring?**

You must also monitor three operating parameters:

(a) Load level of each municipal waste combustion unit.

(b) Temperature of flue gases at the inlet of your particulate matter air pollution control device.

(c) Carbon feed rate if activated carbon is used to control dioxins/furans or mercury emissions.

**§ 60.1810 How do I monitor the load of my municipal waste combustion unit?**

(a) If your municipal waste combustion unit generates steam, you must install, calibrate, maintain, and operate a steam flowmeter or a feed water flowmeter and meet five requirements:

(1) Continuously measure and record the measurements of steam (or feed water) in kilograms (or pounds) per hour.

(2) Calculate your steam (or feed water) flow in 4-hour block averages.

(3) Calculate the steam (or feed water) flow rate using the method in “American Society of Mechanical

Engineers Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1—1964 (R1991),” section 4 (incorporated by reference in § 60.17(h)(2)).

(4) Design, construct, install, calibrate, and use nozzles or orifices for flow rate measurements, using the recommendations in “American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters,” 6th Edition (1971), chapter 4 (incorporated by reference in § 60.17(h)(3)).

(5) Before each dioxins/furans stack test, or at least once a year, calibrate all signal conversion elements associated with steam (or feed water) flow measurements according to the manufacturer instructions.

(b) If your municipal waste combustion units do not generate steam, or, if your municipal waste combustion units have shared steam systems and steam load cannot be estimated per unit, you must determine, to the satisfaction of the Administrator, one or more operating parameters that can be used to continuously estimate load level (for example, the feed rate of municipal solid waste or refuse-derived fuel). You must continuously monitor the selected parameters.

**§ 60.1815 How do I monitor the temperature of flue gases at the inlet of my particulate matter control device?**

You must install, calibrate, maintain, and operate a device to continuously measure the temperature of the flue gas stream at the inlet of each particulate matter control device.

**§ 60.1820 How do I monitor the injection rate of activated carbon?**

If your municipal waste combustion unit uses activated carbon to control dioxins/furans or mercury emissions, you must meet three requirements:

(a) Select a carbon injection system operating parameter that can be used to calculate carbon feed rate (for example, screw feeder speed).

(b) During each dioxins/furans and mercury stack test, determine the average carbon feed rate in kilograms (or pounds) per hour. Also, determine the average operating parameter level that correlates to the carbon feed rate. Establish a relationship between the operating parameter and the carbon feed rate in order to calculate the carbon feed rate based on the operating parameter level.

(c) Continuously monitor the selected operating parameter during all periods when the municipal waste combustion unit is operating and combusting waste

and calculate the 8-hour block average carbon feed rate in kilograms (or pounds) per hour, based on the selected operating parameter. When calculating the 8-hour block average, do two things:

- (1) Exclude hours when the municipal waste combustion unit is not operating.
- (2) Include hours when the municipal waste combustion unit is operating but the carbon feed system is not working correctly.

**§ 60.1825 What is the minimum amount of monitoring data I must collect with my continuous parameter monitoring systems and is the data collection requirement enforceable?**

- (a) Where continuous parameter monitoring systems are used, obtain 1-hour arithmetic averages for three parameters:
  - (1) Load level of the municipal waste combustion unit.
  - (2) Temperature of the flue gases at the inlet of your particulate matter control device.
  - (3) Carbon feed rate if activated carbon is used to control dioxins/furans or mercury emissions.
- (b) Obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average.
- (c) Obtain valid 1-hour averages for at least 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel.
- (d) If you do not obtain the minimum data required in paragraphs (a) through (c) of this section, you are in violation of the data collection requirement, and you must notify the Administrator according to § 60.1885(e).

**Model Rule—Recordkeeping**

**§ 60.1830 What records must I keep?**

- You must keep four types of records:
- (a) Operator training and certification.
  - (b) Stack tests.
  - (c) Continuously monitored pollutants and parameters.
  - (d) Carbon feed rate.

**§ 60.1835 Where must I keep my records and for how long?**

- (a) Keep all records onsite in paper copy or electronic format unless the Administrator approves another format.
- (b) Keep all records on each municipal waste combustion unit for at least 5 years.
- (c) Make all records available for submittal to the Administrator, or for onsite review by an inspector.

**§ 60.1840 What records must I keep for operator training and certification?**

You must keep records of six items:

(a) *Records of provisional certifications.* Include three items:

(1) For your municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who are provisionally certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program.

(2) Dates of the initial provisional certifications.

(3) Documentation showing current provisional certifications.

(b) *Records of full certifications.* Include three items:

(1) For your municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who are fully certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program.

(2) Dates of initial and renewal full certifications.

(3) Documentation showing current full certifications.

(c) *Records showing completion of the operator training course.* Include three items:

(1) For your municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who have completed the EPA or State municipal waste combustion operator training course.

(2) Dates of completion of the operator training course.

(3) Documentation showing completion of operator training course.

(d) *Records of reviews for plant-specific operating manuals.* Include three items:

(1) Names of persons who have reviewed the operating manual.

(2) Date of the initial review.

(3) Dates of subsequent annual reviews.

(e) *Records of when a certified operator is temporarily offsite.* Include two main items:

(1) If the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for 2 weeks or less, and no other certified operator is onsite, record the dates that the certified chief facility operator and certified shift supervisor were offsite.

(2) When all certified chief facility operators and certified shift supervisors are offsite for more than 2 weeks and no other certified operator is onsite, keep records of four items:

(i) Your notice that all certified persons are offsite.

(ii) The conditions that cause those people to be offsite.

(iii) The corrective actions you are taking to ensure a certified chief facility operator or certified shift supervisor is onsite.

(iv) Copies of the written reports submitted every 4 weeks that summarize the actions taken to ensure that a certified chief facility operator or certified shift supervisor will be onsite.

(f) *Records of calendar dates.* Include the calendar date on each record.

**§ 60.1845 What records must I keep for stack tests?**

For stack tests required under § 60.1775, you must keep records of four items:

(a) The results of the stack tests for eight pollutants or parameters recorded in the appropriate units of measure specified in Table 2 or 4 of this subpart:

- (1) Dioxins/furans.
- (2) Cadmium.
- (3) Lead.
- (4) Mercury.
- (5) Opacity.
- (6) Particulate matter.
- (7) Hydrogen chloride.
- (8) Fugitive ash.

(b) Test reports including supporting calculations that document the results of all stack tests.

(c) The maximum demonstrated load of your municipal waste combustion units and maximum temperature at the inlet of your particulate matter control device during all stack tests for dioxins/furans emissions.

(d) The calendar date of each record.

**§ 60.1850 What records must I keep for continuously monitored pollutants or parameters?**

You must keep records of eight items.

(a) *Records of monitoring data.*

Document six parameters measured using continuous monitoring systems:

- (1) All 6-minute average levels of opacity.
- (2) All 1-hour average concentrations of sulfur dioxide emissions.
- (3) For Class I municipal waste combustion units only, all 1-hour average concentrations of nitrogen oxides emissions.
- (4) All 1-hour average concentrations of carbon monoxide emissions.
- (5) All 1-hour average load levels of your municipal waste combustion unit.
- (6) All 1-hour average flue gas temperatures at the inlet of the particulate matter control device.

(b) *Records of average concentrations and percent reductions.* Document five parameters:

- (1) All 24-hour daily block geometric average concentrations of sulfur dioxide emissions or average percent reductions of sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, all 24-hour daily arithmetic average concentrations of nitrogen oxides emissions.

(3) All 4-hour block or 24-hour daily block arithmetic average concentrations of carbon monoxide emissions.

(4) All 4-hour block arithmetic average load levels of your municipal waste combustion unit.

(5) All 4-hour block arithmetic average flue gas temperatures at the inlet of the particulate matter control device.

(c) *Records of exceedances.* Document three items:

(1) Calendar dates whenever any of the five pollutant or parameter levels recorded in paragraph (b) of this section or the opacity level recorded in paragraph (a)(1) of this section did not meet the emission limits or operating levels specified in this subpart.

(2) Reasons you exceeded the applicable emission limits or operating levels.

(3) Corrective actions you took, or are taking, to meet the emission limits or operating levels.

(d) *Records of minimum data.*

Document three items:

(1) Calendar dates for which you did not collect the minimum amount of data required under §§ 60.1750 and 60.1825. Record those dates for five types of pollutants and parameters:

(i) Sulfur dioxide emissions.

(ii) For Class I municipal waste combustion units only, nitrogen oxides emissions.

(iii) Carbon monoxide emissions.

(iv) Load levels of your municipal waste combustion unit.

(v) Temperatures of the flue gases at the inlet of the particulate matter control device.

(2) Reasons you did not collect the minimum data.

(3) Corrective actions you took or are taking to obtain the required amount of data.

(e) *Records of exclusions.* Document each time you have excluded data from your calculation of averages for any of the following five pollutants or parameters and the reasons the data were excluded:

(1) Sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, nitrogen oxides emissions.

(3) Carbon monoxide emissions.

(4) Load levels of your municipal waste combustion unit.

(5) Temperatures of the flue gases at the inlet of the particulate matter control device.

(f) *Records of drift and accuracy.* Document the results of your daily drift

tests and quarterly accuracy determinations according to Procedure 1 of appendix F of this part. Keep those records for the sulfur dioxide, nitrogen oxides (Class I municipal waste combustion units only), and carbon monoxide continuous emissions monitoring systems.

(g) *Records of the relationship between oxygen and carbon dioxide.* If you choose to monitor carbon dioxide instead of oxygen as a diluent gas, document the relationship between oxygen and carbon dioxide, as specified in § 60.1745.

(h) *Records of calendar dates.* Include the calendar date on each record.

**§ 60.1855 What records must I keep for municipal waste combustion units that use activated carbon?**

For municipal waste combustion units that use activated carbon to control dioxins/furans or mercury emissions, you must keep records of five items:

(a) *Records of average carbon feed rate.* Document five items:

(1) Average carbon feed rate in kilograms (or pounds) per hour during all stack tests for dioxins/furans and mercury emissions. Include supporting calculations in the records.

(2) For the operating parameter chosen to monitor carbon feed rate, average operating level during all stack tests for dioxins/furans and mercury emissions. Include supporting data that document the relationship between the operating parameter and the carbon feed rate.

(3) All 8-hour block average carbon feed rates in kilograms (or pounds) per hour calculated from the monitored operating parameter.

(4) Total carbon purchased and delivered to the municipal waste combustion plant for each calendar quarter. If you choose to evaluate total carbon purchased and delivered on a municipal waste combustion unit basis, record the total carbon purchased and delivered for each individual municipal waste combustion unit at your plant. Include supporting documentation.

(5) Required quarterly usage of carbon for the municipal waste combustion plant, calculated using equation 4 or 5 in § 60.1935(f). If you choose to evaluate required quarterly usage for carbon on a municipal waste combustion unit basis, record the required quarterly usage for each municipal waste combustion unit at your plant. Include supporting calculations.

(b) *Records of low carbon feed rates.* Document three items:

(1) The calendar dates when the average carbon feed rate over an 8-hour

block was less than the average carbon feed rates determined during the most recent stack test for dioxins/furans or mercury emissions (whichever has a higher feed rate).

(2) Reasons for the low carbon feed rates.

(3) Corrective actions you took or are taking to meet the 8-hour average carbon feed rate requirement.

(c) *Records of minimum carbon feed rate data.* Document three items:

(1) Calendar dates for which you did not collect the minimum amount of carbon feed rate data required under § 60.1825.

(2) Reasons you did not collect the minimum data.

(3) Corrective actions you took or are taking to get the required amount of data.

(d) *Records of exclusions.* Document each time you have excluded data from your calculation of average carbon feed rates and the reasons the data were excluded.

(e) *Records of calendar dates.* Include the calendar date on each record.

**Model Rule—Reporting**

**§ 60.1860 What reports must I submit and in what form?**

(a) Submit an initial report and annual reports, plus semiannual reports for any emission or parameter level that does not meet the limits specified in this subpart.

(b) Submit all reports on paper, postmarked on or before the submittal dates in §§ 60.1870, 60.1880, and 60.1895. If the Administrator agrees, you may submit electronic reports.

(c) Keep a copy of all reports required by §§ 60.1875, 60.1885, and 60.1900 onsite for 5 years.

**§ 60.1865 What are the appropriate units of measurement for reporting my data?**

See Tables 2, 3, 4 and 5 of this subpart for appropriate units of measurement.

**§ 60.1870 When must I submit the initial report?**

As specified in § 60.7(c), submit your initial report by 180 days after your final compliance date.

**§ 60.1875 What must I include in my initial report?**

You must include seven items:

(a) The emission levels measured on the date of the initial evaluation of your continuous emission monitoring systems for all of the following five pollutants or parameters as recorded in accordance with § 60.1850(b).

(1) The 24-hour daily geometric average concentration of sulfur dioxide emissions or the 24-hour daily

geometric percent reduction of sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, the 24-hour daily arithmetic average concentration of nitrogen oxides emissions.

(3) The 4-hour block or 24-hour daily arithmetic average concentration of carbon monoxide emissions.

(4) The 4-hour block arithmetic average load level of your municipal waste combustion unit.

(5) The 4-hour block arithmetic average flue gas temperature at the inlet of the particulate matter control device.

(b) The results of the initial stack tests for eight pollutants or parameters (use appropriate units as specified in Table 2 or 4 of this subpart):

- (1) Dioxins/furans.
- (2) Cadmium.
- (3) Lead.
- (4) Mercury.
- (5) Opacity.
- (6) Particulate matter.
- (7) Hydrogen chloride.
- (8) Fugitive ash.

(c) The test report that documents the initial stack tests including supporting calculations.

(d) The initial performance evaluation of your continuous emissions monitoring systems. Use the applicable performance specifications in appendix B of this part in conducting the evaluation.

(e) The maximum demonstrated load of your municipal waste combustion unit and the maximum demonstrated temperature of the flue gases at the inlet of the particulate matter control device. Use values established during your initial stack test for dioxins/furans emissions and include supporting calculations.

(f) If your municipal waste combustion unit uses activated carbon to control dioxins/furans or mercury emissions, the average carbon feed rates that you recorded during the initial stack tests for dioxins/furans and mercury emissions. Include supporting calculations as specified in § 60.1855(a)(1) and (2).

(g) If you choose to monitor carbon dioxide instead of oxygen as a diluent gas, documentation of the relationship between oxygen and carbon dioxide, as specified in § 60.1745.

**§ 60.1880 When must I submit the annual report?**

Submit the annual report no later than February 1 of each year that follows the calendar year in which you collected the data. If you have an operating permit for any unit under title V of the CAA, the permit may require you to submit semiannual reports. Parts 70 and 71 of

this chapter contain program requirements for permits.

**§ 60.1885 What must I include in my annual report?**

Summarize data collected for all pollutants and parameters regulated under this subpart. Your summary must include twelve items:

(a) The results of the annual stack test, using appropriate units, for eight pollutants, as recorded under § 60.1845(a):

- (1) Dioxins/furans.
- (2) Cadmium.
- (3) Lead.
- (4) Mercury.
- (5) Opacity.
- (6) Particulate matter.
- (7) Hydrogen chloride.
- (8) Fugitive ash.

(b) A list of the highest average levels recorded, in the appropriate units. List those values for five pollutants or parameters:

- (1) Sulfur dioxide emissions.
- (2) For Class I municipal waste combustion units only, nitrogen oxides emissions.
- (3) Carbon monoxide emissions.
- (4) Load level of the municipal waste combustion unit.
- (5) Temperature of the flue gases at the inlet of the particulate matter air pollution control device (4-hour block average).

(c) The highest 6-minute opacity level measured. Base the value on all 6-minute average opacity levels recorded by your continuous opacity monitoring system (§ 60.1850(a)(1)).

(d) For municipal waste combustion units that use activated carbon for controlling dioxins/furans or mercury emissions, include four records:

- (1) The average carbon feed rates recorded during the most recent dioxins/furans and mercury stack tests.
- (2) The lowest 8-hour block average carbon feed rate recorded during the year.
- (3) The total carbon purchased and delivered to the municipal waste combustion plant for each calendar quarter. If you choose to evaluate total carbon purchased and delivered on a municipal waste combustion unit basis, record the total carbon purchased and delivered for each individual municipal waste combustion unit at your plant.

(4) The required quarterly carbon usage of your municipal waste combustion plant calculated using equation 4 or 5 in § 60.1935(f). If you choose to evaluate required quarterly usage for carbon on a municipal waste combustion unit basis, record the required quarterly usage for each municipal waste combustion unit at your plant.

(e) The total number of days that you did not obtain the minimum number of hours of data for six pollutants or parameters. Include the reasons you did not obtain the data and corrective actions that you have taken to obtain the data in the future. Include data on:

- (1) Sulfur dioxide emissions.
- (2) For Class I municipal waste combustion units only, nitrogen oxides emissions.
- (3) Carbon monoxide emissions.
- (4) Load level of the municipal waste combustion unit.
- (5) Temperature of the flue gases at the inlet of the particulate matter air pollution control device.
- (6) Carbon feed rate.

(f) The number of hours you have excluded data from the calculation of average levels (include the reasons for excluding it). Include data for six pollutants or parameters:

- (1) Sulfur dioxide emissions.
- (2) For Class I municipal waste combustion units only, nitrogen oxides emissions.
- (3) Carbon monoxide emissions.
- (4) Load level of the municipal waste combustion unit.
- (5) Temperature of the flue gases at the inlet of the particulate matter air pollution control device.
- (6) Carbon feed rate.

(g) A notice of your intent to begin a reduced stack testing schedule for dioxins/furans emissions during the following calendar year if you are eligible for alternative scheduling (§ 60.1795(a) or (b)).

(h) A notice of your intent to begin a reduced stack testing schedule for other pollutants during the following calendar year if you are eligible for alternative scheduling (§ 60.1795(a)).

(i) A summary of any emission or parameter level that did not meet the limits specified in this subpart.

(j) A summary of the data in paragraphs (a) through (d) of this section from the year preceding the reporting year which gives the Administrator a summary of the performance of the municipal waste combustion unit over a 2-year period.

(k) If you choose to monitor carbon dioxide instead of oxygen as a diluent gas, documentation of the relationship between oxygen and carbon dioxide, as specified in § 60.1745.

(l) Documentation of periods when all certified chief facility operators and certified shift supervisors are offsite for more than 12 hours.

**§ 60.1890 What must I do if I am out of compliance with the requirements of this subpart?**

You must submit a semiannual report on any recorded emission or parameter

level that does not meet the requirements specified in this subpart.

**§ 60.1895 If a semiannual report is required, when must I submit it?**

(a) For data collected during the first half of a calendar year, submit your semiannual report by August 1 of that year.

(b) For data you collected during the second half of the calendar year, submit your semiannual report by February 1 of the following year.

**§ 60.1900 What must I include in the semiannual out-of-compliance reports?**

You must include three items in the semiannual report:

(a) For any of the following six pollutants or parameters that exceeded the limits specified in this subpart, include the calendar date they exceeded the limits, the averaged and recorded data for that date, the reasons for exceeding the limits, and your corrective actions:

(1) Concentration or percent reduction of sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, concentration of nitrogen oxides emissions.

(3) Concentration of carbon monoxide emissions.

(4) Load level of your municipal waste combustion unit.

(5) Temperature of the flue gases at the inlet of your particulate matter air pollution control device.

(6) Average 6-minute opacity level. The data obtained from your continuous opacity monitoring system are not used to determine compliance with the limit on opacity emissions.

(b) If the results of your annual stack tests (as recorded in § 60.1845(a)) show emissions above the limits specified in Table 2 or 4 of this subpart as applicable for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash, include a copy of the test report that documents the emission levels and your corrective actions.

(c) For municipal waste combustion units that apply activated carbon to control dioxins/furans or mercury emissions, include two items:

(1) Documentation of all dates when the 8-hour block average carbon feed rate (calculated from the carbon injection system operating parameter) is less than the highest carbon feed rate established during the most recent mercury and dioxins/furans stack test (as specified in § 60.1855(a)(1)). Include four items:

(i) Eight-hour average carbon feed rate.

(ii) Reasons for occurrences of low carbon feed rates.

(iii) The corrective actions you have taken to meet the carbon feed rate requirement.

(iv) The calendar date.

(2) Documentation of each quarter when total carbon purchased and delivered to the municipal waste combustion plant is less than the total required quarterly usage of carbon. If you choose to evaluate total carbon purchased and delivered on a municipal waste combustion unit basis, record the total carbon purchased and delivered for each individual municipal waste combustion unit at your plant. Include five items:

(i) Amount of carbon purchased and delivered to the plant.

(ii) Required quarterly usage of carbon.

(iii) Reasons for not meeting the required quarterly usage of carbon.

(iv) The corrective actions you have taken to meet the required quarterly usage of carbon.

(v) The calendar date.

**§ 60.1905 Can reporting dates be changed?**

(a) If the Administrator agrees, you may change the semiannual or annual reporting dates.

(b) See § 60.19(c) for procedures to seek approval to change your reporting date.

**Model Rule—Air Curtain Incinerators That Burn 100 Percent Yard Waste**

**§ 60.1910 What is an air curtain incinerator?**

An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of that type can be constructed above or below ground and with or without refractory walls and floor.

**§ 60.1915 What is yard waste?**

Yard waste is grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs. They come from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands. Yard waste does not include two items:

(a) Construction, renovation, and demolition wastes that are exempt from the definition of “municipal solid waste” in § 60.1940.

(b) Clean wood that is exempt from the definition of “municipal solid waste” in § 60.1940.

**§ 60.1920 What are the emission limits for air curtain incinerators that burn 100 percent yard waste?**

If your air curtain incinerator combusts 100 percent yard waste, you

must only meet the emission limits in this section.

(a) By 180 days after your final compliance date, you must meet two limits:

(1) The opacity limit is 10 percent (6-minute average) for air curtain incinerators that can combust at least 35 tons per day of municipal solid waste and no more than 250 tons per day of municipal solid waste.

(2) The opacity limit is 35 percent (6-minute average) during the startup period that is within the first 30 minutes of operation.

(b) Except during malfunctions, the requirements of this subpart apply at all times. Each malfunction must not exceed 3 hours.

**§ 60.1925 How must I monitor opacity for air curtain incinerators that burn 100 percent yard waste?**

(a) Use EPA Reference Method 9 in appendix A of this part to determine compliance with the opacity limit.

(b) Conduct an initial test for opacity as specified in § 60.8.

(c) After the initial test for opacity, conduct annual tests no more than 13 calendar months following the date of your previous test.

**§ 60.1930 What are the recordkeeping and reporting requirements for air curtain incinerators that burn 100 percent yard waste?**

(a) Provide a notice of construction that includes four items:

(1) Your intent to construct the air curtain incinerator.

(2) Your planned initial startup date.

(3) Types of fuels you plan to combust in your air curtain incinerator.

(4) The capacity of your incinerator, including supporting capacity calculations, as specified in § 60.1935(d) and (e).

(b) Keep records of results of all opacity tests onsite in either paper copy or electronic format unless the Administrator approves another format.

(c) Keep all records for each incinerator for at least 5 years.

(d) Make all records available for submittal to the Administrator or for onsite review by an inspector.

(e) Submit the results (each 6-minute average) of the opacity tests by February 1 of the year following the year of the opacity emission test.

(f) Submit reports as a paper copy on or before the applicable submittal date. If the Administrator agrees, you may submit reports on electronic media.

(g) If the Administrator agrees, you may change the annual reporting dates (see § 60.19(c)).

(h) Keep a copy of all reports onsite for a period of 5 years.

**Equations**

**§ 60.1935 What equations must I use?**

(a) *Concentration correction to 7 percent oxygen.* Correct any pollutant

concentration to 7 percent oxygen using equation 1 of this section:

$$C_{7\%} = C_{unc} * (13.9) * (1 / (20.9 - CO_2)) \quad (\text{Eq. 1})$$

Where:

$C_{7\%}$  = concentration corrected to 7 percent oxygen.

$C_{unc}$  = uncorrected pollutant concentration.

$CO_2$  = concentration of oxygen (percent).

(b) *Percent reduction in potential mercury emissions.* Calculate the percent reduction in potential mercury

emissions ( $\%P_{Hg}$ ) using equation 2 of this section:

$$\%P_{Hg} = (E_i - E_o) * (100 / E_i) \quad (\text{Eq. 2})$$

Where:

$\%P_{Hg}$  = percent reduction of potential mercury emissions

$E_i$  = mercury emission concentration as measured at the air pollution

control device inlet, corrected to 7 percent oxygen, dry basis  
 $E_o$  = mercury emission concentration as measured at the air pollution control device outlet, corrected to 7 percent oxygen, dry basis

(c) *Percent reduction in potential hydrogen chloride emissions.* Calculate the percent reduction in potential hydrogen chloride emissions ( $\%P_{HCl}$ ) using equation 3 of this section:

$$\%P_{HCl} = (E_i - E_o) * (100 / E_i) \quad (\text{Eq. 3})$$

Where:

$\%P_{HCl}$  = percent reduction of the potential hydrogen chloride emissions

$E_i$  = hydrogen chloride emission concentration as measured at the air pollution control device inlet, corrected to 7 percent oxygen, dry basis

$E_o$  = hydrogen chloride emission concentration as measured at the air pollution control device outlet, corrected to 7 percent oxygen, dry basis

(d) *Capacity of a municipal waste combustion unit.* For a municipal waste combustion unit that can operate continuously for 24-hour periods, calculate the municipal waste combustion unit capacity based on 24 hours of operation at the maximum charge rate. To determine the maximum charge rate, use one of two methods:

(1) For municipal waste combustion units with a design based on heat input capacity, calculate the maximum charging rate based on the maximum heat input capacity and one of two heating values:

(i) If your municipal waste combustion unit combusts refuse-derived fuel, use a heating value of 12,800 kilojoules per kilogram (5,500 British thermal units per pound).

(ii) If your municipal waste combustion unit combusts municipal solid waste, use a heating value of

10,500 kilojoules per kilogram (4,500 British thermal units per pound).

(2) For municipal waste combustion units with a design not based on heat input capacity, use the maximum designed charging rate.

(e) *Capacity of a batch municipal waste combustion unit.* Calculate the capacity of a batch municipal waste combustion unit as the maximum design amount of municipal solid waste they can charge per batch multiplied by the maximum number of batches they can process in 24 hours. Calculate the maximum number of batches by dividing 24 by the number of hours needed to process one batch. Retain fractional batches in the calculation. For example, if one batch requires 16 hours, the municipal waste combustion unit can combust 24/16, or 1.5 batches, in 24 hours.

(f) *Quarterly carbon usage.* If you use activated carbon to comply with the dioxins/furans or mercury limits, calculate the required quarterly usage of carbon using equation 4 of this section for plant basis or equation 5 of this section for unit basis:

(1) Plant basis.

$$C = \sum_{i=1}^n f_i * h_i \quad (\text{Eq. 4})$$

Where:

$C$  = required quarterly carbon usage for the plant in kilograms (or pounds).

$f_i$  = required carbon feed rate for the municipal waste combustion unit in kilograms (or pounds) per hour. That is the average carbon feed rate during the most recent mercury or dioxins/furans stack tests (whichever has a higher feed rate).

$h_i$  = number of hours the municipal waste combustion unit was in operation during the calendar quarter (hours).

$n$  = number of municipal waste combustion units,  $i$ , located at your plant.

(2) Unit basis.

$$C = f * h \quad (\text{Eq. 5})$$

Where:

$C$  = required quarterly carbon usage for the unit in kilograms (or pounds).

$f$  = required carbon feed rate for the municipal waste combustion unit in kilograms (or pounds) per hour. That is the average carbon feed rate during the most recent mercury or dioxins/furans stack tests (whichever has a higher feed rate).

$h$  = number of hours the municipal waste combustion unit was in operation during the calendar quarter (hours).

## Definitions

### § 60.1940 What definitions must I know?

Terms used but not defined in this section are defined in the CAA and in subparts A and B of this part.

*Administrator* means the Administrator of the U.S. Environmental Protection Agency or his/her authorized representative or the Administrator of a State Air Pollution Control Agency.

*Air curtain incinerator* means an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs. Incinerators of that type can be constructed above or below ground and with or without refractory walls and floor.

*Batch municipal waste combustion unit* means a municipal waste combustion unit designed so it cannot combust municipal solid waste continuously 24 hours per day because the design does not allow waste to be fed to the unit or ash to be removed during combustion.

*Calendar quarter* means three consecutive months (nonoverlapping) beginning on: January 1, April 1, July 1, or October 1.

*Calendar year* means 365 (or 366 consecutive days in leap years) consecutive days starting on January 1 and ending on December 31.

*Chief facility operator* means the person in direct charge and control of the operation of a municipal waste combustion unit. That person is responsible for daily onsite supervision, technical direction, management, and overall performance of the municipal waste combustion unit.

*Class I units* mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste. See the definition in this section of "municipal waste combustion plant capacity" for specification of which units at a plant site are included in the aggregate capacity calculation.

*Class II units* mean small municipal combustion units subject to this subpart that are located at municipal waste combustion plants with aggregate plant combustion capacity less than or equal to 250 tons per day of municipal solid waste. See the definition in this section of "municipal waste combustion plant capacity" for specification of which units at a plant site are included in the aggregate capacity calculation.

*Clean wood* means untreated wood or untreated wood products including

clean untreated lumber, tree stumps (whole or chipped), and tree limbs (whole or chipped). Clean wood does not include two items:

(1) "Yard waste," which is defined elsewhere in this section.

(2) Construction, renovation, or demolition wastes (for example, railroad ties and telephone poles) that are exempt from the definition of "municipal solid waste" in this section.

*Co-fired combustion unit* means a unit that combusts municipal solid waste with nonmunicipal solid waste fuel (for example, coal, industrial process waste). To be considered a co-fired combustion unit, the unit must be subject to a federally enforceable permit that limits it to combusting a fuel feed stream which is 30 percent or less (by weight) municipal solid waste as measured each calendar quarter.

*Continuous burning* means the continuous, semicontinuous, or batch feeding of municipal solid waste to dispose of the waste, produce energy, or provide heat to the combustion system in preparation for waste disposal or energy production. Continuous burning does not mean the use of municipal solid waste solely to thermally protect the grate or hearth during the startup period when municipal solid waste is not fed to the grate or hearth.

*Continuous emission monitoring system* means a monitoring system that continuously measures the emissions of a pollutant from a municipal waste combustion unit.

*Dioxins/furans* mean tetra-through octachlorinated dibenzo-p-dioxins and dibenzofurans.

*Effective date of State plan approval* means the effective date that the EPA approves the State plan. The **Federal Register** specifies the date in the notice that announces EPA's approval of the State plan.

*Eight-hour block average* means the average of all hourly emission concentrations or parameter levels when the municipal waste combustion unit operates and combusts municipal solid waste measured over any of three 8-hour periods of time:

- (1) 12:00 midnight to 8:00 a.m.
- (2) 8:00 a.m. to 4:00 p.m.
- (3) 4:00 p.m. to 12:00 midnight.

*Federally enforceable* means all limits and conditions the Administrator can enforce (including the requirements of 40 CFR parts 60, 61, and 63), requirements in a State's implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

*First calendar half* means the period that starts on January 1 and ends on June 30 in any year.

*Fluidized bed combustion unit* means a unit where municipal waste is combusted in a fluidized bed of material. The fluidized bed material may remain in the primary combustion zone or may be carried out of the primary combustion zone and returned through a recirculation loop.

*Four-hour block average* or *4-hour block average* means the average of all hourly emission concentrations or parameter levels when the municipal waste combustion unit operates and combusts municipal solid waste measured over any of six 4-hour periods:

- (1) 12:00 midnight to 4:00 a.m.
- (2) 4:00 a.m. to 8:00 a.m.
- (3) 8:00 a.m. to 12:00 noon.
- (4) 12:00 noon to 4:00 p.m.
- (5) 4:00 p.m. to 8:00 p.m.
- (6) 8:00 p.m. to 12:00 midnight.

*Mass burn refractory municipal waste combustion unit* means a field-erected municipal waste combustion unit that combusts municipal solid waste in a refractory wall furnace. Unless otherwise specified, that includes municipal waste combustion units with a cylindrical rotary refractory wall furnace.

*Mass burn rotary waterwall municipal waste combustion unit* means a field-erected municipal waste combustion unit that combusts municipal solid waste in a cylindrical rotary waterwall furnace.

*Mass burn waterwall municipal waste combustion unit* means a field-erected municipal waste combustion unit that combusts municipal solid waste in a waterwall furnace.

*Maximum demonstrated load of a municipal waste combustion unit* means the highest 4-hour block arithmetic average municipal waste combustion unit load achieved during 4 consecutive hours in the course of the most recent dioxins/furans stack test that demonstrates compliance with the applicable emission limit for dioxins/furans specified in this subpart.

*Maximum demonstrated temperature of the particulate matter control device* means the highest 4-hour block arithmetic average flue gas temperature measured at the inlet of the particulate matter control device during 4 consecutive hours in the course of the most recent stack test for dioxins/furans emissions that demonstrates compliance with the limits specified in this subpart.

*Medical/infectious waste* means any waste meeting the definition of "medical/infectious waste" in § 60.51c.

*Mixed fuel-fired (pulverized coal/refuse-derived fuel) combustion unit* means a combustion unit that combusts coal and refuse-derived fuel simultaneously, in which pulverized coal is introduced into an air stream that carries the coal to the combustion chamber of the unit where it is combusted in suspension. That includes both conventional pulverized coal and micropulverized coal.

*Modification or modified municipal waste combustion unit* means a municipal waste combustion unit you have changed after June 6, 2001 and that meets one of two criteria:

(1) The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the unit (not including the cost of land) updated to current costs.

(2) Any physical change in the municipal waste combustion unit or change in the method of operating it that increases the emission level of any air pollutant for which new source performance standards have been established under section 129 or section 111 of the CAA. Increases in the emission level of any air pollutant are determined when the municipal waste combustion unit operates at 100 percent of its physical load capability and are measured downstream of all air pollution control devices. Load restrictions based on permits or other nonphysical operational restrictions cannot be considered in the determination.

*Modular excess-air municipal waste combustion unit* means a municipal waste combustion unit that combusts municipal solid waste, is not field-erected, and has multiple combustion chambers, all of which are designed to operate at conditions with combustion air amounts in excess of theoretical air requirements.

*Modular starved-air municipal waste combustion unit* means a municipal waste combustion unit that combusts municipal solid waste, is not field-erected, and has multiple combustion chambers in which the primary combustion chamber is designed to operate at substoichiometric conditions.

*Municipal solid waste or municipal-type solid waste* means household, commercial/retail, or institutional waste. Household waste includes material discarded by residential dwellings, hotels, motels, and other similar permanent or temporary housing. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at industrial facilities, and other similar

establishments or facilities. Institutional waste includes materials discarded by schools, by hospitals (nonmedical), by nonmanufacturing activities at prisons and government facilities, and other similar establishments or facilities. Household, commercial/retail, and institutional waste does include yard waste and refuse-derived fuel. Household, commercial/retail, and institutional waste does not include used oil; sewage sludge; wood pallets; construction, renovation, and demolition wastes (which include railroad ties and telephone poles); clean wood; industrial process or manufacturing wastes; medical waste; or motor vehicles (including motor vehicle parts or vehicle fluff).

*Municipal waste combustion plant* means one or more municipal waste combustion units at the same location as specified under Applicability of State Plans (§ 60.1550(a)).

*Municipal waste combustion plant capacity* means the aggregate municipal waste combustion capacity of all municipal waste combustion units at the plant that are not subject to subparts Ea, Eb, or AAAA of this part.

*Municipal waste combustion unit* means any setting or equipment that combusts solid, liquid, or gasified municipal solid waste including, but not limited to, field-erected combustion units (with or without heat recovery), modular combustion units (starved-air or excess-air), boilers (for example, steam generating units), furnaces (whether suspension-fired, grate-fired, mass-fired, air curtain incinerators, or fluidized bed-fired), and pyrolysis/combustion units. Two criteria further define municipal waste combustion units:

(1) Municipal waste combustion units do not include pyrolysis or combustion units located at a plastics or rubber recycling unit as specified under Applicability of State Plans (§ 60.1555(h) and (i)). Municipal waste combustion units do not include cement kilns that combust municipal solid waste as specified under Applicability of State Plans (§ 60.1555(j)). Municipal waste combustion units also do not include internal combustion engines, gas turbines, or other combustion devices that combust landfill gases collected by landfill gas collection systems.

(2) The boundaries of a municipal waste combustion unit are defined as follows. The municipal waste combustion unit includes, but is not limited to, the municipal solid waste fuel feed system, grate system, flue gas system, bottom ash system, and the combustion unit water system. The

municipal waste combustion unit does not include air pollution control equipment, the stack, water treatment equipment, or the turbine-generator set. The municipal waste combustion unit boundary starts at the municipal solid waste pit or hopper and extends through three areas:

(i) The combustion unit flue gas system, which ends immediately after the heat recovery equipment or, if there is no heat recovery equipment, immediately after the combustion chamber.

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

(iii) The combustion unit water system, which starts at the feed water pump and ends at the piping that exits the steam drum or superheater.

*Particulate matter* means total particulate matter emitted from municipal waste combustion units as measured using EPA Reference Method 5 in appendix A of this part and the procedures specified in § 60.1790.

*Plastics or rubber recycling unit* means an integrated processing unit for which plastics, rubber, or rubber tires are the only feed materials (incidental contaminants may be in the feed materials). The feed materials are processed and marketed to become input feed stock for chemical plants or petroleum refineries. The following three criteria further define a plastics or rubber recycling unit:

(1) Each calendar quarter, the combined weight of the feed stock that a plastics or rubber recycling unit produces must be more than 70 percent of the combined weight of the plastics, rubber, and rubber tires that recycling unit processes.

(2) The plastics, rubber, or rubber tires fed to the recycling unit may originate from separating or diverting plastics, rubber, or rubber tires from municipal or industrial solid waste. The feed materials may include manufacturing scraps, trimmings, and off-specification plastics, rubber, and rubber tire discards.

(3) The plastics, rubber, and rubber tires fed to the recycling unit may contain incidental contaminants (for example, paper labels on plastic bottles or metal rings on plastic bottle caps).

*Potential hydrogen chloride emissions* means the level of emissions from a municipal waste combustion unit that would occur from combusting municipal solid waste without emission controls for acid gases.

*Potential mercury emissions* means the level of emissions from a municipal waste combustion unit that would occur from combusting municipal solid waste without controls for mercury emissions.

*Potential sulfur dioxide emissions* means the level of emissions from a municipal waste combustion unit that would occur from combusting municipal solid waste without emission controls for acid gases.

*Pyrolysis/combustion unit* means a unit that produces gases, liquids, or solids by heating municipal solid waste. The gases, liquids, or solids produced are combusted and the emissions vented to the atmosphere.

*Reconstruction* means rebuilding a municipal waste combustion unit and meeting two criteria:

(1) The reconstruction begins after June 6, 2001.

(2) The cumulative cost of the construction over the life of the unit exceeds 50 percent of the original cost of building and installing the municipal waste combustion unit (not including land) updated to current costs (current dollars). To determine what systems are within the boundary of the municipal waste combustion unit used to calculate the costs, see the definition in this section of "municipal waste combustion unit."

*Refractory unit or refractory wall furnace* means a municipal waste combustion unit that has no energy recovery (such as through a waterwall) in the furnace of the municipal waste combustion unit.

*Refuse-derived fuel* means a type of municipal solid waste produced by processing municipal solid waste through shredding and size classification. That includes all classes of refuse-derived fuel including two fuels:

(1) Low-density fluff refuse-derived fuel through densified refuse-derived fuel.

(2) Pelletized refuse-derived fuel.

*Same location* means the same or contiguous properties under common ownership or control, including those separated only by a street, road,

highway, or other public right-of-way. Common ownership or control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, subdivision, or any combination thereof. Entities may include a municipality, other governmental unit, or any quasi-governmental authority (for example, a public utility district or regional authority for waste disposal).

*Second calendar half* means the period that starts on July 1 and ends on December 31 in any year.

*Shift supervisor* means the person who is in direct charge and control of operating a municipal waste combustion unit and who is responsible for onsite supervision, technical direction, management, and overall performance of the municipal waste combustion unit during an assigned shift.

*Spreader stoker, mixed fuel-fired (coal/refuse-derived fuel) combustion unit* means a municipal waste combustion unit that combusts coal and refuse-derived fuel simultaneously, in which coal is introduced to the combustion zone by a mechanism that throws the fuel onto a grate from above. Combustion takes place both in suspension and on the grate.

*Standard conditions* when referring to units of measure mean a temperature of 20 °C and a pressure of 101.3 kilopascals.

*Startup period* means the period when a municipal waste combustion unit begins the continuous combustion of municipal solid waste. It does not include any warmup period during which the municipal waste combustion unit combusts fossil fuel or other solid waste fuel but receives no municipal solid waste.

*State* means any of the 50 United States and the protectorates of the United States.

*State plan* means a plan submitted pursuant to sections 111(d) and 129(b)(2) of the CAA and subpart B of this part, that implements and enforces this subpart.

*Stoker (refuse-derived fuel) combustion unit* means a steam

generating unit that combusts refuse-derived fuel in a semisuspension combusting mode, using air-fed distributors.

*Total mass dioxins/furans or total mass* means the total mass of tetra-through octachlorinated dibenzo-p-dioxins and dibenzofurans as determined using EPA Reference Method 23 in appendix A of this part and the procedures specified in § 60.1790.

*Twenty-four hour daily average or 24-hour daily average* means either the arithmetic mean or geometric mean (as specified) of all hourly emission concentrations when the municipal waste combustion unit operates and combusts municipal solid waste measured during the 24 hours between 12:00 midnight and the following midnight.

*Untreated lumber* means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Untreated lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote.

*Waterwall furnace* means a municipal waste combustion unit that has energy (heat) recovery in the furnace (for example, radiant heat transfer section) of the combustion unit.

*Yard waste* means grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs. They come from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands. Yard waste does not include two items:

(1) Construction, renovation, and demolition wastes that are exempt from the definition of "municipal solid waste" in this section.

(2) Clean wood that is exempt from the definition of "municipal solid waste" in this section.

**Tables**

TABLE 1 OF SUBPART BBBB—MODEL RULE—COMPLIANCE SCHEDULES AND INCREMENTS OF PROGRESS

Affected units	Increment 1 (Submit final control plan)	Increment 2 (Award contracts)	Increment 3 (Begin onsite construction)	Increment 4 (Complete onsite construction)	Increment 5 (Final compliance)
1. All Class I units <sup>a b</sup>	(Dates to be specified in State plan).	(Dates to be specified in State plan).	(Dates to be specified in State plan).	(Dates to be specified in State plan).	(Dates to be specified in State plan) <sup>c d</sup> .
2. All Class II units <sup>a c</sup>	(Dates to be specified in State plan).	Not applicable .....	Not applicable .....	Not applicable .....	(Dates to be specified in State plan) <sup>c</sup> .

<sup>a</sup> Plant specific schedules can be used at the discretion of the State.

<sup>b</sup> Class I units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste. See § 60.1940 for definitions.

<sup>c</sup> The date can be no later than 3 years after the effective date of State plan approval or December 6, 2005.

<sup>d</sup> For Class I units that began construction, reconstruction, or modification after June 26, 1987, comply with the dioxins/furans and mercury limits by the later of two dates:

1. One year after the effective date of State plan approval.
2. One year after the issuance of a revised construction or operation permit, if a permit modification is required.
3. Final compliance with the dioxins/furans limits must be achieved no later than December 6, 2005, even if the date one year after the issuance of a revised construction or operation permit is after December 6, 2005.

<sup>e</sup> Class II units mean all small municipal combustion units subject to this subpart that are located at municipal waste combustion plants with aggregate plant combustion capacity less than or equal to 250 tons per day of municipal solid waste. See § 60.1940 for definitions.

TABLE 2 OF SUBPART BBBB—MODEL RULE—CLASS I EMISSION LIMITS FOR EXISTING SMALL MUNICIPAL WASTE COMBUSTION UNITS <sup>a</sup>

For the following pollutants	You must meet the following emission limits <sup>b</sup>	Using the following averaging times	And determine compliance by the following methods
1. Organics: Dioxins/Furans (total mass basis).	30 nanograms per dry standard cubic meter for municipal waste combustion units that do not employ an electrostatic precipitator-based emission control system -or- 60 nanograms per dry standard cubic meter for municipal waste combustion units that employ an electrostatic precipitator-based emission control system.	3-run average (minimum run duration is 4 hours).	Stack test.
2. Metals: Cadmium .....	0.040 milligrams per dry standard cubic meter .....	3-run average (run duration specified in test method).	Stack test.
Lead .....	0.490 milligrams per dry standard cubic meter .....	3-run average (run duration specified in test method).	Stack test.
Mercury .....	0.080 milligrams per dry standard cubic meter .....	3-run average (run duration specified in test method).	Stack test.
Opacity .....	85 percent reduction of potential mercury emissions. 10 percent .....	Thirty 6-minute averages .....	Stack test.
Particulate Matter .....	27 milligrams per dry standard cubic meter .....	3-run average (run duration specified in test method).	Stack test.
3. Acid Gases: Hydrogen Chloride .....	31 parts per million by dry volume 95 percent reduction of potential hydrogen chloride emissions.	3-run average (minimum run duration is 1 hour).	Stack test.
Sulfur Dioxide .....	31 parts per million by dry volume 75 percent reduction of potential sulfur dioxide emissions.	24-hour daily block geometric average concentration percent reduction.	Continuous emission monitoring system.
4. Other: Fugitive Ash .....	Visible emissions for no more than 5 percent of hourly observation period.	Three 1-hour observation periods.	Visible emission test.

<sup>a</sup> Class I units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste. See § 60.1940 for definitions.

<sup>b</sup> All emission limits (except for opacity) are measured at 7 percent oxygen.

TABLE 3 OF SUBPART BBBB—MODEL RULE—CLASS I NITROGEN OXIDES EMISSION LIMITS FOR EXISTING SMALL MUNICIPAL WASTE COMBUSTION UNITS<sup>a,b,c</sup>

Municipal waste combustion technology	Limits for class I municipal waste combustion units
1. Mass burn waterwall .....	200 parts per million by dry volume.
2. Mass burn rotary waterwall .....	170 parts per million by dry volume.
3. Refuse-derived fuel .....	250 parts per million by dry volume.
4. Fluidized bed .....	220 parts per million by dry volume.
5. Mass burn refractory .....	350 parts per million by dry volume.
6. Modular excess air .....	190 parts per million by dry volume.
7. Modular starved air .....	380 parts per million by dry volume.

<sup>a</sup> Class I units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste. See § 60.1940 for definitions.

<sup>b</sup> Nitrogen oxides limits are measured at 7 percent oxygen.

<sup>c</sup> All limits are 24-hour daily block arithmetic average concentration. Compliance is determined for Class I units by continuous emission monitoring systems.

TABLE 4 OF SUBPART BBBB—MODEL RULE—CLASS II EMISSION LIMITS FOR EXISTING SMALL MUNICIPAL WASTE COMBUSTION UNIT<sup>a</sup>

For the following pollutants	You must meet the following emission following determine limits <sup>b</sup>	Using the following averaging times	And determine compliance by the following methods
1. Organics: Dioxins/Furans (total mass basis) .....	125 nanograms per dry standard cubic meter.	3-run average (minimum run duration is 4 hours).	Stack test.
2. Metals: Cadmium .....	0.10 milligrams per dry standard cubic meter.	3-run average (run duration specified in test method).	Stack test.
Lead .....	1.6 milligrams per dry standard cubic meter.	3-run average (run duration specified in test method).	Stack test.
Mercury .....	0.080 milligrams per dry standard cubic meter.	3-run average (run duration specified in test method).	Stack test.
Opacity .....	85 percent reduction of potential mercury emissions. 10 percent .....	Thirty 6-minute average ....	Stack test.
Particulate Matter .....	70 milligrams per dry standard cubic meter.	3-run average (run duration specified in test method).	Stack test.
3. Acid Gases: Hydrogen Chloride .....	250 parts per million by volume -or- 50 percent reduction of potential hydrogen chloride emissions.	3-run average (minimum run duration is 1 hour).	Stack test.
Sulfur Dioxide .....	77 parts per million by dry volume -or- 50 percent reduction of potential sulfur dioxides emissions.	24-hour daily block geometric average concentration -or- percent reduction.	Continuous emission monitoring system.
4. Other: Fugitive Ash .....	Visible emissions for no more than 5 percent of hourly observation period.	Three 1-hour observation periods.	Visible emission test.

<sup>a</sup> Class II units mean all small municipal combustion units subject to this subpart that are located at municipal waste combustion plants with aggregate plant combustion capacity less than or equal to 250 tons per day of municipal solid waste. See § 60.1940 for definitions.

<sup>b</sup> All emission limits (except for opacity) are measured at 7 percent oxygen.

<sup>c</sup> No monitoring, testing, recordkeeping or reporting is required to demonstrate compliance with the nitrogen oxides limit for Class II units.

TABLE 5 OF SUBPART BBBB—MODEL RULE—CARBON MONOXIDE EMISSION LIMITS FOR EXISTING SMALL MUNICIPAL WASTE COMBUSTION UNITS

For the following municipal waste combustion units	You must meet the following carbon monoxide limits <sup>a</sup>	Using the following averaging times <sup>b</sup>
1. Fluidized bed .....	100 parts per million by dry volume .....	4-hour.
2. Fluidized bed, mixed fuel, (wood/refuse-derived fuel)	200 parts per million by dry volume .....	24-hour <sup>c</sup> .
3. Mass burn rotary refractory .....	100 parts per million by dry volume .....	4-hour.
4. Mass burn rotary waterwall .....	250 parts per million by dry volume .....	24-hour.
5. Mass burn waterwall and refractory .....	100 parts per million by dry volume .....	4-hour.
6. Mixed fuel-fired, (pulverized coal/refuse-derived fuel)	150 parts per million by dry volume .....	4-hour.
7. Modular starved-air and excess air .....	50 parts per million by dry volume .....	4-hour.
8. Spreader stoker, mixed fuel-fired (coal/refuse-derived fuel).	200 parts per million by dry volume .....	24-hour daily.
9. Stoker, refuse-derived fuel .....	200 parts per million by dry volume .....	24-hour daily.

<sup>a</sup> All emission limits (except for opacity) are measured at 7 percent oxygen. Compliance is determined by continuous emission monitoring systems.

<sup>b</sup> Block averages, arithmetic mean. See § 60.1940 for definitions.

<sup>c</sup> 24-hour block average, geometric mean.

TABLE 6 OF SUBPART BBBB—MODEL RULE—REQUIREMENTS FOR VALIDATING CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS)

For the following continuous emission monitoring systems	Use the following methods in appendix A of this part to validate pollutant concentration levels	Use the following methods in appendix A of this part to measure oxygen (or carbon dioxide)
1. Nitrogen Oxides (Class I units only) <sup>a</sup> .....	Method 7, 7A, 7B,7C, 7D, or 7E .....	Method 3 or 3A.
2. Sulfur Dioxide .....	Method 6 or 6C .....	Method 3 or 3A.
3. Carbon Monoxide .....	Method 10, 10A, or 10B .....	Method 3 or 3A.

<sup>a</sup>Class I units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste. See §60.1940 for definitions.

TABLE 7 OF SUBPART BBBB—“MODEL RULE—REQUIREMENTS FOR CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS)

For the following pollutants	Use the following span values for CEMS	Use the following performance specifications in appendix B of this part for your CEMS	If needed to meet minimum data requirements, use the following alternate methods in appendix A of this part to collect data
1. Opacity .....	100 percent opacity .....	P.S. 1 .....	Method 9.
2. Nitrogen Oxides (Class I units only).	Control device outlet: 125 percent of the maximum expected hourly potential nitrogen oxides emissions of the municipal waste combustion unit.	P.S. 2 .....	Method 7E.
3. Sulfur Dioxide .....	Inlet to control device: 125 percent of the maximum expected hourly potential sulfur dioxide emissions of the municipal waste combustion unit. Control device outlet: 50 percent of the maximum expected hourly potential sulfur dioxide emissions of the municipal waste combustion unit.	P.S. 2 .....	Method 6C.
4. Carbon Monoxide .....	125 percent of the maximum expected hourly potential carbon monoxide emissions of the municipal waste combustion unit.	P.S. 4A .....	Method 10 with alternative interference trap.
5. Oxygen or Carbon Dioxide.	25 percent oxygen or 25 percent carbon dioxide .....	P.S. 3 .....	Method 3A or 3B.

TABLE 8 OF SUBPART BBBB—MODEL RULE—REQUIREMENTS FOR STACK TESTS

To measure the following pollutants	Use the following methods in appendix A of this part to determine the sampling location	Use the following methods in appendix A of this part to measure pollutant concentration	Also note the following additional information
1. Organics Dioxins/Furans .....	Method 1 .....	Method 23 <sup>a</sup> .....	The minimum sampling time must be 4 hours per test run while the municipal waste combustion unit is operating at full load.
2. Metals Cadmium .....	Method 1 .....	Method 29 <sup>a</sup> .....	Compliance testing must be performed while the municipal waste combustion unit is operating at full load.
Lead .....	Method 1 .....	Method 29 <sup>a</sup> .....	Compliance testing must be performed while the municipal waste combustion unit is operating at full load.
Mercury .....	Method 1 .....	Method 29 <sup>a</sup> .....	Compliance testing must be performed while the municipal waste combustion unit is operating at full load.
Opacity .....	Method 9 .....	Method 9 .....	Use Method 9 to determine compliance with opacity limits. 3-hour observation period (thirty 6-minute averages).
Particulate Matter .....	Method 1 .....	Method 5 or 29 .....	The minimum sample volume must be 1.0 cubic meters. The probe and filter holder heating systems in the sample train must be set to provide a gas temperature no greater than 160 ±14 °C. The minimum sampling time is 1 hour.
3. Acid Gases <sup>b</sup> Hydrogen Chloride .....	Method 1 .....	Method 26 or 26A <sup>a</sup> .....	Test runs must be at least 1 hour long while the municipal waste combustion unit is operating at full load.
4. Other <sup>b</sup>			

TABLE 8 OF SUBPART BBBB—MODEL RULE—REQUIREMENTS FOR STACK TESTS—Continued

To measure the following pollutants	Use the following methods in appendix A of this part to determine the sampling location	Use the following methods in appendix A of this part to measure pollutant concentration	Also note the following additional information
Fugitive Ash .....	Not applicable .....	Method 22 (visible emissions).	The three 1-hour observation period must include periods when the facility transfers fugitive ash from the municipal waste combustion unit to the area where the fugitive ash is stored or loaded into containers or trucks.

<sup>a</sup> Must simultaneously measure oxygen (or carbon dioxide) using Method 3A or 3B in appendix A of this part.

<sup>b</sup> Use CEMS to test sulfur dioxide, nitrogen oxide, and carbon monoxide. Stack tests are not required except for quality assurance requirements in Appendix F of this part.

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