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Part II

Environmental Protection Agency

40 CFR Part 60

Emission Guidelines for Existing Stationary Sources: Small Municipal Waste Combustion Units; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 60

[AD–FRL–6424–6]

RIN 2060–AI51

Emission Guidelines for Existing Stationary Sources: Small Municipal Waste Combustion Units

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: This action proposes to reestablish emission guidelines for existing small municipal waste combustion (MWC) units. When implemented, these emission guidelines will result in stringent emission limits for organics (dioxins/furans), metals (cadmium, lead, mercury, and particulate matter), and acid gases (hydrogen chloride, sulfur dioxide, and nitrogen oxides). 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.

DATES: *Comments:* Comments on these proposed emission guidelines and comments on the Information Collection Request (ICR) document associated with these emission guidelines must be received on or before October 29, 1999.

Public Hearing: A public hearing will be held if requests to speak are received by September 14, 1999. The public hearing will provide interested parties the opportunity to present data, views, or arguments concerning these proposed emission guidelines. If requests to speak are received, the public hearing will take place in Research Triangle Park, North Carolina, approximately 30 days after August 30, 1999 and will begin at 10:00 a.m. A message regarding the status of the public hearing may be accessed by calling (919) 541–5264.

ADDRESSES: *Comments:* Submit comments on these proposed emission guidelines (in duplicate, if possible) to: Air and Radiation Docket and Information Center (MC–6102), Attention Docket No. A–98–18, U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460. Comments may also be submitted electronically. Send electronic submittals to: ''A-and-R-Docket@epamail.epa.gov''. Submit electronic comments in American Standard Code for Information Interchange (ASCII) format. Avoid the use of special characters and any form of encryption. Electronic comments on these proposed emission guidelines may be filed online at any Federal Depository Library. For additional information on comments and public hearing see the **SUPPLEMENTARY INFORMATION** section.

Docket: Docket No. A–98–18 for this proposal and associated Docket Nos. A–90–45 and A–89–08 contain supporting information for these emission guidelines. These 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 (MC–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, central mall). A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Mr. Walt Stevenson at (919) 541–5264, Combustion Group, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, e-mail: stevenson.walt@epa.gov.

SUPPLEMENTARY INFORMATION:

Comment Information

Comments and data will also be accepted on disks in WordPerfect® Version 5.1 or 6.1 file format (or ASCII file format). Address all comments and data for this proposal, whether on paper or in electronic form, such as through e-mail or disk, to Docket No. A–98–18.

Commenters wishing to submit proprietary information for consideration must clearly distinguish such information from other comments and clearly label it Confidential Business Information. Send submissions containing such proprietary information directly to the following address, and not to the public docket, to ensure that proprietary information is not inadvertently placed in the docket: Attention: Ms. Melva Toomer, U.S. EPA, OAQPS Document Control Officer, 411 W. Chapel Hill Street, Room 944, Durham, NC 27701. Do not submit Confidential Business Information (CBI) electronically.

The EPA will disclose information identified as Confidential Business Information only to the extent allowed and by the procedures set forth in 40 CFR part 2. If no claim of confidentiality accompanies a submission when it is received by the EPA, the information may be made available to the public without further notice to the commenter.

Public Hearing

If a public hearing is held, it will take place at EPA's Office of Administration Auditorium, Research Triangle Park, NC, or at an alternate site nearby. Persons interested in presenting oral testimony at the public hearing should notify Ms. Libby Bradley, Combustion Group, Emission Standard Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, telephone (919) 541–5578, at least 2 days in advance of the public hearing. Persons interested in attending the public hearing must also call Ms. Bradley to verify the time, date, and location of the hearing. The final hearing status and location may be obtained by calling (919) 541–5264.

World Wide Web Site

Electronic versions of this notice, the proposed regulatory text, and other background information are available at the World Wide Web site that EPA has established for these proposed emission guidelines for small MWC units. The address is: ''http://www.epa.gov/ttn/uatw/129/mwc/rimwc2.html.'' For assistance in downloading files, call the EPA's Technology Transfer Network (TTN) HELP line at (919) 541–5384.

Regulated Entities

No entities would be directly regulated by this action because this proposal is an emission guideline, which requires additional State or Federal action for implementation. However, the promulgation of State or Federal plans implementing these emission guidelines would 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.

This 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 these emission guidelines for small MWC units. These emission guidelines would primarily impact facilities in North American Industrial Classification System (NAICS) codes 562213 and 92411, formerly Standard Industrial Classification (SIC) codes 4953 and 9511, respectively. Not all facilities classified under these codes would be affected. To determine whether your facility would be regulated by State or Federal plans implementing these emission guidelines, carefully examine the applicability criteria in section II.A of this preamble and in §§ 60.1550 through 60.1565 of these proposed emission guidelines. If you have any questions regarding the applicability of this action to your small MWC unit or any other question or comment, please submit comments to Docket No. A–98–18 or refer to the **FOR FURTHER INFORMATION CONTACT** section.

Organization of This Document. The following outline is provided to aid in locating information in this preamble. Each section heading of the preamble is presented as a question and the text in the section answers the question.

Abbreviations and Acronyms Used in This Document

ASCII—American Standard Code for Information Interchange
ASME—American Society of Mechanical Engineers
CBI—Confidential Business Information
CFR—Code of Federal Regulations
DSI/ESP/CI—dry sorbent injection/electrostatic precipitator/carbon injection
EPA—Environmental Protection Agency
ESP—electrostatic precipitator
FR—Federal Register
ICR—Information Collection Request
kg/year—kilograms per year
MACT—maximum achievable control technology
mg/dscm—milligrams per dry standard cubic meter
Mg/year—megagrams per year
MSW—municipal solid waste
MWC—municipal waste combustion
NAICS—North American Industrial Classification System
ng/dscm—nanograms per dry standard cubic meter
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
ppmv—parts per million by volume
RDF—refuse-derived fuel
RFA—Regulatory Flexibility Act
SBREFA—Small Business Regulatory Enforcement Fairness Act
SD/ESP/CI—spray dryer/electrostatic precipitator/carbon injection
SD/FF/CI/SNCR—spray dryer/fabric filter/carbon injection/selective noncatalytic reduction
SIC—Standard Industrial Classification
TTN—Technology Transfer Network
UMRA—Unfunded Mandates Reform Act
U.S.C.—United States Code

I. Background Information

On September 20, 1994, EPA proposed emission guidelines for large and small MWC units under 40 CFR part 60, subpart Cb. Those emission guidelines covered all MWC units located at plants with an aggregate plant combustion capacity larger than 35 megagrams per day of municipal solid waste (MSW), which is approximately 39 tons per day of MSW. The subpart Cb emission guidelines for large and small MWC units were promulgated on December 19, 1995.

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 based on the total aggregate capacity of all MWC units at the MWC plant. The large plant category included all MWC units located at MWC plants with aggregate plant combustion capacities greater than 225 megagrams per day (approximately 248 tons per

day). The small plant category comprised all MWC units located at MWC plants with aggregate plant combustion capacities of 35 to 225 megagrams per day (approximately 39 to 248 tons per day).

Following promulgation of the 1995 emission guidelines, a petition for review was filed with the U.S. Court of Appeals for the District of Columbia Circuit regarding the use of aggregate plant capacity as the basis for initial categorization of the MWC unit population. An initial opinion was issued by the court on December 6, 1996 (*Davis County Solid Waste Management and Recovery District* v. *EPA*, 101 F. 3d 1395, D.C. Cir. 1996). The initial opinion would have vacated (canceled) the 1995 emission guidelines for both large and small MWC units.

The EPA filed a petition for rehearing on February 4, 1997 requesting the court to reconsider the remedy portion of its opinion and to vacate these emission guidelines only as they apply to small MWC units (units having an individual capacity of 35 to 250 tons per day). The court granted EPA's petition, reconsidered its opinion, and issued a revised opinion on March 21, 1997 (*Davis County Solid Waste Management and Recovery District* v. *EPA*, 108 F. 3d 1454, D.C. Cir. 1997). The revised opinion remanded to EPA the 1995 emission guidelines for the large MWC unit category for amendment to be consistent with the court's final opinion and vacated these emission guidelines only as they applied to small MWC units.

Amendments to the 1995 emission guidelines incorporating the court's final opinion were published on August 25, 1997 (62 FR 45116). The amendments made the subpart Cb emission guidelines consistent with the court's decision and included other minor technical corrections to improve clarity. The principal change was to remove small MWC units from the applicability of subpart Cb. This was accomplished by increasing the lower size cutoff for large MWC units from 35 megagrams per day on a plant capacity basis to 250 tons per day on a unit capacity basis. No adverse comments were received on the proposal and they became effective on October 24, 1997.

With the increase in the lower size cutoff for large MWC units from 248 tons per day on a plant capacity basis to 250 tons per day on a unit capacity basis, 45 MWC units that were previously in the large MWC plant category were moved into the newly classified small MWC unit category. These units are commonly referred to as ''Davis class'' MWC units (referencing the name of the court's opinion that clarifies that EPA must move these units from the large MWC unit category to the small MWC unit category).

Today's proposal would reestablish emission guidelines for existing small municipal waste combustion capacities of 35 to 250 tons per day of MSW.

II. Summary of These Proposed Emission Guidelines

This section summarizes these proposed emission guidelines for small MWC units, including identification of the subcategories used in this proposal for small MWC units. Overall, these proposed emission guidelines for small MWC units are functionally equivalent to the 1995 emission guidelines for small MWC units.

A. What Sources Would be Directly or Indirectly Regulated by These Proposed Emission Guidelines?

Today's proposed emission guidelines would not directly regulate small MWC units, but they would require States to develop plans to limit air emissions from existing small MWC units. In this proposal and in associated State plans, a small MWC unit would be defined as any MWC unit with a combustion design capacity of 35 to 250 tons per day.

B. Has the Small MWC Unit Population Been Subcategorized Within this Proposal?

Yes, within these proposed emission guidelines, the small MWC unit population is subcategorized based on: (1) Aggregate capacity of the plant where the individual MWC unit is located, and (2) combustor type. The resulting subcategories are as follows: (1) Class A units are defined as nonrefractory-type small MWC units located at plants with an aggregate plant capacity greater than 250 tons per day of MSW, (2) Class B units are refractory-type small MWC units located at plants with an aggregate plant capacity greater than 250 tons per day of MSW, and (3) Class C units are all small MWC units located at plants with an aggregate plant capacity less than or equal to 250 tons per day of MSW.

C. What Pollutants Would be Regulated by These Proposed Emission Guidelines?

Section 129 of the Clean Air Act 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 proposing guidelines for 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 proposing requirements for the control of fugitive ash emissions. All of these requirements were contained in the 1995 emission guidelines.

D. What is the Format of the Proposed Emission Limits in These Emission Guidelines?

The format of the proposed emission limits is identical to the format of the emission limits in the 1995 emission guidelines. The format is in the form of 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 identical to the 1995 emission guidelines. In addition to controlling stack emissions, these proposed emission guidelines incorporate the same good combustion practice requirements (i.e., operator training, operator certification, and operating requirements) that were included in the 1995 emission guidelines. Additionally, this proposal includes a clarification to the operator certification requirements to address periods when the certified chief facility operator and certified shift supervisor must be offsite. Section III.F provides more detail on the differences in operator certification requirements between these proposed subpart BBBB guidelines and the 1995 subpart Cb guidelines. Today's proposal also includes a revision to the activated carbon feed rate requirement. (Section III.G provides additional information on proposed changes to the carbon feed rate requirements.)

E. Where Can I Find a More Detailed Summary of These Proposed Emission Guidelines?

A concise summary of these proposed emission guidelines can be found either in: (1) Tables 2 through 5 of the proposed subpart BBBB emission guidelines following this preamble; or (2) the Technical Fact Sheet for this proposal that can be downloaded from the EPA World Wide Web site for small MWC units

(http://www.epa.gov/ttn/uatw/129/mwc/rimwc2.html).

III. Changes in These Proposed Emission Guidelines Relative to the 1995 Emission Guidelines

This section summarizes changes in the proposed emission guidelines compared to the 1995 emission guidelines. Overall, these emission guidelines are functionally equivalent to the 1995 emission guidelines, with minimal changes. The most significant change is the use of the plain language style for organizing and writing these emission guidelines. These proposed emission guidelines retain subcategorization by aggregate plant capacity and only a few emission limits have been revised.

Compared to the 1995 emission guidelines for large and small MWC units, these proposed emission guidelines have identical requirements for all small MWC units except for Class B units. The requirements for the Class A and Class C units remain the same as the 1995 requirements, except that the nitrogen oxides emission limit for Class A units has been changed to reflect revised MACT floors.

A. How Has the Conversion to Plain Language Affected These Emission Guidelines?

These proposed emission guidelines are organized and written in the plain language style. This style has not affected the content of these proposed emission guidelines when compared to the 1995 emission guidelines. However, it has changed their appearance. The EPA considers the question and answer format of the plain language style to be more user friendly and understandable to all audiences when compared with previous rules that were not written in this style.

The question and answer format that is used in the regulatory text for this proposal significantly minimizes cross-referencing within these emission guidelines. Additionally, these proposed emission guidelines have been drafted as a stand-alone subpart without the cross-referencing to the NSPS required by the 1995 emission guidelines. To improve the presentation of these emission guidelines requirements, additional tables have been added.

B. How Has the Size Definition of the Small MWC Category Been Revised?

As a result of the 1997 court decision, both the upper and lower size definitions (cutoffs) have been changed so that the small MWC unit category is based on the capacity of an individual MWC unit rather than on the total capacity of the plant where an MWC unit is located. Additionally, English units of measure (tons per day capacity) are used instead of metric units of measure (megagrams per day capacity).

1. Upper Size Cutoff

The upper size cutoff for small MWC units is proposed as 250 tons per day on a unit capacity basis. In the 1995 emission guidelines, the upper size cutoff was 225 megagrams per day (approximately 248 tons per day) based on total plant capacity. This revised upper size cutoff is consistent with the 1997 court ruling.

2. Lower Size Cutoff

The lower size cutoff for small MWC units is proposed as 35 tons per day on a unit capacity basis. In the 1995 emission guidelines, the lower size cutoff for small MWC units was 35 megagrams per day (approximately 39 tons per day) based on total plant capacity. In this proposal, the lower size cutoff has been changed to a unit capacity basis to make both the upper size cutoff and lower size cutoff based on a unit capacity basis (Docket No. A–98–18).

C. How has the Population of Small MWC Units Been Subcategorized?

These proposed emission guidelines retain the use of aggregate plant capacity to subcategorize small MWC units.

After first dividing the MWC unit population into units above 250 tons per day (large units) and units less than 250 tons per day (small units), the court's decision allowed EPA to:

> * * * exercise its discretion to distinguish among units within a category and create subcategories of small units, for which it can then calculate MACT floors and standards separately.

Thus, the court allowed EPA to subcategorize by unit location (aggregate plant capacity) at its discretion. The EPA has elected to retain the subcategorization used in the 1995 emission guidelines. Therefore, today's proposal establishes separate subcategories for small MWC units at: (1) Facilities with aggregate plant capacities greater than 250 tons per day (Davis class units), and (2) facilities with aggregate plant capacities less than or equal to 250 tons per day (non-Davis class units).

The EPA has noted that design and operational characteristics of refractory-type units are noticeably different than those of nonrefractory-type units. Further analysis of MWC unit operation showed that refractory-type MWC units generate approximately 50 percent more flue gas (exhaust) per ton of waste burned than nonrefractory-type MWC units. Higher levels of excess combustion air are used with refractory units by design to avoid overheating the refractory walls (Docket No. A–98–18). Because of this technical difference, EPA has elected to subdivide the Davis class units into a Davis refractory-type class and a Davis nonrefractory-type class.

In summary, today's proposal divides the small MWC unit population into three classes. Class A comprises small nonrefractory-type MWC units located at plants with an aggregate plant capacity greater than 250 tons per day of MSW. Class B comprises small refractory-type MWC units located at plants with an aggregate plant capacity greater than 250 tons per day of MSW. Class C comprises all small MWC units located at plants with an aggregate plant capacity less than or equal to 250 tons per day of MSW.

D. What are the Proposed Emission Limits?

1. Summary of the Proposed Emission Limits for Small MWC Units

To propose emission limits for small MWC units, EPA had to recalculate the MACT floors to account for changes in the small MWC unit definition (from a plant basis to a unit basis and from metric units of measure to English units) and the establishment of the three MWC unit subcategories. After establishing the MACT floor for each pollutant in each small MWC unit subcategory, EPA considered the cost, nonair quality health and environmental impacts, and energy requirements associated with any alternatives more stringent than the MACT floor in selecting MACT for each pollutant.

For each of the three MWC unit subcategories (Classes A, B, and C), EPA is proposing emission limits for organics (dioxins/furans), metals (cadmium, lead, mercury, particulate matter, and opacity), and acid gases (sulfur dioxide and hydrogen chloride). In addition, a nitrogen oxides emission limit is proposed for Class A units.

The emission limits proposed for Class A and Class C units are identical to those promulgated in the 1995 emission guidelines for large and small MWC plants, respectively, except that the nitrogen oxides emission limit for Class A units has changed to reflect the revised MACT floor. The emission limits proposed today for the Class B units are less stringent than those contained in the 1995 emission guidelines for large MWC plants.

2. Summary of the MACT Floor for Small MWC Units

To calculate the MACT floors, the small MWC unit population had to first be subdivided. This was done by modifying the MWC unit population in the 1995 MWC inventory database to: (1) Incorporate the 45 Davis class MWC units into the small MWC unit category, and (2) assign those 45 units to the Class A or Class B subcategories. The remaining small MWC units originally in the 1995 MWC inventory database are Class C units.

After establishing the small MWC unit population in each of the three classes, the MACT floors were calculated using a similar method and the same emissions data that were used to calculate the MACT floors for the 1995 emission guidelines. In summary, the MACT floor for each pollutant in each of the three classes was determined by: (1) Identifying the most stringent emission limitations achieved by the small MWC units, and (2) calculating the average emission limitation of the best performing 12 percent of units in each class. In identifying the most stringent emission limitations achieved by small MWC units, EPA relied on permit limits. Where EPA did not have permit information for a sufficient number of units to account for 12 percent of the units in a particular class, EPA used an uncontrolled default emission value based on AP–42 emission factors and test data to account for the additional number of units necessary to represent 12 percent of the units in the class. The default values were also used for a small MWC unit if: (1) The unit was not in compliance with its permit; or (2) the unit had a permit limit value higher than typical uncontrolled emissions from small MWC units. The EPA believes the uncontrolled default emission values used are a reasonable surrogate for actual data for the following reasons. First, EPA made an exhaustive effort to obtain permit information for each small MWC unit. Some small MWC units did not have permits, while others had permits which did not contain emission limitations for one or more of the pollutants specified in section 129. The EPA believes that it is reasonable to assume that uncontrolled emission values reasonably reflect actual emissions for such units. Second, EPA believes that the uncontrolled emission default values used reasonably reflect uncontrolled emissions for small MWC units. The MACT floor development for this proposal is discussed in more detail in ''Determination of the Maximum Achievable Control Technology (MACT) Floor for Small Municipal Waste Combustion Units'' (Docket No. A–98–18), the September 1995 EPA report ''Municipal Waste Combustion: Background Information Document for Promulgated Standards and Guidelines—Public Comments and Responses'' (EPA–453/R–95–013b), and the 1994 proposal preamble (59 FR 48228).

3. Emission Limits for Class A Units

Class A units in this proposal are nonrefractory Davis class units that were in the large MWC plant population in the 1995 emission guidelines. Table 1 presents the MACT floor emission levels for Class A units.

TABLE 1.—MACT FLOOR EMISSION LEVELS FOR CLASS A MWC UNITS

Pollutant [a]	MACT floor
Dioxins/furans (ng/dscm) [b]	1000
Cadmium (mg/dscm)	0.45
Lead (mg/dscm)	1.0
Mercury (mg/dscm)	0.37
Particulate matter (mg/dscm)	34
Sulfur dioxide (ppmv)	50
Hydrogen chloride (ppmv)	50
Nitrogen oxides (ppmv)	171

[a] All concentrations are corrected to 7 percent oxygen.
[b] Total mass of tetra- through octachlorinated dibenzo-p-dioxins and dibenzofurans.

The EPA has concluded that a SD/FF/CI/SNCR air pollution control system is needed to achieve the MACT floor emission levels for sulfur dioxide, hydrogen chloride, mercury, nitrogen oxides, and particulate matter presented in table 1. This is the same air pollution control technology that served as the basis of these emission guidelines promulgated in 1995 for large MWC plants. This air pollution control technology would also provide substantial reductions of dioxins/furans, cadmium, and lead. Therefore, EPA is proposing the same emission limits for Class A units for all pollutants, except nitrogen oxides, as those promulgated for large MWC plants in the 1995 emission guidelines.

The EPA is proposing a single emission limit for nitrogen oxides of 171 ppmv. Unlike the emission limits promulgated in 1995 that had separate nitrogen oxides limits for each different combustion unit design type (e.g., mass burn waterwall, fluidized bed combustor, mass burn rotary waterwall), EPA is proposing one nitrogen oxides emission limit for all combustion unit design types within Class A. This proposed nitrogen oxides emission limit is the MACT floor emission level. The EPA has concluded that this limit could be achieved with the same control technology (SNCR) that served as the basis of the nitrogen oxides emission limits for large MWC plants in 1995 (Docket No. A–90–45). This single nitrogen oxides emission limit also simplifies these emission guidelines. Table 2 presents the proposed emission limits for Class A units.

TABLE 2.—EMISSION LIMITS FOR CLASS A MWC UNITS

Pollutant [a]	Emission limit
Dioxins/furans (ng/dscm) [b]	30/60 [c]
Cadmium (mg/dscm)	0.04
Lead (mg/dscm)	0.49
Mercury (mg/dscm)	0.08 (or 85-percent reduction)
Particulate matter (mg/dscm).	27
Sulfur dioxide (ppmv)	31 (or 75-percent reduction)
Hydrogen chloride (ppmv)	31 (or 95-percent reduction)
Nitrogen oxides (ppmv)	171

[a] All concentrations are corrected to 7 percent oxygen.
[b] Total mass of tetra- through octachlorinated dibenzo-p-dioxins and dibenzofurans.
[c] The emission limit is 60 ng/dscm for MWC units using an electrostatic precipitator-based air pollution control system and is 30 ng/dscm for MWC units using a non-electrostatic precipitator-based air pollution control system.

The 1994 proposal preamble (59 FR 48228) provides thorough documentation of: (1) the capability of an SD/FF/CI/SNCR air pollution control system to meet the emission limits being proposed, and (2) the rationale for selection of these limits for Class A units.

4. Emission Limits for Class B Units

Class B units in this proposal are the refractory-type MWC units in the Davis class that were in the large MWC plant population for the 1995 emission guidelines. Table 3 presents the MACT floor emission levels for Class B units.

TABLE 3.—MACT FLOOR EMISSION LEVELS FOR CLASS B MWC UNITS

Pollutant [a]	MACT floor
Dioxins/furans (ng/dscm) [b]	123
Cadmium (mg/dscm)	1.2
Lead (mg/dscm)	1.8
Mercury (mg/dscm)	0.29
Particulate matter (mg/dscm)	34
Sulfur dioxide (ppmv)	55
Hydrogen chloride (ppmv)	200

[a] All concentrations are corrected to 7 percent oxygen.

[b] Total mass of tetra- through octachlorinated dibenzo-p-dioxins and dibenzofurans.

The EPA has concluded that a DSI/ESP/CI air pollution control system is needed to achieve the MACT floor emission levels for sulfur dioxide, hydrogen chloride, dioxins/furans, mercury, and particulate matter presented in table 3. Unlike the MACT floors for large MWC plants for the 1995 emission guidelines, which requires an air pollution control technology equivalent to a SD/ESP/CI or SD/FF/CI, it is not necessary to use this technology to meet these MACT floors for Class B units.

The EPA considered the feasibility of going beyond the MACT floor level of technology and proposing the same emission limits for Class B units as those for Class A units (i.e., emission limits based on SD/ESP/CI or SD/FF/CI technology). However, the refractory-type combustor design of Class B units is distinctly different from the nonrefractory-type design of Class A units. The design and operational characteristics of refractory and nonrefractory-type units were evaluated (Docket No. A–98–18). This evaluation demonstrated that refractory-type MWC units (Class B) generate approximately 50 percent more flue gas (exhaust volume) per ton of waste burned than nonrefractory-type MWC units (Class A). Higher levels of excess air are used in refractory-type units by design to avoid overheating the refractory walls. Large flue gas exhaust volume from refractory-type units result in more flue gas to be cleaned. Therefore, EPA does not believe it is reasonable to propose emission limits for Class B units based on SD/FF/CI or SD/ESP/CI technology.

For this reason, EPA proposes to set the emission limits for Class B units based on the MACT floor level control technology (DSI/ESP/CI). For dioxins/furans, particulate matter, sulfur dioxide, and hydrogen chloride, the proposed emission limits are the MACT floor emission levels. For cadmium, lead, and mercury, EPA is proposing emission limits that are more stringent than the MACT floor level but have been demonstrated to be achievable by DSI/ESP/CI technology. The emission limits for these three pollutants are the same as the limits in the 1995 emission guidelines for small MWC plants where DSI/ESP/CI technology was the basis of the MACT limits. The proposed emission limits for Class B units are summarized in table 4.

TABLE 4.—EMISSION LIMITS FOR CLASS B MWC UNITS

Pollutant [a]	Emission limit
Dioxins/furans (ng/dscm) [b]	123
Cadmium (mg/dscm)	0.1
Lead (mg/dscm)	1.6
Mercury (mg/dscm)	0.08 (or 85-percent reduction)
Particulate matter (mg/dscm).	34
Sulfur dioxide (ppmv)	55 (or 50-percent reduction)
Hydrogen chloride (ppmv)	200 (or 50-percent reduction)

[a] All concentrations are corrected to 7 percent oxygen.
[b] Total mass of tetra through octachlorinated dibenzo-p-dioxins and dibenzofurans.

Thorough documentation of the capability of a DSI/ESP/CI system to meet these proposed emission limits is available in the 1994 proposal (59 FR 48228) and the document ''Municipal Waste Combustors—Background Information for Proposed Standards: Post-Combustion Technology Performance'' (Docket No. A–89–08). As in the 1995 emission guidelines for large refractory-type MWC units, no nitrogen oxides emission limit is proposed for Class B units (see the 1994 proposal preamble, 59 FR 48228).

5. Emission Limits for Class C Units

Class C units in this proposal are those units that were in the small MWC plant population in the 1995 emission guidelines. Table 5 presents the MACT floor emission levels for Class C units.

TABLE 5.—MACT FLOOR EMISSION LEVELS FOR CLASS C MWC UNITS

Pollutant [a]	MACT floor
Dioxins/furans (ng/dscm) [b]	837
Cadmium (mg/dscm)	1.2
Lead (mg/dscm)	23
Mercury (mg/dscm)	0.65
Particulate matter (mg/dscm)	91
Sulfur dioxide (ppmv)	85
Hydrogen chloride (ppmv)	291

[a] All concentrations are corrected to 7 percent oxygen.
[b] Total mass of tetra through octachlorinated dibenzo-p-dioxins and dibenzofurans.

The EPA has concluded that a DSI/ESP air pollution control system is needed to achieve the MACT floor emission levels for sulfur dioxide, hydrogen chloride, and particulate matter presented in table 5. This is the same air pollution control technology (DSI/ESP) used as the basis of the emission limits promulgated in 1995 for small MWC plants. This air pollution control technology would also provide substantial reductions in cadmium and lead. The MACT floor for mercury is at a level typical for units that are uncontrolled. As discussed in the 1994 proposal preamble (59 FR 48249), for units that would need a DSI/ESP system to meet MACT floor requirements, activated carbon injection could be added to a DSI/ESP system at a minimal incremental cost. The addition of a CI air pollution control system would provide substantial reductions in dioxins/furans and mercury. The EPA considers that the cost to install CI is reasonable given the potential health effects associated with the bioaccumulation of mercury in the environment and the toxic nature of dioxins/furans. Therefore, EPA is proposing the same emission limits for Class C units as those promulgated for small MWC plants in the 1995 emission guidelines as MACT. These emission limits reflect MACT performance and are based on the performance of a DSI/ESP/CI air pollution control technology. Table 6 presents the proposed emission limits for Class C units.

TABLE 6.—EMISSION LIMITS FOR CLASS C MWC UNITS

Pollutant [a]	Emission limit
Dioxins/furans (ng/dscm) [b]	125
Cadmium (mg/dscm)	0.1
Lead (mg/dscm)	1.6
Mercury (mg/dscm)	0.08 (or 85-percent reduction)
Particulate matter (mg/dscm).	70
Sulfur dioxide (ppmv)	80 (or 50-percent reduction)
Hydrogen chloride (ppmv)	250 (or 50-percent reduction)

[a] All concentrations are corrected to 7 percent oxygen.
[b] Total mass of tetra through octachlorinated dibenzo-p-dioxins and dibenzofurans.

These proposed emission limits are identical to those promulgated in the 1995 emission guidelines for small MWC units. Because of this, the 1994 proposal preamble (59 FR 48228) provides thorough documentation of: (1) The capability of a DSI/ESP/CI system to meet the emission limits being proposed, and (2) the rationale for selection of these limits for Class C units. As in the 1995 emission guidelines for small MWC units, no nitrogen oxides emission limit is proposed for Class C units.

E. Have Carbon Monoxide Emission Limits Been Revised for Fluidized Bed Combustion Units That Cofire Wood and Refuse-derived Fuel?

The EPA has concluded that another MWC unit category should be established for carbon monoxide emission limits. Fluidized bed combustion units that burn a mixture of wood and RDF have exhibited higher variations in carbon monoxide than expected.

The EPA conducted an analysis of carbon monoxide data from a fluidized bed combustion unit that burns a mixture of wood and RDF and has incorporated good combustion practice modifications (Docket No. A–98–18). The EPA has determined that an additional carbon monoxide emission limit would be appropriate for cofired fluidized bed combustion units. Based on this analysis, EPA observed that a long-term average carbon monoxide emission level of less than 100 ppmv can be achieved and a carbon monoxide emission limit for this combustion unit type of 200 ppmv (24-hour average) would be appropriate. The carbon monoxide data used to establish this new carbon monoxide emission limit were compared with dioxin/furan emission tests conducted on this same MWC unit following the good combustion practice modifications. This comparison showed that fluidized bed combustion units burning wood and RDF and applying good combustion practices emit carbon monoxide up to 200 ppmv, and substantial dioxin/furan emission reductions are achieved by good combustion practices at these carbon monoxide levels.

F. Have Any Changes Been Made to the Operator Certification Requirements?

One change is proposed for the operator certification section of the good combustion practice requirements since the 1995 guidelines. In response to questions since the 1995 emission guidelines were promulgated, EPA has clarified what actions an MWC unit owner must take to continue operating an MWC unit during times when the certified chief facility operator and certified shift supervisor must be temporarily offsite for an extended period of time and there are no other certified chief facility operators or certified shift supervisors onsite. The EPA has addressed this issue by adding specific requirements for MWC units when the certified chief facility operator and certified shift supervisor must be offsite. Different requirements apply depending on the length of time the certified chief facility operator and certified shift supervisor must be offsite. These changes have been added to § 60.1685 of these proposed emission guidelines.

G. Have Any Changes Been Made to the Operating Practice Requirements?

One change is proposed for the operating practice requirements since the 1995 guidelines. The EPA has clarified how the required level of carbon feed rate is established and how the required monitoring parameter and quarterly carbon usage are used to determine compliance with the operating practice requirements. As discussed below, this results in two enforceable requirements for carbon feed rate.

As in the 1995 emission guidelines, the MWC plant owner must select an operating parameter (e.g., screw feeder speed) that can be used to calculate carbon feed rate. During each dioxin/furan and mercury stack test, the total amount of carbon used during each stack test must be measured. The total amount of carbon used during the test is divided by the duration (hours) of the stack test to give an average carbon feed rate in kilograms (or pounds) per hour. The MWC plant owner must also monitor the selected operating parameter during each dioxin/furan and mercury stack test and record the average operating parameter level. After the dioxin/furan and mercury stack tests are complete, the MWC owner must establish a relationship between the selected operating parameter and the measured carbon feed rate so that the selected parameter can be used to calculate the carbon feed rate. The selected operating parameter must then be continuously monitored during MWC unit operation and used to calculate the carbon feed rate. The calculated carbon feed rate cannot fall below the carbon feed rate measured during the dioxin/furan or mercury stack test (depending on which test establishes the higher carbon feed rate).

The 1995 emission guidelines did not clearly specify an averaging time for calculating the carbon feed rate. Because the baseline carbon feed rate is established as the average feed rate during the annual dioxin/furan or mercury stack test, EPA is clarifying that the averaging time used for monitoring this feed rate (using parametric data) should be of similar duration. Therefore, EPA is proposing an 8-hour block averaging period for monitoring carbon feed rates. This would allow facilities to compensate for interruptions in carbon feed rates (due to calibration, malfunction, or repair) by offsetting the interruption with an increase in carbon feed rates within the 8-hour averaging period.

The quarterly carbon usage requirements in the 1995 emission guidelines have also been revised and clarified. The EPA is proposing that MWC plant owners calculate required plantwide carbon usage on a quarterly basis and compare this required level of carbon usage to the actual amount of carbon purchased and delivered to the MWC plant. After an average carbon feed rate is established for an MWC unit based on the most recent dioxin/furan or mercury stack test, the required quarterly carbon usage level for the MWC unit is calculated by multiplying the kilogram (or pound) per hour rate by the number of operating hours for each quarter. Next, the required quarterly carbon usage for the plant is calculated by summing the carbon usage value for each small MWC unit located at the plant.

The MWC plant owner must then compare the required quarterly carbon usage level, based on the carbon usage during the stack test and the hours of operation, with the amount of carbon purchased and delivered to the MWC plant. The MWC plant owner must demonstrate that they are using the required amount of carbon during each quarter. This comparison is done on a plant basis rather than a unit basis because MWC units typically use a common carbon storage system; therefore, purchase, delivery, and usage are best tracked on a plant basis. If a plant does not meet the quarterly carbon usage requirement, all units at the plant would be considered out of compliance.

An MWC plant owner can choose to track quarterly carbon usage on an MWC unit basis if that is practical at the plant. The required quarterly carbon usage for each individual unit would then be compared to the carbon purchased and delivered to that unit. In this case, if an MWC unit does not meet the quarterly carbon usage requirement, only the one MWC unit, instead of the entire MWC plant, would be considered out of compliance.

H. Have any Changes Been Made to the Monitoring and Stack Testing Requirements?

No changes are proposed to the monitoring and stack testing requirements contained in the 1995 guidelines. However, to clarify differences between stack testing and continuous emission monitoring system requirements, these two topics have been divided into separate sections within these proposed guidelines.

The nitrogen oxides trading and averaging provisions that were included

in the 1995 emission guidelines are not included in this proposal. No large MWC units have used the trading and averaging provisions provided in the subpart Cb emission guidelines for large MWC units. Therefore, EPA does not anticipate that any small MWC units will use the nitrogen oxides trading and averaging provisions. Furthermore, the majority of small MWC units affected by this proposed subpart would not have nitrogen oxides emission limits and therefore, would not need trading and averaging provisions.

I. Have any Changes Been Made to the Recordkeeping and Reporting Requirements?

No changes are proposed to the recordkeeping and reporting requirements since the 1995 emission guidelines. However, consistent with the proposed changes in subpart B contained in this proposal, a reduction in the number of increments of progress reporting requirements for Class C small MWC units would occur.

This change affects the number of increments of progress required for State plans under subpart B of this part. Subpart B generally requires specific milestone dates and notification for five increments of progress when compliance will take longer than 12 months. For Class C units, EPA is proposing a requirement of only two increments of progress: submittal of a control plan and final compliance. For Class C units, the other three increments of progress are not appropriate or necessary to ensure progress toward compliance. Reducing the number of increments required for Class C units reduces the reporting and recordkeeping burden on smaller facilities. Section VI of this preamble, ''Amendments to Subpart B,'' addresses the subpart B revision.

Furthermore, EPA is proposing one minor change to clarify recordkeeping and reporting of: (1) 8-hour average calculated carbon feed rate, and (2) quarterly amounts of carbon purchased and delivered. These changes make the recordkeeping and reporting sections consistent with the operating practice requirements described above in section III.G.

IV. What Would Be the Impacts of These Proposed Emission Guidelines?

This section describes the impacts (i.e., air, water, solid waste, energy, cost, and economic impacts) of these proposed emission guidelines for small MWC units. The impact analysis conducted to evaluate the 1995 emission guidelines is available at 59 FR 48228. The discussion in this section focuses only on the air, cost, and economic impacts of these proposed emission guidelines.

In the preamble for the 1995 emission guidelines, EPA determined that the water, solid waste, and energy impacts associated with these proposed emission guidelines were not significant. Today's proposal affects only a subset of the MWC units that were addressed in the earlier impact analysis. Again, EPA has concluded that the water, solid waste, and energy impacts associated with today's proposal would not be significant.

For further information on the impacts of these proposed emission guidelines, refer to the document entitled ''Economic Impact Analysis: Small Municipal Waste Combustor—Section 111/129 Emission Guidelines and New Source Performance Standards'' (Docket No. A–98–18).

A. Air Impacts

The national air emission reductions that would result from full implementation of these emission guidelines compared to current estimated national emission levels have been calculated. Table 7 summarizes these air emission reductions and the percentage change in emissions relative to current baseline levels associated with the full implementation of these proposed emission guidelines for small MWC units.

TABLE 7. NATIONAL AIR EMISSION IMPACTS OF THESE EMISSION GUIDELINES FOR SMALL MWC UNITS

Pollutant	Air emission reduction	Percent change from 1998 baseline emission level [a]
Dioxins/furans [b].	2.7 kg/year	97
Cadmium	309 kg/year ...	84
Lead	12.7 Mg/year	91
Mercury	4.1 Mg/year ...	95
Particulate matter.	351 Mg/year ..	73
Sulfur dioxide	1,196 Mg/year	49
Hydrogen chloride.	2,390 Mg/year	85
Nitrogen oxides.	384 Mg/year ..	9

[a] Percent national emission reduction relative to national baseline emissions that would occur in the absence of these emission guidelines.

[b] Total mass of tetra- through octachlorinated dibenzo-p-dioxins and dibenzofurans.

B. Cost and Economic Impacts

The EPA estimates that 90 small MWC units located at 41 plants would be affected by these proposed emission guidelines. The total MSW combustion capacity of these 90 units is 8,551 tons per day. Of these 90 units, 69 percent are owned by city or county governments, 29 percent are owned by private businesses, and 2 percent are owned by nonprofit organizations.

To estimate the cost impacts of the proposed guidelines, EPA has taken into account all of the existing control equipment currently in operation at small MWC units. The cost estimates presented here, which are in 1997 dollars, are incremental costs over the control equipment already in use. The method used to estimate the cost and economic impacts of today's proposal is similar to the method used in the 1995 emission guidelines. For more details on the cost and economic analysis, refer to the impact analysis in the document entitled ''Economic Impact Analysis: Small Municipal Waste Combustor—Section 111/129 Emission Guidelines and New Source Performance Standards'' (Docket No. A–98–18).

The total annual cost (including annualized capital and operating costs) of these proposed emission guidelines would be approximately $50 million, which is equivalent to $18.75 per ton of MSW combusted. The total nationwide cost is approximately one-tenth of the nationwide cost that was estimated for both large and small MWC units for the 1995 emission guidelines. This is because most of the impacts of the 1995 emission guidelines were associated with large MWC units and because there has been a decrease in the small MWC population.

V. Companion Proposal for New Small MWC Units

A companion proposal to these proposed emission guidelines is being published in today's **Federal Register** to establish NSPS for new small MWC units. Following promulgation, the NSPS for new small MWC units will be contained in 40 CFR part 60, subpart AAAA.

VI. Amendments to Subpart B

Also included in today's **Federal Register** is a proposal to amend subpart B of this part, ''Adoption and Submittal of State Plans for Designated Facilities.'' Subpart B establishes procedures that are used in developing State plans and Federal plans to implement section 111(d) emission guidelines for existing facilities. Subpart B would be used to develop State plans implementing the subpart BBBB emission guidelines proposed today for small MWC units. The EPA is proposing two amendments to subpart B.

The first amendment addresses compliance schedules for designated facilities. The amendment affects the increments of progress requirements specified in § 60.24(e)(1) of subpart B of 40 CFR part 60. The EPA is adding the following language to the increments of progress requirements: ''unless otherwise specified in the applicable subpart.'' The purpose of this amendment is to allow EPA subpart-specific discretion in the number of increments of progress that a designated facility must meet. The intent of the increments of progress is to ensure designated facilities make continued progress toward meeting the compliance schedules established in these emission guidelines for the source category. Emission guidelines that have been implemented through subpart B include those for sulfuric acid plants, large MWC units, medical waste incinerators, and municipal solid waste landfills.

Currently, subpart B requires designated facilities to meet five increments of progress during their air pollution control device retrofit. The following five increments, with dates, must be addressed for the following activities: (1) submitting control plans, (2) awarding contracts, (3) initiating onsite construction, (4) completing onsite construction, and (5) final compliance.

For some categories of designated facilities, such as large MWC units, the five increments are appropriate. Large MWC units must develop site-specific control plans. Retrofit of controls is normally associated with large onsite field-erected construction projects. Although the current subpart B increments are appropriate for large MWC units, they are inappropriate for smaller MWC units. Most small Class C MWC units will achieve compliance by installing preconstructed modular control systems. When a control system for a small MWC unit is ordered from a vendor and then delivered, installation is relatively quick without extensive onsite construction. This is different from a complex retrofit where detailed site-specific planning, multiple contracts, and months of onsite construction are required to complete the retrofit. Therefore, EPA believes that establishing and reporting five increments of progress is overly burdensome for small Class C MWC units and is not necessary to ensure compliance. Other source categories covered by future emission guidelines may experience similar situations where some of the five increments of progress are also not appropriate. Therefore, EPA is proposing to allow subpart-specific flexibility in establishing increments of progress for a particular subpart.

The proposed second amendment to subpart B addresses the public hearing requirements specified in § 60.27(f) of subpart B of 40 CFR part 60. The EPA is proposing additional text to clarify that EPA will hold a public hearing for Federal plan development just as a State holds a public hearing for State plan development.

The purpose of this revision is to clarify how the public hearing requirements apply if EPA is developing a Federal plan for designated facilities in States that did not develop approvable State plans. If State regulatory authorities are developing a plan that affects designated facilities in their States, § 60.23(c)(1) of subpart B of 40 CFR part 60 requires at least one public hearing per State (a State has the discretion to hold more than one hearing). The proposed revisions would clarify that EPA must conduct at least one public hearing for the Federal plan (EPA will also have the discretion to hold more than one public hearing).

VII. Administrative Requirements

A. Public Hearing

In accordance with section 307(d)(5) of the Clean Air Act, EPA will hold a public hearing if individuals request to speak. If a public hearing is held, EPA may ask clarifying questions during the oral presentation but will not respond to the presentations or comments. To provide an opportunity for all who may wish to speak, oral presentations will be limited to 15 minutes each. Any member of the public may submit written comments (see the **DATES** and **ADDRESSES** sections). The EPA will consider written comments and supporting information with equivalent weight as any oral statement and supporting information presented at a public hearing.

B. Docket

The docket is an organized and complete file of the administrative record compiled by EPA in the development of this proposal. Material is added to the docket throughout the rule development process. The principal purposes of the docket are: (1) to allow members of the public to identify and locate documents so that they can effectively participate in the rulemaking process, and (2) to serve as the record in case of judicial review except for interagency review material. The docket numbers for these emission guidelines are Docket No. A–98–18 and associated Docket Nos. A–90–45 and A–89–08, which have been incorporated by reference into Docket No. A–98–18.

C. National Technology Transfer and Advancement Act

Under section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Pub. L. 104–113), all Federal agencies are required to use voluntary consensus standards in their regulatory and procurement 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 bodies. The NTTAA requires Federal agencies to provide Congress, through annual reports to the OMB, with explanations when an agency does not use available and applicable voluntary consensus standards.

Consistent with the NTTAA, the EPA conducted searches to identify voluntary consensus standards for use in process and emissions monitoring. The search for emissions monitoring procedures identified 20 voluntary consensus standards that appeared to have possible use in lieu of EPA standard reference methods. However, after reviewing available standards, EPA determined that 12 of the candidate consensus standards identified for measuring emissions of pollutants or surrogates subject to emission standards in the rule would not be practical due to lack of equivalency, documentation, validation data, and other important technical and policy considerations. Eight of the remaining candidate consensus standards are new standards under development that EPA plans to follow, review and consider adopting at a later date.

One consensus standard, ASTM D6216–98, appears to be practical for EPA use in lieu of EPA Performance Specification 1 (40 CFR part 60, appendix B). On September 23, 1998, EPA proposed incorporating by reference ASTM D6216–98 under a separate rulemaking (63 FR 50824) that would allow broader use and application of this consensus standard. The EPA plans to complete this action in the near future. For these reasons, EPA does not propose in these emission guidelines to adopt D6216–98 in lieu of PS–1 requirements as it would be impractical for EPA to act independently from separate rulemaking activities already undergoing notice and comment.

The EPA solicits comment on proposed emission monitoring

requirements proposed in these emission guidelines and specifically invites the public to identify potentially-applicable voluntary consensus standards. Commenters should also explain why this regulation should incorporate these voluntary consensus standards, in lieu of EPA's standards. Emission test methods and performance specifications submitted for evaluation should be accompanied with a basis for the recommendation, including method validation data and the procedure used to validate the candidate method (if method other than Method 301, 40 CFR part 63, appendix A was used).

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: (1) MWC unit load level (steam output), (2) designing, constructing, installing, calibrating, and using nozzles and orifices, and (3) MWC plant operator certification requirements.

One consensus standard by the ASME was identified for use in these proposed emission guidelines for measurement of MWC unit load level (steam output). The EPA believes this standard is practical to use in these proposed emission guidelines as the method to measure MWC unit load. The EPA takes comment on the incorporation by reference of ''ASME Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1—1964 (R1991)'' in the proposed guidelines.

A second consensus standard by ASME was identified for use in these proposed emission guidelines for designing, constructing, installing, calibrating, and using nozzles and orifices. The EPA believes this standard is practical to use in these proposed emission guidelines for the design, construction, installation, calibration, and use of nozzles and orifices. The EPA takes comment on the incorporation by reference of ''American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters'', 6th edition (1971).

A third consensus standard by ASME (QRO–1–1994) was identified for use in these proposed emission guidelines for MWC plant operator certification requirements instead of developing new operator certification procedures. The EPA believes this standard is practical to use in these proposed emission guidelines that require a chief facility operator and shift supervisor to successfully complete the operator certification procedures developed by ASME.

Tables 6, 7, and 8 of these proposed emission guidelines list the EPA testing methods and performance standards included in the proposed regulations. Most of these standards have been used by States and industry for more than 10 years. Nevertheless, under § 60.8 of 40 CFR part 60, subpart A, the proposal also allows any State or source to apply to EPA for permission to use an alternative methods in place of any of the EPA testing methods or performance standards listed in Tables 6, 7, and 8.

D. Paperwork Reduction Act

The EPA submitted the information collection requirements (ICR) in these proposed emission guidelines to OMB for approval under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The EPA prepared an ICR document (ICR No. 1900.01.01) and a copy may be obtained from Sandy Farmer by mail at the OP, Regulatory Information Division, U.S. Environmental Protection Agency (2137), 401 M Street SW, Washington, DC 20460, by e-mail at ''farmer.sandy@epamail.epa.gov'' or by calling (202) 260–2740. A copy may also be downloaded off the Internet at ''http://www.epa.gov/icr''.

Comments are requested on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques. Send comments on the ICR to the Director, OP Regulatory Information Division, U.S. Environmental Protection Agency (2137), 401 M Street, SW, Washington, DC 20460, and to the Office of Information and Regulatory Affairs, OMB, 725 17th Street, NW, Washington, DC 20503, marked ''Attention: Desk Officer for EPA (ICR Tracking No. 1900.01).'' Include the ICR number in any correspondence. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after August 30, 1999, a comment to OMB is best assured of having its full effect if OMB receives it by September 29, 1999. The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

The information would be used by the Agency 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 enable EPA to identify small MWC units that may not be in compliance with these emission guidelines. Based on reported information, EPA would decide which small MWC units should be inspected and what records or processes should be inspected. The records that owners and operators of small MWC units maintain would indicate to EPA whether personnel are operating and maintaining control equipment properly.

These proposed 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 these 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. This 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.

E. Regulatory Flexibility Act/Small Business Regulatory Enforcement Fairness Act

Section 605 of the RFA (5 U.S.C. 601 *et seq.*) requires Federal agencies to give special consideration to the impacts of regulations on small entities, which are small businesses, small organizations, and small governments. In 1996, the SBREFA amended the RFA to strengthen the RFA's analytical and procedural requirements and to establish a new mechanism for expedited congressional review. The major purpose of these Acts is to keep paperwork and regulatory requirements from getting out of proportion to the scale of the entities being regulated without compromising the objectives of

the Clean Air Act. If a regulation is likely to have a significant economic impact on a substantial number of small entities, the EPA may give special consideration to those small entities when analyzing regulatory alternatives and drafting the regulation. Under these Acts, EPA must generally prepare a regulatory flexibility analysis for a rule subject to notice and comment rulemaking procedures unless the EPA certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small government jurisdictions.

Pursuant to the provisions of 5 U.S.C. 605(b), the EPA certifies that today's proposed emission guidelines will not have a significant economic impact on a substantial number of small entities. The EPA conducted a regulatory flexibility analysis that shows eight existing small MWC units (operated by one small business and seven small governments) that would be subject to these 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.

Based on the results of the initial analysis, EPA concluded that these emission guidelines do not have a significant economic impact on a substantial number of small entities. Therefore, it is not necessary to prepare a final regulatory flexibility analysis.

F. Unfunded Mandates Reform Act

Title II of the 1995 UMRA, Pub. L. 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and 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 by State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any 1 year. Before promulgating an EPA 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 allow 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 these proposed emission guidelines do not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any 1 year. The economic impact analysis (Docket No. A–98–18) shows that the total annual costs of these proposed emission guidelines is about $50 million per year (in 1997 dollars), starting on the fifth year after the rule is promulgated. Thus, today's proposed emission guidelines are not subject to the requirements of sections 202 and 205 of the UMRA. Although these emission guidelines are not subject to UMRA, EPA did prepare 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 (60 FR 65405–65412, December 19, 1995). Because today's proposed emission guidelines are functionally equivalent to the 1995 emission guidelines, no additional consultations were necessary.

G. 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 OMB review and the requirements of this 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.

The EPA considers these emission guidelines proposed today to be ''not significant'' because these guidelines will not have an annual effect on the economy of $100 million or more and do not impose any additional control requirements above the 1995 emission guidelines. The EPA considered the 1995 emission guidelines to be ''significant'' because the 1995 guidelines were expected to have an annual effect on the economy in excess of $100 million. The EPA submitted the 1995 emission guidelines to OMB for review (60 FR 65405, December 19, 1995). However, these emission guidelines proposed today are projected to have an impact of approximately $50 million annually (Docket No. A–98–18). Therefore, these proposed emission guidelines are considered to be ''not significant'' under Executive Order 12866 and will not be submitted to OMB for review.

H. Executive Order 12875—Enhancing the Intergovernmental Partnership

Under Executive Order 12875, EPA may not issue a regulation that is not required by statute and that creates a mandate upon a State, local, or tribal government unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments or EPA consults with those governments. If EPA complies by consulting, Executive Order 12875 requires EPA to provide to

OMB a description of the extent of EPA's prior consultation with representatives of affected State, local, and tribal governments, the nature of their concerns, copies of any written communications from the governments, and a statement supporting the need to issue the regulation. In addition, Executive Order 12875 requires EPA to develop an effective process permitting elected officials and other representatives of State, local and tribal governments ''to provide meaningful and timely input in the development of regulatory proposals containing significant unfunded mandates.''

The EPA has concluded that these emission guidelines may create a mandate on a number of city and county governments, and the Federal government would not provide the funds necessary to pay the direct costs incurred by these city and county governments in complying with the mandate. However, today's proposed emission guidelines do not impose any additional costs or result in any additional control requirements above those considered during promulgation of the 1995 emission guidelines. In developing the 1995 emission guidelines, EPA consulted extensively with State and local governments to enable them to provide meaningful and timely input in the development of those emission guidelines. Because these proposed emission guidelines are the same as those developed in 1995, these previous consultations still apply. For a discussion of EPA's consultations with State and local governments, the nature of the governments' concerns, and EPA's position supporting the need to issue these emission guidelines, see the preamble to the 1995 emission guidelines (60 FR 65405–65413, December 19, 1995).

I. Executive Order 12898—Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 directs Federal agencies to ''determine whether their programs, policies, and activities have disproportionately high adverse human health or environmental effects on minority populations and low-income populations'' (sections 3–301 and 3–302). In developing these emission guidelines for small MWC units, EPA analyzed environmental justice issues that could be relevant to this proposal.

An impact analysis was conducted to determine the distribution of minority and low-income groups in the surrounding area where MWC units are located in the United States. The EPA reviewed the demographic characteristics presented in this impact analysis (Docket No. A–90–45) and other analyses. The EPA concluded that there is no significant difference in ethnic makeup or income level in counties where MWC units are located when compared to the average ethnic and income levels of the respective States in which the units are located.

In addition, this proposal would reduce air emissions from small MWC units, thereby improving air quality, health, and the environment in areas where MWC units are located.

Therefore, EPA has concluded that this proposal would not have a disproportionately high adverse human health or environmental effect on minority populations or low-income populations.

J. 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, the Agency 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 the Agency.

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.

These emission guidelines are not subject to Executive Order 13045 because they are not economically significant as defined in Executive Order 12866 and because they are based on technology performance and not on health and safety risks. No children's risk analysis was performed because no alternative technologies exist that would provide greater stringency at a reasonable cost. Therefore, the results of any such analysis would have no impact on the stringency decision.

K. 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 emission guidelines do 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 these emission guidelines.

L. Executive Memorandum on Plain Language in Government Writing

On June 1, 1998, President Clinton issued an Executive Memorandum entitled ''Plain Language in Government Writing,'' which instructs Federal agencies to use plain language in all proposed and final rulemakings by January 1, 1999. Therefore, these proposed emission guidelines are organized and written in a plain language format and style. The plain language format and style do not alter the content or intent of this proposal compared to the 1995 emission guidelines. The EPA considers this plain language format and style to be more user friendly and understandable to all audiences when compared with previous proposals that were not written in plain language.

List of Subjects in 40 CFR Part 60

Environmental protection, Air pollution control, Municipal waste combustion.

Dated: August 6, 1999.

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, 7411, 7413, 7414, 7416, 7429, 7601, and 7602.

2. Section 60.24 of subpart B of part 60 is amended by revising paragraph (e)(1) to read as follows:

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

§ 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.

* * * * *

3. Section 60.27 of subpart B of part 60 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: Small Municipal Waste Combustion Units

Sec.

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 these emission guidelines are listed in tables 2, 3, 4, and 5 of this subpart. These emission guidelines are developed in accordance with sections 111(d) and 129 of the Clean Air Act and subpart B of this part.

§ 60.1505 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 before August 30, 1999, you must submit a State plan to EPA that implements these emission guidelines contained in this subpart.

(b) You must submit the State plan to EPA within 1 year after the promulgation of this subpart.

§ 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 these emission guidelines contained in this subpart.

(5) Stack testing, continuous emission monitoring, recordkeeping and reporting requirements.

(6) Transcript of the public hearing on the State plan.

(7) Provision for State progress reports to EPA.

(8) Identification of enforceable State mechanisms that you selected for implementing these emission guidelines of this subpart.

(9) Demonstration of your State's legal authority to carry out the section 111(d) and section 129 State plan.

(b) Your State plan can deviate from the format and content of these emission guidelines contained in this subpart. However, if your State plan does deviate, you must demonstrate that your State plan is as protective as these 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 of subpart B of this part.

§ 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 of subpart B of this part, to implement these 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 these 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 as expeditiously as practicable but not later than the earlier of two dates:

(1) Five years after [*the date of publication of the final rule*].

(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 A and Class B units (see definition in § 60.1940), dioxin/furan 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 A and Class B units that commenced construction after June 26, 1987 must comply with the dioxin/furan 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 apply instead of the requirements specified in subpart B?

Subpart B establishes general requirements for developing and processing section 111(d) plans. This subpart applies, instead of the requirements in subpart B of this part, for 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 these emission guidelines contained in this subpart. State plans must require all municipal waste combustion units to comply within 5 years after [publication date of final rule]. This requirement applies, instead of the option for case-by-case less stringent emission standards and longer compliance schedules in § 60.24(f) of subpart B of this part.

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

§ 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 these emission guidelines contained in this subpart. Some States may incorporate these 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 5 years after [*the date of publication of the final rule*], 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 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 the date 6 months after [*the date of publication of the final rule*] 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 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.* These 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 municipal solid waste combustion to less than 11 tons per day.

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

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

(c) *Cogeneration units.* These 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 this exemption.

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

(d) *Municipal waste combustion units that combust only tires.* These 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 cofire coal, fuel oil, natural gas, or other nonmunicipal solid waste).

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

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

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

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

(g) *Cofired units.* These 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 this 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.* These 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.* These 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 these units must meet only 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 these same three subcategories in your State plan. These three subcategories are based on aggregate capacity of the municipal waste combustion plant and the type of municipal waste combustor unit as follows:

(a) *Class A units.* These are nonrefractory-type small municipal waste combustion units that are located at municipal waste combustion plants with 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 B units.* These are refractory-type small municipal waste combustion units that are located at municipal waste combustion plants with 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.)

(c) *Class C units.* These are all small municipal combustion units that are located at municipal waste combustion plants with aggregate plant combustion capacity no more 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.)

Use of Model Rule

§ 60.1570 What is the purpose of the ''Model Rule'' in this subpart?

(a) The model rule provides these emission guidelines requirements in a standard regulation format. You must develop a State plan that is as protective as the model rule. You may use the

model rule language as part of your State plan. Alternative language may be used in your State plan if you demonstrate that the alternative language is as protective as the model rule contained in this subpart.

(b) In the model rule of §§ 60.1585 through 60.1905, ''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). Alternatives may be used, but only if you can demonstrate that they are 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 A and Class B 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 C 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 A, B, and C 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. This 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 this increment of progress has been achieved.

§ 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) These 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 standards 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 within the standards 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 of subpart A of this part)) 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 A and Class B units, 12 months after the effective date of State plan approval. For Class C 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 of subpart A of this part)).

(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 A and Class B units, 12 months after the effective date of State plan approval. For Class C 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 must leave your municipal waste combustion unit, 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 is away, you must meet one of three criteria:

(a) When the certified chief facility operator and certified shift supervisor are both offsite for less than 8 hours 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 8 hours, but less 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 record the periods when the certified chief facility operator and certified shift supervisor are offsite and include this 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 dioxin/furan 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 dioxin/furan or mercury test.

(d) If your municipal waste combustion unit uses activated carbon to control dioxin/furan 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 the appropriate equation in § 60.1935.

(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 following four tables of this subpart:

(1) For Class A units, see table 2.

(2) For Class B units, see table 3.

(3) For Class C units, see table 4.

(4) For carbon monoxide emission limits for all classes of units, see table 5.

(b) If your Class A or Class B municipal waste combustion unit began construction, reconstruction, or modification after June 26, 1987, then you must comply with the dioxin/furan and mercury emission limits specified in table 2 or 3 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.

§ 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.

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 A municipal waste combustion unit, also install, calibrate, maintain, and operate a continuous emission monitoring system for nitrogen oxides. Install the continuous emission monitoring system for sulfur dioxide and nitrogen oxides 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 of subpart A of this part.

(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 A 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 a continuous emission monitoring system for sulfur dioxide and oxygen (or carbon dioxide) at the inlet of the air pollution control device.

§ 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 A 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 these 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. These 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 12 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 system. You may reestablish the relationship during annual evaluations. To establish the relationship use three procedures:

(a) Use EPA Reference Method 3 or 3A 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 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 this 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 A 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) of subpart A of this part 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 and 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 this 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, 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, section 5.4, to determine the daily geometric average percent reduction of potential sulfur dioxide emissions.

(c) If you operate a Class A municipal waste combustion unit, use EPA Reference Method 19, section 4.1, to calculate the daily arithmetic average for concentrations of nitrogen oxides.

(d) Use EPA Reference Method 19, 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 of subpart A of this part.

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

(d) Complete each annual evaluation of your continuous opacity monitoring system no more than 12 months after the previous evaluation.

(e) Use tests conducted according to EPA Reference Method 9, as specified in § 60.1790, to determine compliance with the applicable emission limit for opacity in tables 2, 3, or 4 of this subpart. The data obtained from your continuous opacity monitoring system are not used to determine compliance with the limit on opacity emissions.

§ 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 my continuous emission monitoring system is temporarily unavailable to meet the data collection requirements?

Refer to table 8 of this subpart. It shows alternate methods for collecting data when these 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, 3, 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 these pollutants after the initial stack test. Conduct each annual stack test within 12 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 these pollutants consist of at least three test runs, as specified in § 60.8 (Performance Tests) of subpart A of this part. Use the average of the pollutant emission concentrations from the three test runs to determine compliance with the applicable emission limits in tables 2, 3, or 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.

§ 60.1795 May I conduct stack testing less often?

(a) You may test less often if you own or operate a Class C 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 this 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 third 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 a 3-year period show compliance.

(b) You can test less often 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 these municipal waste combustion units have demonstrated levels of dioxin/furan emissions no more than 15 nanograms per dry

standard cubic meter (total mass) for Class A units, or 30 nanograms per day standard cubic meter (total mass) for Class B and Class C units, for 2 consecutive years. In this case, you may choose to conduct annual stack tests on only one municipal waste combustion unit per year at your plant.

(1) Conduct the stack test no more than 12 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 dioxin/furan emissions less than 15 nanograms per dry standard cubic meter (total mass) for Class A units, or 30 nanograms per day standard cubic meter (total mass) for Class B and Class C 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 dioxin/furan emissions greater than 15 nanograms per dry standard cubic meter (total mass) for Class A units, or 30 nanograms per day standard cubic meter (total mass) for Class B and Class C 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 dioxin/furan emission levels less than 15 nanograms per dry standard cubic meter (total mass) for Class A units, or 30 nanograms per day standard cubic meter (total mass) for Class B and Class C 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 12-month testing schedule if unforeseen circumstances arise?

You may not deviate from the 12-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 dioxin/furan 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 per hour (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 of subpart A of this part).

(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 of subpart A of this part).

(5) Before each dioxin/furan 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 unit does not generate steam, 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 dioxin/furan 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 dioxin/furan 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 this 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 dioxin/furan 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 and 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 this 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. Dates on which each person completed the 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 chief facility operator and shift supervisor are offsite for more than 8 hours but less than 2 weeks and no other certified operator is onsite, record the dates that the chief facility operator and shift supervisor were offsite.

(2) When all certified chief facility operators and 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 these people to be offsite.

(iii) The corrective actions you are taking to ensure a certified chief facility operator or 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 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 tables 2, 3, 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 dioxin/furan 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 A 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 A 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 pollutants or parameter levels recorded in paragraph (b) 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 these dates for five types of pollutants and parameters:

(i) Sulfur dioxide emissions.

(ii) For Class A 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 A 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 these records for the sulfur dioxide, nitrogen oxides (Class A municipal waste combustion units only), and carbon monoxide continuous emissions monitoring systems.
(g) *Records of the relationship between oxygen and carbon dioxide.* If you chose 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 dioxin/furan 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 dioxin/furan 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 dioxin/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 (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 the appropriate equation 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 dioxin/furan 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 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 subpart A of this part, 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 A 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 tables 2, 3, 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 dioxin/furan emissions and include supporting calculations.

(f) If your municipal waste combustion unit uses activated carbon to control dioxin/furan or mercury emissions, the average carbon feed rates that you recorded during the initial stack tests for dioxin/furan 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 Clean Air Act, 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 emission levels recorded, in the appropriate units. List these values for five pollutants or parameters:

(1) Sulfur dioxide emissions.

(2) For Class A 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 this 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 dioxin/furan or mercury emissions, include four records:

(1) The average carbon feed rates recorded during the most recent dioxin/furan 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 the appropriate equation 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 A 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 A 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 dioxin/furan 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. This summary 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 8 hours.

§ 60.1890 What must I do if I am out of compliance with these standards?

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 A 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.

(b) If the results of your annual stack tests (as recorded in § 60.1845(a)) show emissions above the limits specified in table 2, 3 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 dioxin/furan 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 dioxin/furan stack test (as specified in § 60.1855(a)(1)). Include four items:

(i) Eight-hour average carbon feed rate.

(ii) Reasons for these 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) in subpart A of this part 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 this 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 of this subpart.

(b) Clean wood that is exempt from the definition of ''municipal solid waste'' in § 60.1940 of this subpart.

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

(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 to determine compliance with the opacity limit.

(b) Conduct an initial test for opacity as specified in § 60.8 of subpart A of this part.

(c) After the initial test for opacity, conduct annual tests no more than 12 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) in subpart A of this part).

(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 the following equation:

$$C_7\% = C_{unc} * (13.9) * (1/(20.9 - C_{O2}))$$

Where:

$C^7\%$ = concentration corrected to 7 percent oxygen.

C_{unc} = uncorrected pollutant concentration.

C_{O2} = concentration of oxygen (%).

(b) *Percent reduction in potential mercury emissions.* Calculate the percent reduction in potential mercury emissions ($\%P_{Hg}$) using the following equation:

$$\%P_{Hg} = (E_i - Eo) * (100/E_i)$$

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 the following equation:

$$\%P_{HCl} = (E^i - E_o) * (100/E_i)$$

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 capacity of the municipal waste combustion unit 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 this 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 this 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 dioxin/furan or mercury limits, calculate the required quarterly usage of carbon using the appropriate equation for plant basis or unit basis:

(1) Plant basis.

$$C = \sum_{i=i}^{n} f_i * h_i$$

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. This is the average carbon feed rate during the most recent mercury or dioxin/furan 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.

$$C = f * h$$

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. This is the average carbon feed rate during the most recent mercury or dioxin/furan 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 Clean Air Act 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 this 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 (366 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. This person is responsible for daily onsite supervision, technical direction, management, and overall performance of the municipal waste combustion unit.

Class A units mean nonrefractory-type small municipal waste combustion units that are located at municipal waste combustion plants with an aggregate plant capacity greater than 250 tons per day of municipal solid waste. See the definition of ''municipal waste combustion plant capacity'' for specification of which units at a plant site are included in the aggregate capacity calculation.

Class B units mean refractory-type small municipal waste combustion units that are located at municipal waste combustion plants with an aggregate plant capacity greater than 250 tons per day of municipal solid waste. See the definition of ''municipal waste combustion plant capacity'' for specification of which units at a plant site are included in the aggregate capacity calculation.

Class C units mean all small municipal combustion units that are located at municipal waste combustion plants with aggregate plant capacity less than or equal to 250 tons per day of municipal solid waste. See the definition 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 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.

Cofired 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 cofired 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 this 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 a.m.
(2) 4 a.m. to 8 a.m.
(3) 8 a.m. to 12:00 noon.
(4) 12:00 noon to 4 p.m.
(5) 4 p.m. to 8 p.m.
(6) 8 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, this 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 dioxin/furan 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 dioxin/furan emissions that demonstrates compliance with the limits specified in this subpart.

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. This includes both conventional pulverized coal and micropulverized coal.

Modification or *modified municipal waste combustion unit* means a municipal waste combustion unit you have changed later than 6 months after [*the date of publication of the final rule*] 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 standards have been established under section 129 or section 111 of the Clean Air Act. 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 this 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 unit capacity at a plant for 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 these 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 by EPA Reference Method 5 (§ 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). These 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. These 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 on or after [the date 6 months after publication date of the final rule].

(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 these costs, see the definition of ''municipal waste combustion unit'' in this section.

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. This 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 section 111(d) and section 129(b)(2) of the Clean Air Act and 40 CFR part 60, subpart B, that implements and enforces 40 CFR part 60, subpart BBBB.

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 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.

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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)
All affected Class A and Class B units[a]	(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)[b,c]
All Class C units [a]	(Dates to be specified in State plan)	Not applicable	Not applicable	Not applicable	(Dates to be specified in State plan)[b]

[a] Plant specific schedules can be used at the discretion of the State.

[b] The date can be no later than 3 years after the effective date of State plan approval or 5 years after [the date of publication of the final rule].

[c] For Class A and Class B units that began construction, reconstruction, or modification after June 26, 1987, comply with the dioxin/furan 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.

Table 2 of Subpart BBBB — Model Rule — Class A Emission Limits for Existing Municipal Waste Combustion Units

For these pollutants	You must meet these emission limits [a]	Using these averaging times	And determine compliance by these methods
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
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 -or- 85 percent reduction of potential mercury emissions	3-run average (run duration specified in test method)	Stack test
Opacity	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

[a] All emission limits are measured at 7 percent oxygen.

Table 2 of Subpart BBBB — Model Rule —Class A Emission Limits For Existing Municipal Waste Combustion Units (Continued)

For these pollutants	You must meet these emission limits [a]	Using these averaging times	And determine compliance by these methods
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 -or- 85 percent reduction of potential mercury emissions	3-run average (run duration specified in test method)	Stack test
Opacity	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

[a] All emission limits are measured at 7 percent oxygen.

Table 3 of Subpart BBBB — Model Rule — Class B Emission Limits for Existing Municipal Waste Combustion Units

For these pollutants		You must meet these emission limits[a]	Using these averaging times	And determine compliance by these methods
Organics				
	Dioxins/furans (total mass basis)	123 nanograms per dry standard cubic meter	3-run average (minimum run duration is 4 hours)	Stack test
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 -or- 85 percent reduction of potential mercury emissions	3-run average (run duration specified in test method)	Stack test
	Opacity	10 percent	Thirty 6-minute averages	Stack test
	Particulate matter	34 milligrams per dry standard cubic meter	3-run average (run duration specified in test method)	Stack test
Acid Gases				
	Hydrogen chloride	200 parts per million by dry volume -or- 50 percent reduction of potential hydrogen chloride emissions	3-run average (minimum run duration is 1 hour)	Stack test
	Nitrogen Oxides	Not applicable	Not applicable	Not applicable

[a]All emission limits measured at 7 percent oxygen.

Table 3 of Subpart BBBB — Model Rule — Class B Emission Limits for Existing Municipal Waste Combustion Units (Continued)

For these pollutants	You must meet these emission limits[a]	Using these averaging times	And determine compliance by these methods
Acid gases			
Sulfur dioxide	55 parts per million by dry volume -or - 50 percent reduction of potential sulfur dioxide emissions	24-hour daily block geometric average concentration -or- percent reduction	Continuous emission monitoring system
Other			
Fugitive ash	Visible emissions for no more than 5 percent of hourly observation period	Three 1-hour observation periods	Visible emission test

[a]All emission limits are measured at 7 percent oxygen.

Table 4 of Subpart BBBB — Model Rule — Class C Emission Limits for Existing Municipal Waste Combustion Units

For these pollutants		You must meet these emission limits[a]	Using these averaging times	And determine compliance by these methods
Organics				
	Dioxins/furans (total mass basis)	125 nanograms per dry standard cubic meter	3-run average (minimum run duration is 4 hours)	Stack test
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 -or- 85 percent reduction of potential mercury emissions	3-run average (run duration specified in test method)	Stack test
	Opacity	10 percent	Thirty 6-minute averages	Stack test
	Particulate Matter	70 milligrams per dry standard cubic meter	3-run average (run duration specified in test method)	Stack test
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

[a]All emission limits measured at 7 percent oxygen.

Table 4 of Subpart BBBB — Model Rule — Class C Emission Limits for Existing Municipal Waste Combustion Units (Continued)

For these pollutants		You must meet these emission limits[a]	Using these averaging times	And determine compliance by these methods
Acid gases				
	Nitrogen Oxides	Not applicable	Not applicable	Not applicable
	Sulfur Dioxide	80 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
Other				
	Fugitive Ash	Visible emissions for no more than 5 percent of hourly observation period	Three 1-hour observation periods	Visible emission test

[a]All emission limits are measured at 7 percent oxygen.

Table 5 of Subpart BBBB — Model Rule — Carbon Monoxide Emission Limits for Existing Municipal Waste Combustion Units

For these municipal waste combustion units	You must meet the carbon monoxide limits[a]	Using these averaging times[b]
Fluidized bed	100 parts per million by dry volume	4-hour
Fluidized bed, mixed fuel, (wood/refuse-derived fuel)	200 parts per million by dry volume	24-hour
Mass burn rotary refractory	100 parts per million by dry volume	4-hour
Mass burn rotary waterwall	250 parts per million by dry volume	24-hour
Mass burn waterwall and refractory	100 parts per million by dry volume	4-hour
Mixed fuel-fired, (pulverized coal/refuse-derived fuel)	150 parts per million by dry volume	4-hour
Modular starved-air and excess air	50 parts per million by dry volume	4-hour
Spreader stoker, mixed fuel-fired (coal/refuse-derived fuel)	200 parts per million by dry volume	24-hour daily
Stoker, refuse-derived fuel	200 parts per million by dry volume	24-hour daily

[a] All limits are measured at 7 percent oxygen. Compliance is determined by continuous emission monitoring systems.

[b] All averages are block averages. See §60.1940 for definitions.

Table 6 of Subpart BBBB — Model Rule — Requirements for Validating Continuous Emission Monitoring Systems (CEMS)

For these continuous monitoring systems	Use these methods to validate pollutant concentration levels	Use these methods to measure oxygen (or carbon dioxide)
Nitrogen oxides (Class A units only)	Method 7, 7A, 7B, 7C, 7D, or 7E	Method 3 or 3A
Sulfur dioxide	Method 6 or 6C	Method 3 or 3A
Carbon monoxide	Method 10, 10A, or 10B	Method 3 or 3A

Table 7 of Subpart BBBB — Model Rule — Requirements for Continuous Emission Monitoring Systems (CEMS)

For these pollutants	Use these span values for your CEMS	Use these performance specifications for your CEMS (from appendix B)	If needed to meet minimum data requirements, use these alternate methods to collect data
Opacity	100 percent opacity	P.S. 1	Method 9
Nitrogen oxides (Class A 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 19
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 19
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
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 these pollutants	Use these methods to determine the sampling location	Use these methods to measure pollutant concentration	Also note the following additional information
Organics			
Dioxins/furans	Method 1	Method 23[a]	The minimum sampling time must be 4 hours per test run while the municipal waste combustion unit is operating at full load.
Metals			
Cadmium	Method 1	Method 29[a]	Compliance testing must be performed while the municipal waste combustion unit is operating at full load.
Lead	Method 1	Method 29[a]	Compliance testing must be performed while the municipal waste combustion unit is operating at full load.
Mercury	Method 1	Method 29[a]	Compliance testing must be performed while the municipal waste combustion unit is operating at full load.
Opacity	Not applicable	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[a]	The minimum sample volume must be 1.7 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 $\pm$14 °C.

[a] Must simultaneously measure oxygen (or carbon dioxide) using Method 3 or 3A.
[b] Use CEMS to test sulfur dioxide, nitrogen oxide, and carbon monoxide. Stack tests are not required except for Appendix F quality assurance requirements.

Table 8 of Subpart BBBB — Model Rule — Requirements for Stack Tests (Continued)

To measure these pollutants	Use these methods to determine the sampling location	Use these methods to measure pollutant concentration	Also note the following additional information
Acid gases[b]			
Hydrogen chloride	Not applicable	Method 26[a]	Test runs must be at least 1 hour long.
Other[b]			
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.

[a] Must simultaneously measure oxygen (or carbon dioxide) using Method 3 or 3A.
[b] Use CEMS to test sulfur dioxide, nitrogen oxide, and carbon monoxide. Stack tests are not required except for Appendix F quality assurance requirements.

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