

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 60

[OAR-2003-0156; FRL-7845-4]

RIN 2060-AG31

Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Other Solid Waste Incineration Units

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rules.

SUMMARY: The EPA is proposing new source performance standards (NSPS) and emission guidelines for new and existing "other" solid waste incinerators (OSWI) units. The proposed rules fulfill the requirements of sections 111 and 129 of the Clean Air Act (CAA), which require EPA to promulgate NSPS and emission guidelines for solid waste incineration units. These requirements are based on the Administrator's determination that these waste incinerators cause, or contribute significantly to, air pollution that may reasonably be anticipated to endanger public health or welfare. The proposed rules, which address only nonhazardous solid wastes, would protect public health by reducing exposure to air pollution.

DATES: Comments must be received on or before February 7, 2005.

Public Hearing. If anyone contacts EPA by December 29, 2004, requesting to speak at a public hearing, EPA will hold a public hearing on January 10, 2005. If you are interested in attending the public hearing, contact Ms. Kelly Hayes at (919) 541-5578 to verify that a hearing will be held.

ADDRESSES: Submit your comments, identified by Docket ID No. OAR-2003-0156, by one of the following methods:

Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the on-line instructions for submitting comments.

Agency Web site: <http://www.epa.gov/edocket>. EDOCKET, EPA's electronic public docket and comment system, is EPA's preferred method for receiving comments. Follow the on-line instructions for submitting comments.

E-mail: Send your comments via electronic mail to a-and-r-docket@epa.gov, Attention Docket ID No. OAR-2003-0156.

Facsimile: Fax your comments to (202) 566-1741, Attention Docket ID No. OAR-2003-0156.

Mail: Send your comments to: EPA Docket Center (EPA/DC), Environmental Protection Agency, Mailcode 6102T,

1200 Pennsylvania Ave., NW., Washington, DC 20460, Attention Docket ID No. OAR-2003-0156. Please include a total of two copies. The EPA requests a separate copy also be sent to either of the contact persons identified below (*see* **FOR FURTHER INFORMATION CONTACT**). In addition, please mail a copy of your comments on the information collection provisions to the Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), Attn: Desk Officer for EPA, 725 17th St., NW., Washington, DC 20503.

Hand Delivery: Deliver your comments to: EPA Docket Center (EPA/DC), EPA West Building, Room B108, 1301 Constitution Ave., NW., Washington, DC, 20460, Attention Docket ID No. OAR-2003-0156. Such deliveries are accepted only during the normal hours of operation (8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays), and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. OAR-2003-0156. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at <http://www.epa.gov/edocket>, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through EDOCKET, [regulations.gov](http://www.regulations.gov), or e-mail. The EPA EDOCKET and the Federal [regulations.gov](http://www.regulations.gov) Web sites are "anonymous access" systems, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through EDOCKET or [regulations.gov](http://www.regulations.gov), your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Public Hearing: If a public hearing is held, it will be held at EPA's Campus located at 109 T.W. Alexander Drive in Research Triangle Park, NC, or an alternate site nearby.

Docket: All documents in the docket are listed in the EDOCKET index at <http://www.epa.gov/edocket>. Although listed in the index, some information is not publicly available, *i.e.*, CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in EDOCKET or in hard copy at the EPA Docket Center (EPA/DC), EPA West Building, Room B102, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: Ms. Mary Johnson or Mr. Fred Porter, Combustion Group, Emission Standards Division (C439-01), U.S. EPA, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-5025 or (919) 541-5251; e-mail address: johnson.mary@epa.gov or porter.fred@epa.gov.

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SUPPLEMENTARY INFORMATION:

I. General Information

A. Does This Action Apply To Me?

Regulated Entities. Categories and entities potentially regulated by the proposed rules are very small municipal waste combustion (VSMWC) units and institutional waste incineration (IWI) units. The OSWI emission guidelines and NSPS would affect the following categories of sources:

Category	NAICS code	SIC code	Examples of potentially regulated entities
Any State, local, or Tribal government using a VSMWC unit as defined in the regulation.	562213, 92411	4953, 9511	Solid waste combustion units burning municipal waste collected from the general public and from residential, commercial, institutional, and industrial sources.
Institutions using an IWI unit as defined in the regulations.	922, 6111, 623, 7121	9223, 8211, 7999	Correctional institutions, primary and secondary schools, camps and national parks.
Any Federal government agency using an OSWI unit as defined in the regulations.	928	9711	Department of Defense (labs, military bases, munition facilities).
Any college or university using an OSWI unit as defined in the regulations.	6113, 6112	8221, 8222	Universities, colleges and community colleges.
Any church or convent using an OSWI unit as defined in the regulations.	8661	8131	Churches and convents.
Any civic or religious organization using an OSWI unit as defined in the regulations.	8641	8134	Civic associations and fraternal associations.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by the proposed rules. To determine whether your facility would be regulated by the proposed rules, you should examine the applicability criteria in 40 CFR 60.2885 through 60.2888 of subpart EEEE, and 40 CFR 60.2991 through 60.2994 of subpart FFFF. If you have any questions regarding the applicability of the proposed rules to a particular entity, contact either of the persons listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

B. What Should I Consider as I Prepare My Comments for EPA?

1. **Submitting CBI.** Do not submit information that you consider to be CBI electronically through EDOCKET, regulations.gov, or e-mail. Send or deliver information identified as CBI to only the following address: Ms. Mary Johnson, c/o OAQPS Document Control Officer (Room C404-02), U.S. EPA, Research Triangle Park, NC 27711, Attention Docket ID No. OAR-2003-0156. Clearly mark the part or all of the

information that you claim to be CBI. For CBI information in a disk or CD-ROM that you mail to EPA, mark the outside of the disk or CD-ROM as CBI and then identify electronically within the disk or CD-ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

If you have any questions about CBI or the procedures for claiming CBI, please consult either of the persons identified in the **FOR FURTHER INFORMATION CONTACT** section.

2. **Tips for Preparing Your Comments.** When submitting comments, remember to:

a. Identify the rulemaking by docket number and other identifying information (subject heading, **Federal Register** date and page number).

b. Follow directions. The EPA may ask you to respond to specific questions

or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.

c. Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.

d. Describe any assumptions and provide any technical information and/or data that you used.

e. If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.

f. Provide specific examples to illustrate your concerns, and suggest alternatives.

g. Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

h. Make sure to submit your comments by the comment period deadline identified.

Docket. The docket number for the proposed NSPS (40 CFR part 60, subpart EEEE) and emission guidelines (40 CFR part 60, subpart FFFF) is Docket ID No. OAR-2003-0156.

World Wide Web (WWW). In addition to being available in the docket, an electronic copy of the proposed rules is available on the WWW through the

Technology Transfer Network Web site (TTN Web). Following signature, EPA will post a copy of the proposed rules on the TTN's policy and guidance page for newly proposed or promulgated rules at <http://www.epa.gov/ttn/oarpg>. The TTN provides information and technology exchange in various areas of air pollution control. If you need more information regarding the TTN, call the TTN Help line at (919) 541-5384.

II. Background Information

A. What Is the Statutory Authority for the Proposed Rules?

Section 129 of the CAA, entitled "Solid Waste Combustion," requires EPA to develop and adopt NSPS and emission guidelines for solid waste incineration units pursuant to CAA section 111. Section 111(b) of the CAA requires EPA to establish NSPS for new sources, and CAA section 111(d) requires EPA to establish procedures for States to submit plans for implementing emission guidelines for existing sources. Under CAA section 111, NSPS and emission guidelines must be developed for new and existing stationary sources that cause or contribute significantly to air pollution that may reasonably be anticipated to endanger public health or welfare.

Congress specifically added section 129 to the CAA to address concerns about emissions from solid waste combustion units. Section 129 of the CAA requires EPA to promulgate emissions standards and other requirements for "each category of solid waste incineration unit." Section 129(a)(1) of the CAA identifies five categories of solid waste incineration units:

- (1) Units with a capacity of greater than 250 tons per day (tpd) combusting municipal waste;
- (2) Units with a capacity equal to or less than 250 tpd combusting municipal waste;
- (3) Units combusting hospital, medical and infectious waste;
- (4) Units combusting commercial or industrial waste; and
- (5) Unspecified "other categories of solid waste incineration units."

Section 129(g)(1) of the CAA identifies several types of units that are not solid waste incineration units, including units required to have a permit under section 3005 of the Solid Waste Disposal Act (SWDA); materials recovery facilities; certain qualifying small power production facilities or qualifying cogeneration facilities which burn homogeneous waste; and certain air curtain incinerators that meet opacity limitations established by EPA.

For each category of incineration unit identified under CAA section 129, EPA must establish numerical emission limits for at least nine specified pollutants (particulate matter (PM), sulfur dioxide (SO₂), hydrogen chloride (HCl), nitrogen oxides (NO_x), carbon monoxide (CO), lead (Pb), cadmium (Cd), mercury (Hg), and dioxins and dibenzofurans), and for opacity as appropriate. Section 129 of the CAA provides EPA with the discretion to establish emission limitations for other pollutants as well. (See CAA section 129(a)(4).)

Under CAA section 129, the NSPS and emission guidelines adopted for solid waste combustion units must reflect the maximum achievable control technology (MACT). Accordingly, EPA's standards under CAA section 129 must " * * * reflect the maximum degree of reduction in emissions of [the listed] air pollutants * * * that the Administrator, taking into consideration the cost of achieving such emissions reductions, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new or existing units in each category * * * ." (See CAA section 129(a)(2).) However, the standards for new units must not be less stringent than the emissions control that is achieved in practice by the best controlled similar unit, and the standards for existing sources must not be less stringent than the average emissions limitations achieved by the best performing 12 percent of units in the category.

Regulations have been developed for each of the listed categories of solid waste incineration unit except for the "other categories of solid waste incineration units." Today's notice proposes regulations for these "other" (or OSWI) units. Three previous notices have been published regarding OSWI regulatory development (58 FR 31358, June 2, 1993; 58 FR 58498, November 2, 1993; 65 FR 67367, November 9, 2000). In the November 9, 2000 notice, EPA revised the OSWI regulatory schedule to promulgate regulations by November 2005. This was subsequently incorporated into a consent decree, requiring that EPA propose regulations for the OSWI source category by November 30, 2004, and promulgate by November 30, 2005.

B. What Are New Source Performance Standards?

The NSPS for solid waste incineration units are developed according to CAA sections 111 and 129. An NSPS applies to new stationary sources of emissions, that is, sources for which construction

begins after a standard is proposed or sources that are modified on or after a specified date. The key elements in an NSPS are generally defined as follows:

1. *Source category to be regulated* means the industries or types of processes that are regulated. Section 129 of the CAA requires EPA to regulate several categories of incinerators specifically listed in CAA section 129 and to regulate "other categories of solid waste incineration units" (known as OSWI). The proposed NSPS applies to the OSWI category, which is VSMWC units and IWI units.

2. *Affected facility* means a solid waste incineration unit that will be subject to the NSPS. The proposed NSPS would affect each individual OSWI unit.

3. *Pollutants to be regulated* means the particular substances emitted by the affected facility that the NSPS regulates. Section 129 of the CAA specifies nine pollutants: Cd, CO, dioxins/furans, PM, HCl, Pb, Hg, NO_x, and SO₂. Opacity standards may also be required as appropriate. The CAA section 129 pollutants represent the minimum requirements; EPA can add other pollutants, if appropriate, but has determined that doing so in regulating the OSWI category is unnecessary because other potentially relevant pollutants are adequately addressed by control of the pollutants to be regulated.

4. *Maximum achievable control technology* means the technology on which the emission standards will be based. Section 129(a)(2) of the CAA specifies that standards be based on " * * * the maximum degree of reduction in emissions * * * that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable * * * ." (Note that solid waste incineration standards under CAA section 129 are different from typical NSPS under CAA section 111, which are based on "best demonstrated technology" rather than MACT.)

5. *Format for the standards* means the form in which the standards are expressed; for example, as pollutant concentration emission limits, as a percent reduction in emissions, or as equipment or work practice standards. Section 129 of the CAA also directs EPA to establish siting requirements for new incineration units and operator certification and training requirements for all units.

6. *Emission limits* generally means limits based on the level of reduction that the MACT can achieve. Only in unusual cases do standards require that

a specific technology be used. In general, the source owner or operator may select any method for complying with the limits.

7. *Other considerations in addition to emission limits for NSPS* usually include: Standards for visible emissions, modification and reconstruction provisions, monitoring requirements, performance test methods and compliance procedures, and reporting and recordkeeping requirements.

C. What Are Emission Guidelines?

Emission guidelines are similar to NSPS, except that they apply to existing sources. That is, they apply to sources for which construction began on or before the date a standard is proposed or that are modified before a specified date. Unlike NSPS, the emission guidelines are not enforceable until EPA approves a State plan or adopts a Federal plan for implementing and enforcing them, and the State or Federal plan becomes effective.

D. How Are the Emission Guidelines Implemented?

When standards of performance for solid waste incineration units are promulgated under CAA sections 111 and 129, the CAA requires States under CAA sections 111(d) and 129(b) to submit plans that: (1) Establish emission standards for existing sources, and (2) provide for implementation and enforcement of the emission standards.

States are required to adopt and submit to the Administrator a State plan implementing the emission guidelines within 1 year after the promulgation of the guidelines (CAA section 129(b)(2)). The State plan carries out and provides for enforcing the emission guidelines. Section 129 of the CAA provides that the State plan for existing incineration units must be at least as protective as the emission guidelines and must provide for compliance by affected

facilities no later than 3 years after the effective date of State plan approval, but no later than 5 years after EPA promulgates the guidelines. Section 111(d) of the CAA further requires that the procedures for submitting a State plan must be similar to the procedures for submitting State implementation plans under CAA section 110. (The EPA has established specific procedures in 40 CFR part 60, subpart B.) Sections 111(d) and 129(b) of the CAA also require EPA to develop, implement, and enforce a Federal plan if a State fails to submit a satisfactory State plan.

III. Summary of the Proposed Rules

A. Do the Proposed Rules Apply to Me?

The proposed rules apply to you if you own or operate either of the following:

- (1) An incineration unit burning municipal solid waste (MSW) (as defined in CAA section 129, 40 CFR 60.2977 of subpart EEEE, and 40 CFR 60.3078 of subpart FFFF) with a capacity less than 35 tpd, or
- (2) An incineration unit located at an institutional facility burning institutional waste (as defined in 40 CFR 60.2977 of subpart EEEE and 40 CFR 60.3078 of subpart FFFF) generated at that facility.

If your incineration unit is currently meeting emission limitations and other requirements of another CAA section 129 regulation (*i.e.*, small or large municipal waste combustion (MWC) units; hospital, medical, infectious waste incineration units (HMIWI units); or commercial and industrial solid waste incineration units (CISWI units)), the proposed rules do not apply to you. Likewise, if your institutional combustion unit is covered under the CAA section 112 National Emission Standards for Hazardous Air Pollutants (NESHAP) for industrial, commercial, and institutional boilers and process heaters (boilers NESHAP), it would not

be subject to the proposed rules. Certain types of combustion units listed in 40 CFR 60.2887 of subpart EEEE and 40 CFR 60.2993 of subpart FFFF are also excluded from the proposed rules.

If you began construction of your OSWI unit on or before December 9, 2004, it is considered an existing OSWI unit and would be subject to the proposed emission guidelines. If you began construction of your OSWI unit after December 9, 2004, it is considered a new OSWI unit and would be subject to the proposed NSPS.

If you began reconstruction or modification of your OSWI unit prior to [DATE 6 MONTHS AFTER DATE FINAL RULE IS PUBLISHED IN THE **Federal Register**], it is considered an existing unit and would be subject to the emission guidelines. Likewise, if you began reconstruction or modification of your OSWI unit on or after [DATE 6 MONTHS AFTER DATE FINAL RULE IS PUBLISHED IN THE **Federal Register**], it is considered a new OSWI unit and would be subject to the NSPS.

B. What Emission Limits Must I Meet?

As the owner or operator of a new or existing OSWI unit, you would be required to meet the emission limits specified in Table 1 of this preamble. You would be required to conduct a performance test to show compliance within 60 days after a new OSWI unit reaches the charge rate at which it will operate, but no later than 180 days after the unit's initial startup.

As the owner or operator of an existing OSWI unit, you would be required to meet the emission limits specified in Table 1 of this preamble within 3 years after the effective date of State plan approval or when EPA promulgates a Federal plan, but no later than 5 years after [DATE THE FINAL RULE IS PUBLISHED IN THE **Federal Register**].

TABLE 1.—EMISSION LIMITS FOR NEW AND EXISTING OSWI UNITS

For these pollutants	You must meet these emission limits ^a	And determine compliance using these methods ^{b, c}
Cd	18 micrograms per dry standard cubic meter (µg/dscm).	EPA Method 29
CO	5.0 parts per million dry volume (ppmdv)	EPA Methods 10, 10A or 10B
Dioxins/Furans (total mass basis)	33 nanograms per dry standard cubic meter (ng/dscm).	EPA Method 23
HCl	3.7 ppmdv	EPA Method 26A
Pb	226 µg/dscm	EPA Method 29
Hg	74 µg/dscm	EPA Method 29
Opacity	10%	EPA Method 9
NO _x	103 ppmdv	EPA Methods 7, 7A, 7C, 7D, or 7E ^d
PM	0.013 grains per dry standard cubic foot (gr/dscf)	EPA Method 5 or 29
SO ₂	3.1 ppmdv	EPA Method 6 or 6C ^e

^a All emission limits (except opacity) are measured at 7 percent oxygen, dry basis at standard conditions.

^b These methods are in 40 CFR part 60, appendix A.

^c Compliance with the CO emission limit is determined on a 3-hour rolling average basis using continuous emission monitoring system data. Compliance for the other pollutants' emission limits is determined by stack testing.

^d ASME PTC 19–10–1981—Part 10 is an acceptable alternative to only Methods 7 and 7C.

^e ASME PTC 19–10–1981—Part 10 is an acceptable alternative to Method 6 only.

C. What Operating Limits Must I Meet?

If you use a wet scrubber to comply with the emission limits, you would be required to establish the maximum and minimum site-specific operating limits

indicated in Table 2 of this preamble. You would then be required to operate the OSWI unit so that the charge rate does not exceed the established maximum charge rate. You would be

required to operate the wet scrubber so that the pressure drop or amperage, scrubber liquor flow rate, and scrubber liquor pH do not fall below the minimum established operating limits.

TABLE 2.—OPERATING LIMITS FOR NEW AND EXISTING OSWI UNITS USING WET SCRUBBERS

For these operating parameters	You must establish these operating limits	And monitor continuously using these recording times
Charge rate	Maximum charge rate	Every hour
Pressure drop across the wet scrubber, or amperage to the wet scrubber.	Minimum pressure drop or amperage	Every 15 minutes
Scrubber liquor flow rate	Minimum flow rate	Every 15 minutes
Scrubber liquor pH	Minimum pH	Every 15 minutes

NOTE: Compliance is determined on a 3-hour rolling average basis, except charge rate for batch incinerators, which is determined on a 24-hour basis.

If you use an air pollution control device other than a wet scrubber to comply with the emission limits, you would be required to petition the Administrator for other site-specific operating limits to be established during the initial performance test and continuously monitored thereafter. The information you must include in your petition is described in 40 CFR 60.2917 of subpart EEEE and 40 CFR 60.3024 of subpart FFFF.

D. What Are the Other Requirements?

As the owner or operator of a new or existing OSWI unit, you would be required to meet the following additional requirements.

Siting Analysis (new units only):

- Submit a report that evaluates site-specific air pollution control alternatives that minimize potential risks to public health or the environment, considering costs, energy impacts, nonair environmental impacts, or any other factors related to the practicability of the alternatives.

Waste Management Plan:

- Submit a written plan that identifies both the feasibility and the methods used to reduce or separate certain components of solid waste from the waste stream to reduce or eliminate toxic emissions from incinerated waste.

Operator Training and Qualification Requirements:

- Qualify operators or their supervisors (at least one per facility) by ensuring that they complete an operator training course and annual review or refresher course.

Testing Requirements:

- Conduct initial performance tests for Cd, CO, dioxins/furans, HCl, Pb, Hg, NO_x, opacity, PM, and SO₂ and

establish operating limits (*i.e.*, maximum or minimum values for operating parameters).

- Conduct annual performance tests for all nine pollutants and opacity. (An owner or operator may conduct less frequent testing if the facility demonstrates that it is in compliance with the emission limits for three consecutive performance tests.)

Monitoring Requirements:

- Continuously monitor CO emissions.
- If using a wet scrubber to comply with the emission limits, continuously monitor the following operating parameters: charge rate, pressure drop across the wet scrubber (or amperage), and scrubber liquid flow rate and pH.
- If something other than a wet scrubber is used to comply with the emission limits, monitor other operating parameters, as approved by the Administrator.

Recordkeeping and Reporting Requirements:

- Maintain for 5 years records of the initial performance tests and all subsequent performance tests, operating parameters, any maintenance, the siting analysis (for new units only), and operator training and qualification. Each record must be kept on site for at least 2 years. The records may be kept off site for the remaining 3 years.

- Submit the results of the initial performance tests and all subsequent performance tests and values for the operating parameters.

- Submit annual compliance reports and semiannual reports of any deviations from the emission limits, operating limits, or other requirements.

- Apply for and obtain a title V operating permit.

E. What Are the Requirements for Air Curtain Incinerators?

The proposed rules establish opacity limitations for air curtain OSWI units burning:

- 100 percent wood wastes,
- 100 percent clean lumber,
- 100 percent yard waste, or
- 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

The opacity limit is 10 percent.

However, 35 percent opacity is allowed during startup periods that are within the first 30 minutes of operation. Air curtain incinerators burning only these materials would be required to meet the opacity limits and apply for and obtain a title V operating permit, but would be exempt from the other requirements of the proposed rules.

Air curtain incinerators burning other institutional waste or municipal waste would be required to meet the proposed rules including all emission limits in Table 1 of this preamble and the associated testing, permitting, monitoring, recordkeeping, and reporting requirements.

F. What Title V Permit Requirements Must I Meet?

All new and existing OSWI units would be required to apply for and obtain a title V permit. These title V operating permits would assure compliance with all applicable requirements for OSWI units, including all applicable CAA section 129 requirements. (*See* 40 CFR 70.6(a)(1), 70.2, 71.6(a)(1) and 71.2.)

When a CAA section 129 source is required to apply for a title V permit depends on when the source first becomes subject to the relevant title V

permits program. If an OSWI unit is a new unit and is not subject to an earlier permit application deadline, a complete title V permit application must be submitted on or before one of the following dates:

1. For an OSWI unit that commenced operation as a new source as of the promulgation date of 40 CFR part 60, subpart EEEE, then a complete title V permit application must be submitted not later than 12 months after the promulgation date of 40 CFR part 60, subpart EEEE.

2. For an OSWI unit that does not commence operation as a new source until after the promulgation of 40 CFR part 60, subpart EEEE, then a complete title V permit application must be submitted not later than 12 months after the date the OSWI unit commences operation as a new source. (See CAA section 503(c) and 40 CFR 70.5(a)(1)(i) and 71.5(a)(1)(i).)

If your OSWI unit is an existing unit and is not subject to an earlier permit application deadline, a complete title V permit application must be submitted by the earlier of the following dates:

1. Twelve months after the effective date of any applicable EPA-approved CAA section 111(d)/129 plan (*i.e.*, an approved State or Tribal plan that implements the OSWI emission guidelines).

2. Twelve months after the effective date of any applicable Federal plan.

3. Thirty-six months after promulgation of 40 CFR part 60, subpart FFFF.

For any existing OSWI unit not subject to an earlier permit application deadline, the application deadline of 36 months after the promulgation of 40 CFR part 60, subpart FFFF, applies regardless of whether or when any applicable Federal plan is effective, or whether or when any applicable CAA section 111(d)/129 plan is approved by EPA and becomes effective. (See CAA sections 129(e), 503(c), 503(d), and 502(a) and 40 CFR 70.5(a)(1)(i) and 71.5(a)(1)(i).)

If your OSWI unit is subject to title V as a result of some triggering requirement(s) other than those mentioned above (for example, an OSWI unit may be a major source or part of a major source), then your unit may be required to apply for a title V permit prior to the deadlines specified above. If more than one requirement triggers a source's obligation to apply for a title V permit, the 12-month time frame for filing a title V permit application is triggered by the requirement that first causes the source to be subject to title V. (See CAA section 503(c) and 40 CFR

70.3(a) and (b), 70.5(a)(1)(i), 71.3(a) and (b), and 71.5(a)(1)(i).)

For additional background information on the interface between CAA section 129 and title V, including EPA's interpretation of section 129(e), information on updating existing title V permit applications and reopening existing title V permits, see the final Federal Plan for Commercial and Industrial Solid Waste Incinerators, October 3, 2003 (68 FR 57518, 57532).

IV. Rationale for the Proposed Rules

A. How Did EPA Determine Which Pollution Sources Would Be Regulated Under the Proposed Rules?

Section 129(a) of the CAA requires the promulgation of standards for several categories of solid waste combustion units, including units combusting municipal waste; units combusting hospital, medical and infectious waste; units combusting commercial or industrial waste; and unspecified "other categories of solid waste incineration units." The subject of the proposed rules is the unspecified other categories of solid waste incineration units.

One important part of EPA's rulemaking process is determining what universe of sources will be subject to regulation. With regard to OSWI units, the statutory provisions of CAA sections 129(a), (g) and (h) make it clear that EPA must determine, as a part of the regulatory process, (1) where to draw the line between combustion units potentially subject to regulation under CAA section 129 and combustion units potentially subject to regulation under other statutory authority (such as CAA section 112(d)), and (2) to which categories of solid waste combustion units the standards for "other categories of solid waste incineration units" apply. For example, the reference in CAA section 129(g)(1) to a permit issued under section 3005 of the SWDA, refers to units burning hazardous solid waste. This effectively limits the scope of EPA's authority under CAA section 129 to the regulation of solid waste incineration units that burn nonhazardous solid waste. Similarly, the language of CAA section 129(h) makes clear the Congressional intent for CAA regulation under CAA section 129 or CAA section 112 to be mutually exclusive. Accordingly, sources subject to CAA section 112 standards do not constitute OSWI (the dividing line between boilers regulated under CAA section 112 and OSWI is discussed in detail below). Absence of regulation under CAA section 112, however, is not determinative of what constitutes an OSWI unit. Inherent in EPA's

implementation of CAA section 129 is the discretion to reasonably define what constitutes the statutorily undefined other categories of solid waste incineration units and to determine which of these other units warrant regulation under CAA section 129.

In response to the requirement to publish a schedule for regulation of other categories of solid waste incineration units, a **Federal Register** notice (58 FR 31358, June 2, 1993) was published that proposed a regulatory schedule and a draft list of potential subcategories for consideration of regulation under OSWI standards. After receiving comments on the June 1993 notice, another **Federal Register** notice (58 FR 58498, November 2, 1993) was published to include comments received on the draft category list and proposed regulatory schedule. The November 1993 notice listed the following potential subcategories of OSWI:

- (1) Very small municipal waste combustion units;
- (2) Residential incinerators;
- (3) Agricultural waste incinerators;
- (4) Wood waste incinerators;
- (5) Construction and demolition waste incinerators;
- (6) Crematories; and
- (7) Contaminated soil treatment facilities.

A third **Federal Register** notice (65 FR 67357, November 9, 2000) was published that revised the regulatory schedule. The third notice also noted that, as additional information is collected and assessed, EPA may add or delete subcategories within the OSWI category.

Since publication of the third **Federal Register** notice, EPA has gathered additional information and updated the inventory of possible OSWI units through review of multiple Federal and State databases, literature and permit searches, and contacts with State agencies, incinerator manufacturers, trade associations, and other stakeholders. The following discussion details EPA's current assessment of each of the seven potential subcategories previously identified as under consideration for regulation within the OSWI category. Eight additional subcategories EPA has considered for regulation within the OSWI category are also discussed.

EPA recognizes that there are some subclasses of incinerators that we considered for regulation within the OSWI category that should be handled differently due to unusual circumstances (*e.g.*, unique geographic or climatic factors, used only during emergencies) that would prevent those

incinerators from having the option of using an alternative waste disposal method that our assessment indicates would be lower in cost than complying with the proposed rule. We have attempted to address these subclasses of incinerators accordingly. It has come to our attention that there exists a subclass of IWI that burn national security documents and that this subclass should be considered for potential exclusion from regulation within the OSWI category. We specifically request comment on whether this is an appropriate subclass of incinerators for exclusion.

We also request comment on whether other such subclasses may exist and the precise nature of any special and/or extenuating circumstances. Therefore, in order to make such a determination, the specific information that we are requesting from commenters includes unit location; unit capacity; age of unit; type of waste burned (e.g., paper waste, garbage, laboratory waste, etc.); amount of waste burned per week; frequency and hours of operation per week; unit design characteristics (e.g., single chamber, multi-chamber, presence of afterburner or control technology); an outline of routine maintenance activities to ensure good combustion within the unit; availability and description of test data; availability and cost of local commercial waste collection services; and potential economic burden associated with the proposed rule. In particular, we are interested in this information for very small units (e.g., IWI units with capacities less than 0.5 ton per day). Finally, we request specific information on the nature (e.g., private or public elementary school, not-for-profit) and size (e.g., number of students, members, employees) of the institutions that own affected units, as well as their sources of funding (e.g., county, State, Federal, tuition fees), the size of their overall budget (or revenue for profit-making entities), and the current cost of waste disposal (including the operating, maintenance, and anticipated capital costs).

1. Very Small Municipal Waste Combustion Units

Section 129 of the CAA identifies and defines "municipal waste" as a distinct type of waste. The proposed rules adopt the CAA section 129 definition of municipal waste. Municipal waste, as defined in CAA section 129 and the proposed rules, is:

"refuse (and refuse-derived fuel) collected from the general public and from residential, commercial, institutional, and industrial sources consisting of paper, wood, yard wastes, food wastes, plastics, leather, rubber,

and other combustible materials and non-combustible materials such as metal, glass and rock, provided that: (A) The term does not include industrial process wastes or medical wastes that are segregated from such other wastes; and (B) an incineration unit shall not be considered to be combusting municipal waste for purposes of this subpart if it combusts a fuel feed stream, 30 percent or less of the weight of which is comprised, in aggregate, of municipal waste * * *."

Municipal waste, therefore, is waste that has been "collected from" various solid waste sources or generators.

Very small municipal waste combustion units are typically owned or operated by municipalities, such as towns, cities, or counties. The VSMWC units are units that are not covered by the other CAA section 129 MWC regulations for small (35 to 250 tpd) or large (greater than 250 tpd) MWC units already established (40 CFR part 60 subparts Cb, Ea, Eb, AAAA, and BBBB). The EPA's research indicates that, for the most part, VSMWC units are no longer economical and the majority of them have closed down. Vendors and State agencies have indicated that new purchases and installations of VSMWC units are extremely rare, and that no growth or negative growth is the expected trend for the future. However, the EPA was able to identify a small population of existing VSMWC units.

As mentioned earlier, the larger MWC units (i.e., 35 tpd or greater) are already regulated. As a result, EPA is including VSMWC units as a subcategory of OSWI for regulation.

2. Residential Incinerators

The EPA's research indicates that burning of household trash by individual households does not occur in conventional "incinerators," but, rather, in burn barrels. Burn barrels are typically modified fifty-five gallon steel drums. They have no provisions for regulating air supply to the waste being burned and have no pollution control devices. They are typically used in rural areas where burning household trash may be viewed as more convenient than taking it to a landfill or having a waste management service collect it.

If EPA were to regulate residential burn barrels as a subcategory of OSWI, the costs necessary to comply with the proposed rules would effectively rule out the use of burn barrels. Any regulation established under CAA section 129 requires that sources, at a minimum, undertake operator training, perform emissions testing, and complete permitting, monitoring, recordkeeping and reporting duties. The annual cost of these activities alone would add up to several thousands of dollars per year. As

a result, regulation under section 129 would effectively eliminate the use of residential burn barrels as a legal method of trash disposal.

While this might, at first, seem a desirable outcome, in those rural areas where State and local governments have not provided appropriate alternatives, it could lead to even greater problems if residents turned to open burning, littering, or dumping. This could result because households that use burn barrels to dispose of waste may be located in areas where convenient waste disposal alternatives do not exist. As a result, if the use of burn barrels is effectively prohibited by Federal regulation, households could turn to disposing of trash along a roadside (littering), in a field or woodland, or resorting to open burning. Littering and dumping, besides being unsightly, pose significant other problems, such as potential contamination of streams or other water bodies, and attracting vermin and wild animals, which could contribute to disease transmission. Open burning presents the same air pollution problems as barrel burning and can lead to an increased likelihood of accidental fires. Therefore, Federal regulation of residential barrel burning could lead to a number of undesirable consequences where effective local alternatives do not exist.

The EPA believes that its overriding responsibility must be to promote the use of environmentally sound integrated waste management practices. Effective management of the burning of household waste in rural areas will require the development of suitable waste disposal alternatives as well as the development of a public education effort to inform people of the environmental impacts associated with barrel burning and open burning. It should be noted that regulating open burning is beyond the scope of CAA section 129, since open burning is not done in an incinerator. Most importantly, because uncontrolled burning of household waste occurs in millions of households across rural America, programs to reduce or eliminate this practice can only be effectively managed at the local level through the development of locally based solutions that combine public education, with the development of local infrastructure for waste disposal. In many areas it will also require establishing additional State and local ordinances, and locally managed compliance programs. Many of these concerns are well beyond the scope of the CAA.

Given the highly varied nature of local government, large differences in

existing waste management infrastructure and economic resources, differences in rural population density, and regional differences in practices and attitudes towards waste management, EPA has concluded that adoption of Federal regulations that would mandate use of a uniform set of waste management practices does not appear to be practical. The EPA has chosen, instead, to develop technical assistance to help states and localities design and develop waste management programs tailored to the unique needs and constraints individual communities face. As a result, EPA has decided not to include residential incinerators (*i.e.*, burn barrels) as a subcategory of OSWI for regulation.

To provide additional information about EPA's back yard burning activities, EPA has developed a back yard burning Web site, (<http://www.epa.gov/msw/backyard>), which includes background information, access to available publications, and links to related Web sites.

3. Agricultural Waste Incinerators

Agricultural residue combustion units are primarily those units that are burning rice hulls, bagasse (pressed sugar cane), and other types of biomass. The EPA's information collection efforts, however, indicate that, when burned, these agricultural residues are used as boiler fuel. As such, the boiler is regulated under the boilers NESHAP, a CAA section 112 regulation (69 FR 55218, September 13, 2004). Since sources regulated under CAA section 112 cannot be regulated by CAA section 129 also, these sources would not be subject to the proposed rules.

Manure and livestock bedding material are also considered a type of agricultural residue, and any combustion unit burning these materials could potentially be considered an agricultural residue combustion unit. However, EPA was unable to identify any such incinerators, and has encountered only anecdotal evidence and proposals for manure combustion units. In addition, these proposed units are planned as boilers for energy production and, if built, would likely be "qualifying small power producing facilities," which are excluded from the definition of "solid waste incineration unit" in CAA section 129. Therefore, EPA is not including them as a subcategory of OSWI for regulation at this time.

4. Wood Waste Incinerators

As noted in a previous **Federal Register** notice (65 FR 67357, November 9, 2000), EPA did not anticipate the

discovery of many wood residue combustion units that were not already covered by other rules. The EPA was unable to locate and identify any wood residue combustion units that are not covered by other regulations. Information collection efforts indicate that wood residue is combusted as a fuel in boilers or process heaters. In these situations, the boilers NESHAP under CAA section 112 will regulate these combustion units. To the extent that there are any incinerators that burn wood residue, they are located at sites considered to be commercial or industrial sites, and are properly covered by the CISWI NSPS and emission guidelines. Therefore, EPA is not including wood residue combustion units as a subcategory of OSWI for regulation at this time.

5. Construction and Demolition Waste Incinerators

Like some of the other potential OSWI subcategories, EPA was unable to locate and identify any construction or demolition materials combustion units. Construction and demolition materials contain cement, concrete, gypsum and other non-combustible items. As a result, construction and demolition materials are landfilled rather than burned. In addition to this, there appears to be a trend in minimizing construction site waste generation and recycling of construction and demolition materials for use in other products (*e.g.*, asphalt, mulch, soil amendment, etc.) or structures (*e.g.*, use of "antique" or "restored" woodwork or fixtures in newly constructed buildings or residences).

Since EPA has been unable to identify any construction and demolition materials combustion units and does not anticipate a future growth of these types of units, EPA is not including the construction and demolition materials combustion units as a subcategory of OSWI for regulation at this time.

6. Crematories

Crematories are used to incinerate either human or animal remains. For the purposes of this discussion, EPA differentiates between human and animal crematories.

a. Human Crematories. As mentioned previously, CAA section 129 regulations deal solely with solid waste combustion units. In considering the nature of human crematories since the previous OSWI **Federal Register** notices were published, EPA has come to the conclusion that the human body should not be labeled or considered "solid waste." Therefore, human crematories are not solid waste combustion units,

and are not a subcategory of OSWI for regulation. If EPA or States determine, in the future, that human crematories should be considered for regulation, they would be addressed under other authorities.

b. Animal Crematories. Animal crematories are those used to dispose of animal carcasses at places like veterinary clinics, animal control facilities, universities and research institutions, pet cremation services, and livestock farms such as poultry and swine farms. From the information EPA has gathered, the emissions from these units are very low when compared to other solid waste combustion units. The emissions levels from uncontrolled animal crematory units are, in fact, less than emissions after controls from other types of incinerators that are regulated, such as MWC units and HMIWI units. This is because operation of these units involves incineration of animal or pathological tissue, which consists primarily of water, with negligible or no other materials, such as plastic, wood, metals, etc. Furthermore, the units are typically very small and operated only a few hours a week.

In addition to the low emissions from these units, EPA is also concerned about biosecurity within the agricultural sector. Incineration of diseased animals is often necessary to prevent the spread of infectious diseases. Research within the agricultural community has shown that vehicles traveling among farms to collect dead animals for off-site disposal are significant disease transmission vectors. Thus, on-site incineration is often a preferred method of animal carcass disposal, since it carries no risk of disease transmission between farms. If EPA were to impose regulations that discouraged incineration relative to rendering (which, for economic reasons, requires that trucks travel between farms to pick up animal carcasses), there could be an increase in disease transmission and mortality along with the corresponding economic impacts on farmers.

In many areas there is also a lack of reasonable and economic alternatives (*e.g.*, rendering, composting, burial) to incineration. For example, burial is often prohibited due to water quality concerns and the potential for pathogen contamination. Therefore, any regulation that adds to the costs of operating an animal incinerator would mean additional costs to farmers in areas without disposal alternatives.

Taking these concerns into account, EPA has determined that the adverse impacts associated with regulation of animal crematories outweigh the benefits of regulation and these units are

not included as a subcategory of OSWI for regulation at this time.

7. Contaminated Soil Treatment Facilities

When looking into these types of units, EPA discovered a wide variety of treatment methods as well as a wide variety of facilities at which remediations were being carried out. The methods can be carried out either *in-situ* (e.g., air-sparging) or *ex-situ* (e.g., thermal desorption). Most treatment methods do not involve any type of combustion. Two methods involve some type of combustion device: (1) Incineration, where the soil is extracted and then burned to combust the contaminants; and (2) thermal desorption, where the contaminated soil is heated (not burned) to drive off contaminant vapors. Non-combustion treatments are far more popular, and incineration is very rarely used.

Typically, contaminants being removed from the soil are either hazardous wastes or petroleum products leaked from underground storage tanks (UST). Hazardous waste soil treatment units are covered under Resource Conservation and Recovery Act (RCRA) subtitle C programs. Petroleum products being removed from soil at small UST site remediations are subject to RCRA subtitle I. The few site remediation sites EPA had identified for possible regulation under OSWI were, as discovered through State contacts, regulated under RCRA subtitles C or I. If a unit is subject to RCRA subtitle C, it is treating hazardous waste. Hazardous waste incinerators are exempt from CAA section 129 regulation.

Subtitle I of RCRA, which covers petroleum products coming from UST, specifies stringent site-specific environmental safeguards. Since each site and the remediation thereof may require different treatment methods, subtitle I is designed to ensure a high degree of pollution control for a variety of possible treatment options and a high degree of local regulatory and citizen involvement in selecting the use of equipment and environmental safeguards. At major sources, any site remediation activity would be covered by the CAA section 112 NESHAP for site remediations. As mentioned before, any source regulated under CAA section 112 is not subject to CAA section 129.

Therefore, after assessing the information available on soil treatment facilities and units, EPA has determined that these units are regulated elsewhere. As a result, EPA is not including contaminated soil treatment facilities as a subcategory of OSWI for regulation.

8. Institutional Waste Incinerators

When reviewing the information gathered on potential subcategories of OSWI, EPA identified IWI as a type of unit that is not regulated under other rules and should be regulated under the proposed rules. The OSWI inventory shows over 350 incineration units located at institutions. However, EPA considers this a significant overestimate of the number of IWI units. The EPA's inventory information is several years old (in some cases, as much as 5–10 years old), and research indicates that the population of these types of units has been declining for years. As a result, EPA considers it likely that the actual population of IWI units actually operating today could be half, or possibly less, of what is shown by our inventory.

The inventory information shows that these IWI units are located at a variety of facilities, including schools, universities, prisons, military bases, government facilities, churches, and other institutions, and that they burn solid materials that are generated on site, such as paper, packaging, food waste, rubbish, and garbage. They are not part of the VSMWC category, because the definition of "municipal waste" in CAA section 129 is waste "collected from" establishments, whereas these IWI units burn only waste generated on site.

Moreover, these units are not covered under the CISWI rules, because CAA section 129 limits CISWI to commercial and industrial establishments, and does not include institutions. Therefore, EPA proposes to regulate IWI as a subcategory of OSWI.

Note that under the CAA section 129 definition of "municipal waste," small incinerators that are located at commercial businesses (such as stores and restaurants) or industrial sites and that burn solid materials generated on site are not MWC units because they do not burn waste which has been "collected from." As mentioned above, such units are properly covered under the CISWI rules, because of their location at commercial or industrial establishments.

As mentioned previously, one important part of EPA's rulemaking process is determining what universe of sources to subject to a regulation. The statutory provisions of CAA sections 129(a) and (h) make it clear that EPA must determine, as part of the regulatory process, where to draw the line between combustion units regulated under CAA section 129 and combustion units subject to regulation under other statutory authority, such as CAA section

112. The language of CAA section 129(h) makes clear the Congressional intent that nonhazardous combustion sources not be regulated under both CAA section 129 and CAA section 112. Thus, for the IWI subcategory of OSWI, EPA must determine which sources to include in the subcategory, and which sources to regulate under CAA section 112 (e.g., boilers). For example, institutional boilers burning solid materials are already regulated under CAA section 112 by the boilers NESHAP (40 CFR part 63, subpart DDDDD).¹ Many of the combustion units at institutional facilities (e.g., boilers or steam generating units, heaters, and incinerators) burn "solid" materials. If the solid materials in question are considered institutional waste, the units would be regulated as part of OSWI under CAA section 129. Conversely, if the materials are not considered institutional waste (e.g., they are hazardous solid waste, fuel, solid materials burned for chemical or material recovery, etc.), the units would not be regulated under CAA section 129 but may be regulated under other statutory authority. Thus, collectively, in the process of developing the proposed rules, developing the boilers NESHAP (already promulgated), developing rules for area source boilers, promulgating requirements for electric utility steam generating units, and establishing rules applicable to other combustion sources, EPA will map the regulatory boundaries that identify which units are subject to which requirements.

The process of determining the regulatory applicability of different rules is not unique to the OSWI category. In fact, EPA is addressing similar issues in the CISWI category (see 69 FR 7390, February 17, 2004) and in connection with the boilers NESHAP. The identification of the scope of one rule does not necessarily define the scope of another, or preclude EPA from adjusting the regulatory division in a subsequent rule.

To define IWI units, the proposed rules include definitions of solid waste, institutional waste, and IWI units. The definition of solid waste, for the purposes of the proposed rules, is consistent with the SWDA definition and EPA's existing regulatory

¹ Other such units might be subject to regulation under any number of other EPA regulations, such as: Regulations promulgated pursuant to CAA section 112(k) to control emissions from industrial, commercial and institutional boilers that are area sources; and various other regulations developed under CAA section 112 which cover combustion units burning solid materials to recover their chemical or other material constituents.

definitions. It serves to define nonhazardous solid waste. The definition of "institutional waste" distinguishes between institutional waste and solid materials that should not be considered institutional waste, as well as between IWI units and non-IWI combustion units. This distinction is particularly difficult for institutional units.² For example, there is general agreement that the coal burned in a coal-fired boiler or steam generating unit is not a solid waste because coal is commonly thought of as a fuel. Coal is considered a fuel because it is customarily burned to recover energy (*i.e.*, heat) for some useful purpose such as to heat water or generate steam for space heating or other purposes. However, there is no such general agreement, for example, about a solid material such as paper generated on site at an institution when it is burned in a boiler at that institution to heat a building.

From EPA's point of view, the nature of a material that is burned in a unit at an institutional facility is less important than how the material is burned. In the example, paper is burned to generate the heat necessary to heat a building. If the paper were not burned to generate this heat, then the facility would instead burn another material such as coal. Like the coal, the paper is burned for a useful purpose—to heat the building. Therefore, it is reasonable to consider the paper in this second example, as the coal in the first example, to be a solid fuel and distinct from institutional waste. Thus, for purposes of distinguishing institutional waste from solid fuel, its status is determined by its use, as well as by its nature. Alternatively, if the paper were burned in a combustion unit without heat recovery, its combustion would serve no useful purpose other than to effectuate destruction or disposal of an unwanted material. The EPA would then consider it appropriate to identify the paper as institutional waste, and regulate the combustion unit as an IWI unit under the proposed rules. Similarly, if a material (that is not hazardous waste) is burned in a combustion unit at an

institutional facility with heat recovery, for reasons that do not include the recovery of heat for useful purposes, that material would be institutional waste and the unit would be an IWI unit and would be regulated under the proposed rules. Thus, in general, if a solid material (which is not a hazardous solid waste) is burned with heat recovery at an institutional facility to generate heat for a useful purpose, it is appropriate to consider that material not to be institutional waste, and not to regulate the device as an OSWI unit under CAA section 129. See the recent CISWI notice (69 FR 7390, February 17, 2004) for additional rationale for EPA's discretion to develop definitions under CAA section 129 that distinguish between solid waste incineration units and other combustion units.

The EPA has determined that for purposes of the IWI subcategory of OSWI units, the critical consideration in determining whether the unit is burning institutional waste is the primary function of the combustion unit; and the primary indicator of function is whether or not a unit is designed and operated to recover heat for a useful purpose. That is, if the unit located at an institutional facility combusts material without heat recovery (functions primarily as an incineration unit), then the material burned in that unit is institutional waste. Similarly, if a material is burned in a unit at an institutional facility for reasons that do not include the recovery of heat for useful purposes, that material is institutional waste and the unit is an IWI unit. However, if the unit combusts material with heat recovery for a useful purpose, then the material burned is not institutional waste, and the combustion unit would not be subject to the proposed rules. By specifically defining IWI units to include only units that behave like incinerators, EPA can appropriately identify the scope of regulation of combustion units at institutional facilities under CAA section 129.

In addition to units that combust materials without heat recovery, the definition of institutional waste in the proposed rules also includes materials that are burned in a unit at an institutional facility that is followed by external waste heat recovery only (*i.e.*, no heat recovery in the combustion firebox). The boilers NESHAP covers combustion units at institutional facilities that burn solid materials and recover heat in the combustion firebox. Combustion units at institutional facilities that burn solid materials and do not recover heat in the combustion firebox, but do recover waste heat from

the hot combustion gases following the combustion firebox, would not be covered by the boilers NESHAP. The EPA does not consider it appropriate to regulate such units as boilers.³

Incineration units are designed to discard materials by burning them at high temperatures and leaving as little residue as possible. Incineration units do not have heat recovery in the combustion firebox, but they may be followed by waste heat recovery units. Unlike a boiler (which is specifically designed to recover the maximum amount of heat from a material's combustion), waste heat recovery units are designed to cool the exhaust gas stream from an incineration unit, and/or to recover, indirectly, the useful heat remaining in the exhaust gas. The presence of a waste heat recovery unit on the exhaust gas does not change the fact that the unit combusting the material is primarily an incineration unit. Thus, a combustion unit with no heat recovery in the combustion firebox is still considered an incineration unit (*i.e.*, used primarily to dispose of solid waste), whether the incineration unit is followed by a waste heat recovery unit or not. Such incineration units just happen to have an external device (the waste heat recovery unit) that is recovering some of the waste heat from the incineration unit's exhaust gas. Therefore, IWI units are those units that combust materials with only waste heat recovery (*i.e.*, no heat recovery in the combustion firebox) or no heat recovery.

9. Rural Institutional Waste Incinerators

As discussed above, the OSWI inventory information shows slightly over 350 IWI. These units are located at a variety of institutions and burn solid waste materials generated on site, such as paper, packaging, food waste, rubbish, and garbage. About three-quarters of these IWI appear to be located at primary and secondary schools although, as mentioned, EPA considers this a significant overestimate of the number of IWI. While many IWI appear to be located in areas one would consider suburban or urban, a number appear to be located in areas one might consider rural.

In suburban and urban areas, commercial waste collection/transport/disposal services are widely available and, as a result, IWI in such areas have readily available alternatives to incineration (*i.e.*, commercial waste collection/transport/disposal services). In many rural areas, however, such

² In many cases, such as MWC units and HMIWI units, the identification of the relevant wastes and the relevant units is sufficiently clear that EPA need not address the issue at length in its rule. Indeed, CAA section 129 provides specific guidance for EPA's definitions of municipal waste and medical waste, as well as municipal waste incineration units. See CAA section 129(g)(5) and (6). In addition, there is broad and general agreement between EPA, the regulated community, and other stakeholders regarding what materials are municipal waste and hospital, medical and infectious waste, and which combustion units belong in the respective regulatory categories.

³ These units are often referred to as incinerators with waste heat recovery units or incinerators with waste heat boilers.

services are often very limited and, in some cases, unavailable. Thus, EPA considers IWI located in rural areas (*i.e.*, rural IWI) a distinct class of OSWI due to the lack of readily available commercial waste collection/transport/disposal services.

Because of the limited availability or even lack of such services, the only alternative to incineration for a rural IWI may be to transport their waste to a suburban or urban area, where such services are available. This, of course, would significantly increase the costs and, as such, EPA believes rural IWI merit separate consideration.

Thus, EPA has assessed the increased costs for a rural IWI which may have no reasonable alternative to incineration other than to transport their waste to a suburban or urban area. Based on this assessment, EPA concludes that such costs become significant when transport distances exceed 50 miles.

As mentioned above, the class of rural IWI consist primarily of incinerators located at primary or secondary schools in rural communities. In such communities, the local tax base supporting the school system is limited. School budgets are often stretched to the breaking point and unable to provide more than the minimum and bare essentials. In such an environment, a significant increase in solid waste disposal costs would impose an additional economic burden, which EPA concludes is unreasonable. For this reason, EPA has decided to exclude rural IWI.

To achieve this end, EPA has defined a rural IWI as an IWI located more than 50 miles from the boundary of the nearest Metropolitan Statistical Area (MSA). The Office of Management and Budget identifies areas classified as MSA and these areas are considered by EPA as suburban or urban areas. Thus, defining a rural IWI as an IWI located more than 50 miles from the boundary of the nearest MSA serves the objective of identifying those IWI located in rural areas where commercial waste collection/transport/disposal services may not be readily available or available at all, as well as identifying the maximum reasonable transport distance for an IWI to transport their waste to areas where such services are readily available.

10. Air Curtain Incinerators

Air curtain technology covers a wide variety of combustion equipment designs. For example, all air curtain units contain a fan and ductwork necessary to develop the "air curtain." However, some units are designed to carry out waste combustion within a

partially enclosed firebox (e.g., floor and walls, but open on top), while other designs may not involve a "firebox," *per se*. These other designs consist only of a fan and ductwork to provide the "air curtain," but the combustion is carried out in an earthen trench. The former are referred to as "firebox" units, and the latter are referred to as "trench burners." For the purposes of the proposed rules, EPA is defining "air curtain incinerators" to include both types of units; firebox units as well as trench burners. Since air curtain incinerators could potentially be used for long-term municipal or institutional waste disposal, it makes sense to regulate them as OSWI units subject to the emission limits, operating limits, and other requirements of the proposed rules. Therefore, air curtain incinerators that otherwise meet the definition of OSWI would be regulated as OSWI.

Note that, as required by CAA section 129(g)(1), the proposed rules contain separate opacity requirements for air curtain incinerators burning only yard waste, wood waste, and clean lumber, and those units would not have to meet emission limits for the other CAA section 129 pollutants or the associated monitoring, recordkeeping and recording requirements. Air curtain incinerators that burn institutional or municipal waste, however, would have to meet all requirements of the proposed rules. Since air pollution control devices are unavailable for air curtain incinerators, this has the net effect of precluding the use of air curtain incinerators for burning municipal solid waste or institutional waste.

11. Incinerators and Air Curtain Incinerators in Isolated Areas of Alaska

There are locations in Alaska where limited options exist for solid waste disposal. These areas face unique situations that are not encountered elsewhere in the United States, and incinerators located in these areas merit special consideration. These are sparsely populated areas where access to a large MSW landfill or any other solid waste disposal option outside of the community is not available for all or part of a year. Within these areas, there are many isolated villages with small populations that have no road access. The only surface transportation in and out of many of these communities is barge traffic during the summer months. Other areas have roads that are not passable for much of the winter due to snow. In other cases, roads can be used in the winter when the rivers or streams that the road must cross are frozen, but the road is not available in the summer when the top layer of permafrost melts,

turning the road into a bog. Rivers and streams without bridges thaw and become impassable. In such situations, there is no practical means of transporting waste. As a result, local waste management is the only option available to these communities.

In addition to the unavailability of waste transportation options, climatic conditions can make effective local landfilling difficult or even technically infeasible. These areas experience extended subfreezing conditions for the duration of the winter. In the summer months, the top layer of permafrost melts, turning potential waste disposal areas into bogs. Operation of a conventional landfill is extremely difficult under both weather extremes. In addition, adequate landfill cover material is unavailable in many areas. If waste is simply placed outside in a dump with no or insufficient cover material, it can attract birds and wild animals (such as bears and foxes) that can threaten villagers or spread disease. Waste burning in these remote Alaskan locations has the added benefits of decontaminating the waste, making the waste less attractive to wild animals, reducing the problem of blowing litter, and minimizing the generation and impacts of leachate.

In some Alaskan villages, incineration is used in conjunction with landfilling. In these areas, land that is physically suitable for a landfill is extremely scarce, so waste volume reduction is important to the village to prolong the life of the landfill. Alaskan villages may utilize waste segregation and recycling programs to reduce waste streams, but burning the remaining waste is also important to further reduce the waste volume and prolong the useful life of the local landfill.

Under authority of the SWDA, Alaskan State codes define landfills serving small populations in isolated areas with no access to a regional waste management facility for 3 or more months per year as "Class II" or "Class III" depending on size and accessibility constraints. Disposal sites classified as Class II or III experience the solid waste disposal challenges outlined in the previous paragraphs and incineration is common at these facilities.

As the previous discussion details, the challenges to the use of environmentally sound waste management practices at these remote Alaskan communities make incineration an essential component to their waste management system. Any CAA section 129 regulation imposed on incineration units used at these Class II or Class III facilities in Alaska, however, would effectively preclude use of incinerators.

Even a minimal rule that did not require new air pollution controls would make the cost of incineration prohibitively expensive, because CAA section 129 rules must contain testing, permitting, monitoring, recordkeeping, and reporting requirements. These requirements would easily double or triple the cost of operating an incinerator. These small Alaskan villages would not have the economic resources to comply with a regulation and would likely cease operating incineration units in response to any regulation.

The potential implications of the cessation of incineration at these Class II and Class III facilities include the rapid exhaustion of available landfill capacity, increased transmission of disease, increased threats from wild animals, and an increase in open burning. Therefore, EPA considers it important to preserve incineration as a waste disposal option for Class II and III facilities in Alaska. The EPA's consideration of the solid waste disposal options available at Class II and III facilities in Alaska shows an adverse environmental result from any action that would preclude or build barriers to incineration within these areas.

For these reasons, EPA has decided to exclude incinerators and air curtain incinerators used at solid waste disposal sites in Alaska that are classified as Class II or Class III facilities.

12. Incinerators Located on Remote Islands

The EPA recognizes that certain islands, Guam, American Samoa, the Virgin islands, and the Commonwealth of the Northern Mariana Islands, may lack suitable alternative disposal methods and find the cost of having sources comply with the proposed rules prohibitive. The EPA is not proposing an exclusion or exemption for such sources, but draws the attention of these islands to CAA section 325, which permits EPA to grant an exemption from CAA section 129 requirements upon petition of the "Governor" of one of these islands. The EPA would respond favorably and promptly to any such properly supported petition.

13. Temporary-Use Incinerators Used in Disaster or Emergency Recovery Efforts

The EPA realizes that in certain catastrophic situations, an incinerator may be a very useful tool in the recovery process. Clean-up and recovery efforts after disasters such as floods, tornados, or hurricanes are examples of situations where an incinerator may be useful. In these situations, quick removal of debris is of utmost importance to maintain

public health and safety. Likewise, bioterrorist activities may warrant the immediate destruction of contaminated materials, in which case an incinerator may be best suited to perform the task. In these situations, the incinerator is used at a site only long enough to complete the recovery tasks, and is not used as a long-term waste disposal device. Accordingly, EPA considers that regulations imposed on incinerators temporarily used to recover from an emergency or disaster could perhaps hinder the recovery efforts, and this impact would outweigh any benefits possible under regulation of the units. To address this, EPA has included an exclusion for temporary-use incinerators used in disaster or emergency recovery efforts from regulation under OSWI.

This exclusion applies to temporary-use incinerators used in recovery efforts at local, State and Federally-declared disasters or emergencies. If the incinerator is used for recovery efforts in an area declared by the State as a State of Emergency, or that the President has declared, under the authority of the Stafford Act, a major disaster or emergency, then it would be excluded from regulation under OSWI for as long as required by the recovery effort. However, if the disaster or emergency has not been declared a State of Emergency or a major disaster or emergency, then the exclusion would apply to temporary-use incinerators used in recovery efforts at one location for 8 weeks or less. If the disaster recovery efforts are expected to take longer, the owner/operator of the unit would be required to submit a notification to the Administrator requesting approval to continue operating for a longer period of time. The incinerator may then be used for an additional 8 weeks at the same location while the Administrator reviews the request. After that time period the incinerator must cease operations or comply with the proposed rules unless the Administrator approves the request to operate at the location for a longer period of time.

14. Units that Combust Contraband or Prohibited Goods

The EPA realizes that government agencies sometimes must resort to incineration to destroy illegal drugs and items that are prohibited in all or portions of the U.S. due to biosecurity reasons. For example, few options other than incineration exist for the destruction or disposal of marijuana and other drugs seized by the police. Landfill disposal is not adequate due to the risk of someone recovering the contraband after authorities have

attempted to dispose of it. As another example, produce seized by customs agents at points of entry into the United States may be infected by pathogens or pests that could severely threaten the domestic agriculture industry. In these cases, complete destruction via incineration may be the preferred method of disposal of the contaminated produce.

In such situations, EPA does not want to hinder or deter the use of incinerators by the government agency if it is necessary to protect public health and safety. Therefore, EPA has chosen to exclude units operated by government agencies that combust only contraband or prohibited goods from the proposed rules. Note that if contraband or prohibited goods are combusted with other waste in a VSMWC unit or IWI unit, the unit would be covered by the proposed rules.

15. Units That Combust Municipal Waste or Institutional Waste With Other Materials

In the discussion above, EPA has assumed that units within a potential subcategory are burning only the material described (e.g., MSW, wood residue, contraband, etc.). As EPA has discussed, units at institutions burning institutional waste generated at that institution (IWI units) and VSMWC units would be subject to the emission limits and other requirements of the proposed rules. Any VSMWC or IWI unit that is also combusting other materials, such as contraband, agricultural residue, etc., described in this section of this preamble would be subject to the emission limits and other requirements of the proposed rules. For example, a VSMWC unit that is burning contraband along with municipal waste would be regulated under OSWI and would not qualify for the exclusion for units burning contraband. An incinerator that is burning only contraband would be excluded from the proposed rules. Similarly, an incineration unit that originally is excluded from regulation under OSWI, but subsequently burns municipal waste or institutional waste, would be subject to the emission limits and other requirements of the proposed rules.

B. How Did EPA Select the Pollutants to be Regulated?

The EPA selected emission limits for nine pollutants, as well as an opacity standard, for the proposed rules. As required by CAA section 129, the proposed rules would establish numerical emission limits for Cd, CO, dioxins/furans, HCl, Pb, Hg, opacity, NO_x, PM, and SO₂.

Section 129 of the CAA authorizes, but does not require, EPA to set limits for additional pollutants. The EPA has concluded that emission limits for additional pollutants are not needed because the emission limits for the nine listed pollutants ensure control of the other pollutants emitted by OSWI units. This decision is consistent with other CAA section 129 NSPS and emission guidelines (those for MWC units, HMIWI units, and CISWI units). The pollutants emitted by OSWI units fall into three general classes: Metals, organics, and acid gases. The limits for the nine pollutants, in conjunction with the combustor and control device operating parameter limits established by the regulations, would result in good control of all three classes of pollutants.

The emission limits for PM, Cd, and Pb ensure that emissions of all non-volatile metals are controlled. Cadmium, Pb, and other non-volatile metals are emitted as PM, and are removed by the same control devices that control PM emissions. The Cd, Pb, and PM limits would ensure that a wet scrubber or other control device is installed and operated in a manner that reduces emissions of all non-volatile metals. Mercury is the most volatile of the metals found in emissions from waste combustion units. If emission control devices meet the Hg limits, they would also be controlling any other volatile metals that may be present. Setting emission limits for additional metals would increase testing costs without obtaining any additional emissions reductions.

The emission limits for CO and dioxins/furans ensure control of organic pollutant emissions. Carbon monoxide concentration is a good indicator of combustion efficiency and the destruction of organic compounds. Complete combustion, as indicated by low CO emission limits, results in low emissions of organic compounds. High levels of CO indicate poor combustion conditions that are likely to result in high levels of organic compound emissions. The combustion techniques employed to minimize CO emissions are the same as those that are used to minimize organic compound emissions. Therefore, the CO emission limit would ensure that organic compound emissions are reduced.

Combustor load is also related to organic compound emissions. At loads above 100 percent, PM carryover could increase, and incinerator residence times could decrease, contributing to increased emissions of organic compounds including dioxins/furans. The proposed rules include a maximum charge rate operating limit, which

would help achieve good control of organic pollutants. Dioxins/furans are a type of organic pollutant that is of particular health concern, and they can form on fly ash in the presence of oxygen at temperatures in the range of 250° to 400 °C (480° to 750 °F). Rapid flue gas cooling, for example by a wet scrubber, avoids dioxins/furans formation by this method. The specific emission limits for dioxins/furans would ensure that dioxins/furans emissions are minimized and, along with the CO and operating limits, would also result in the incinerators and control devices being designed and operated in a way that reduces emissions of other organic pollutants.

The emission limits for SO₂ and HCl would result in control of acid gases. Sulfur dioxide and HCl constitute the majority of acid gas emissions from waste combustion units. The same control technologies that reduce emissions of SO₂ and HCl, such as wet scrubbing, also remove emissions of any other acid gases. The SO₂ and HCl emission limits would ensure that the devices that control these two pollutants and other acid gases are installed and operated in a manner that reduces emissions.

The proposed rules require continuous monitoring of selected operating parameters to ensure that the control devices are continuously operated in the manner intended and result in continuous emissions reductions of PM and metals, organic pollutants, and acid gases. In summary, emission limits for other pollutants are not necessary because the emission limits for the nine pollutants would result in control of the other pollutants emitted by OSWI units.

C. How Did EPA Select the Format for the Proposed Rules?

The EPA selected an outlet concentration format for each pollutant because outlet data are available for combustion units using the control technologies that are the basis of the MACT emission limits. All concentration limits are corrected to 7 percent oxygen to provide a common basis. Opacity requirements are proposed on a percentage basis. The individual limits for each pollutant reflect the achievable performance of units using the MACT controls. The units of measure for each of the pollutants are consistent with other CAA section 129 rules and with the available data.

For regulating Cd, Pb, and Hg, the proposed numerical concentration limits are in units of µg/dscm. For total PM, the proposed concentration limits

are in units of gr/dscf. Dioxins/furans emission limits are in units of total ng/dscm (total mass basis), based on measuring emissions of each tetra-through octa-chlorinated dibenzo-p-dioxin and dibenzofuran and summing them. For CO, HC1, NO_x, and SO₂, the proposed rules are volume concentrations (ppmdv).

In addition to numerical emission limits, the proposed rules include siting requirements (for new sources only) and operator training and qualification provisions as required by CAA section 129. Owners or operators of OSWI units would also be required to prepare a waste management plan.

D. How Did EPA Determine the Proposed Emission Limits for New OSWI Units?

All standards established pursuant to CAA section 129 must reflect MACT, the maximum degree of reduction in emissions of air pollutants that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for each category. The CAA also specifies that the degree of reduction in emissions that is deemed achievable for new OSWI units must be at least as stringent as the emissions control that is achieved in practice by the best-controlled similar unit. This requirement constitutes the MACT "floor" for new OSWI units and EPA may not consider costs or other impacts in determining the MACT floor. The EPA may require a greater degree of reduction in emissions that is more stringent than the MACT floor (beyond-the-floor) if the Administrator considers the cost, environmental, and energy impacts to be reasonable.

Section 129(c) of the CAA specifies that standards "shall be based on methods and technologies for removal or destruction of pollutants before, during, or after combustion." In determining the MACT floors and MACT, EPA considered source reduction and materials separation as potential methods of reducing pollutants before combustion. The EPA determined that the variable and heterogeneous nature of municipal solid waste and the site-specific and diverse nature of institutional waste make reliable quantification of emissions reductions associated with removal of various materials technically infeasible for the OSWI unit population. Each OSWI unit combusts a unique mixture of materials and, therefore, a single materials separation approach would not suffice for all OSWI units. Instead,

the EPA would require a site-specific waste management plan for each OSWI unit that identifies the feasibility and methods to reduce or separate components of solid waste from the waste stream to reduce toxic emissions from incineration of waste, as discussed later in this preamble.

In developing the MACT floors and MACT, EPA also considered methods for destruction of pollutants during combustion. The MACT floors and MACT are based on emission data for well-designed and well-operated combustion units, and the CO emission limits would assure proper operation of the combustor, which minimizes emissions of organic pollutants. Technologies for control of pollutants after combustion were also considered as described in the following discussions of the VSMWC and IWI unit MACT floors and beyond-the-floor alternatives.

For the proposed rules, we determined the new source MACT floors and MACT separately for the two subcategories of OSWI—the VSMWC subcategory and the IWI subcategory. Because there are similarities in unit size, design, and operation between the two subcategories, we request public comment on whether we should combine the two subcategories and determine a single new source MACT floor and a single set of new source MACT emission limits for the OSWI category as a whole. If the subcategories were combined, then we would use any available data for OSWI units (regardless of whether they are VSMWC or IWI units) to determine the MACT floor and MACT for the OSWI category.

1. How Did EPA Determine the MACT Floor for New OSWI Units?

To determine the MACT floor for new OSWI units, EPA must identify the “best performing similar unit, as determined by the Administrator.” The best performing “similar source” need not be in the category or subcategory subject to the MACT standard at issue. Rather, the source must be one that EPA, based on our evaluation of similarities and differences (*e.g.*, size, design, method of operation, purpose) has determined is sufficiently similar for us to base our regulations on. While EPA does not have emission test data for the units in the OSWI inventory, emissions information is available for other incineration units that EPA has concluded are “similar.” Accordingly, emission levels for the MACT floor level of control were determined by using actual emissions test data from similar units in other source categories.

New VSMWC MACT floor. The inventory of VSMWC units contains 14 units. All of the units for which MACT compliance control information is available report that they are “afterburner/uncontrolled” units (*i.e.*, two-chamber units consisting of a primary combustion chamber and an afterburner chamber, but no add-on control devices). However, all two-chamber incineration units use an “afterburner” in the second combustion chamber to ensure complete combustion burn-out. Thus, the use of an afterburner in the second combustion chamber is an integral part of the design and operation of these incinerators and does not represent an additional level of emission control beyond that which is inherent in the basic design and operation of VSMWC units. As a result, for the purposes of assessing the performance of these incineration units, EPA considers them “uncontrolled.”

While all of the sources in the VSMWC subcategory are uncontrolled, EPA has data on emissions and controls for HMIWI units that are similar to VSMWC units in size, design, and operation. Based on EPA’s review of this information, EPA has determined that the most representative similar source would be an HMIWI unit using a “medium efficiency” wet scrubber. Small and medium sized HMIWI units, which are similar in size and design to VSMWC units, have low or medium efficiency wet scrubbers as required by the HMIWI rules. Furthermore, there is one OSWI unit, an IWI unit, with a medium efficiency wet scrubber.

While EPA has no emissions data for the IWI unit, EPA has reviewed compliance test data for HMIWI units, which includes the type of units that EPA has determined constitute the best performing similar source. Using this data, EPA determined the performance level of a “medium efficiency” wet scrubber by calculating the average emissions rate for all of the wet scrubbers on HMIWI units. Table 3 of this preamble shows the emission limits associated with the MACT floor for new VSMWC units.

TABLE 3.—NEW VSMWC MACT FLOOR EMISSION LIMITS

Pollutant (concentration units @ 7% O ₂)	Emission limit
PM (gr/dscf)	0.013
HCl (ppmdv)	3.7
SO ₂ (ppmdv)	3.1
CO (ppmdv)	5.0
NO _x (ppmdv)	103
Dioxins/Furans, Total Mass Basis (ng/dscm)	33
Hg (μg/dscm)	74

TABLE 3.—NEW VSMWC MACT FLOOR EMISSION LIMITS—Continued

Pollutant (concentration units @ 7% O ₂)	Emission limit
Cd (μg/dscm)	18
Pb (μg/dscm)	226

New IWI MACT floor. The IWI inventory contains 358 units. These units are two-chamber incineration units with an afterburner in the second chamber. Of these, there is one unit controlled with a medium efficiency wet scrubber.

While EPA has no emissions data on IWI units, EPA has data for HMIWI units that are similar to IWI units in size, design, and operation. Based on EPA’s review of this information, EPA has determined that the most representative similar source would be an HMIWI unit using a “medium efficiency” wet scrubber. Small and medium sized HMIWI units, which are similar in size and design to IWI units, have low or medium efficiency wet scrubbers as required by the HMIWI rules. The EPA reviewed compliance test data for HMIWI units, which includes the type of units that EPA has determined constitute the best performing similar source. Using this data, EPA determined the performance level of a “medium efficiency” wet scrubber by calculating the average emissions rate for all of the wet scrubbers on HMIWI units. Table 4 of this preamble shows the emission limits associated with the MACT floor for new IWI units.

TABLE 4.—NEW IWI MACT FLOOR EMISSION LIMITS

Pollutant (concentration units @ 7% O ₂)	Emission limit
PM (gr/dscf)	0.013
HCl (ppmdv)	3.7
SO ₂ (ppmdv)	3.1
CO (ppmdv)	5.0
NO _x (ppmdv)	103
Dioxins/Furans, Total Mass Basis (ng/dscm)	33
Hg (μg/dscm)	74
Cd (μg/dscm)	18
Pb (μg/dscm)	226

2. How Did EPA Determine Whether Options More Stringent Than the MACT Floor Were Appropriate for New OSWI Units?

In determining MACT, CAA section 129 directs EPA to “* * * require the maximum degree of reduction in emissions * * * that the Administrator, taking into consideration the cost of achieving such emission reduction and any non-air quality health and

environmental impacts and energy requirements, determines is achievable. * * * However, MACT standards may be more stringent than the MACT floor.

The MACT floors for both the new VSMWC subcategory and the new IWI subcategory of OSWI are based on similar units with wet scrubbers, as described earlier in this preamble. The EPA did not identify any feasible regulatory options more stringent than the MACT floors for new VSMWC and IWI units. The EPA considered the possibility of dry sorbent injection systems with carbon injection and fabric filters, but available information indicated that the emissions reductions would be similar to wet scrubbing, and the costs to install and operate the controls would likely be much greater. Furthermore, analyses conducted for other CAA section 129 rules (e.g., HMIWI) for incineration units of the same size and design have found that wet scrubbers are generally the emission control systems selected for very small incineration units.

The EPA does not expect any new VSMWC or IWI units to be built. However, a model plant analysis indicates that total emissions reductions for the nine regulated pollutants that would be achieved by requiring the floor level of control for a new VSMWC unit would range from 2.3 tpy to 67 tpy, depending on the model size and hours of operation. For a new IWI unit, the emissions reductions would range from 2.3 to 34 tpy, depending on the model size and hours of operation. The lower end of each range is based on a model batch unit with the capacity to burn 1 tpd of waste. The upper end of each range is based on an intermittently operated model unit with the capacity to burn 30 tpd for VSMWC units and 15 tpd for IWI units. The size ranges included in the model plant analysis represent the size ranges of units in each subcategory.

Because CAA section 129 requires EPA to establish regulations that are no less stringent than the MACT floor, EPA must require the MACT floor level of control for new VSMWC units and new IWI units regardless of cost. However, model plant cost analyses were conducted for informational purposes. The analyses showed that it is typically less expensive to send waste to a landfill than it is to construct and operate a new VSMWC unit or a new IWI unit. Available information indicates that no new VSMWC or IWI units are being built. The cost impacts of the MACT floor level of control are expected to be minimal, because municipalities and institutions would choose not to construct and operate new

VSMWC or IWI units and would select an alternative waste disposal method.

Given that the MACT floors for both the new VSMWC subcategory and the new IWI subcategory of OSWI are based on wet scrubbers, the floor level of control achieves significant emissions reductions, and EPA has not identified any feasible beyond-the-floor alternatives that would achieve greater emissions reductions, EPA has chosen to base the NSPS for both the new VSMWC subcategory and the new IWI subcategory of OSWI on the use of wet scrubbers. The associated emission limits are shown in Tables 3 and 4 of this preamble.

E. How Did EPA Determine the Proposed Emission Limits for Existing OSWI Units?

All standards established pursuant to CAA section 129 must reflect MACT, the maximum degree of reduction in emissions of air pollutants that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for each category. The CAA also specifies that the degree of reduction in emissions that is deemed achievable for existing units must not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in the category. This requirement constitutes the MACT "floor" for existing OSWI units. However, EPA may not consider costs or other impacts in determining the MACT floor. The EPA may require a greater degree of reduction in emissions that is more stringent than the MACT floor (beyond-the-floor) if the Administrator considers the cost, environmental, and energy impacts to be reasonable.

As with new units, EPA considered methods and technologies for removal or destruction of pollutants before combustion. For the same reasons described for new OSWI units, EPA concluded that the MACT floor for existing OSWI units does not include specific source reduction or materials separation requirements. Instead, EPA would require a site-specific waste management plan for each OSWI unit that identifies the feasibility and methods to reduce or separate components of solid waste from the waste stream to reduce toxic emissions from incinerated waste. Waste management plan requirements are discussed in more detail later in this preamble.

In developing the MACT floors and MACT, EPA also considered methods

for destruction of pollutants during combustion. The MACT floors and MACT are based on emissions data for well-designed and well-operated combustion units, and the CO emission limits would assure proper operation of the combustor, which minimizes emissions of organic pollutants. Technologies for control of pollutants after combustion were also considered as described in the following discussions of the VSMWC and IWI unit MACT floors and beyond-the-floor alternatives.

For the proposed rules, we determined the existing source MACT floors and MACT separately for two subcategories of OSWI—the VSMWC subcategory and the IWI subcategory. Because there are similarities in unit size, design, and operation between the two subcategories, we request public comment on whether we should combine the two subcategories and determine a single existing source MACT floor and a single set of existing source MACT emission limits for the OSWI category as a whole. If the subcategories were combined, then we would use any available data for OSWI units (regardless of whether they are VSMWC or IWI units) to determine the MACT floor and MACT for the OSWI category.

1. How Did EPA Determine the MACT Floor for Existing OSWI Units?

To determine the MACT floor for existing OSWI units EPA must identify the "best performing units" in the category or subcategory. The EPA does not have emissions test data for the units in the OSWI inventory. However, the inventory contains information on air pollution control devices installed on the units. Therefore, information on control devices was used to identify the best performing units in the VSMWC and IWI subcategories and establish the control technology basis of the MACT floors for each. The EPA then determined emissions levels achieved by the MACT floor level of control by using actual emissions test data from similarly controlled incineration units in other source categories, because of the lack of OSWI emissions test data.

Existing VSMWC MACT floor. The inventory of VSMWC units contains 14 units. All of the units for which MACT compliance control information is available report that they are "afterburner/uncontrolled" units (i.e., two-chamber units consisting of a primary combustion chamber and an afterburner chamber, but no add-on control devices). However, all conventional two-chamber incineration units use an "afterburner" in the second

combustion chamber to ensure complete combustion burn-out. Thus, the use of an afterburner in the second combustion chamber is an integral part of the design and operation of these incinerators and does not represent an additional level of emission control beyond that which is inherent in the basic design and operation of VSMWC units. As a result, for the purposes of assessing the performance of these incineration units, EPA considers them "uncontrolled." For existing VSMWC units, 12 percent of 14 units is two units. Therefore, the average of the best performing two units, or existing source MACT floor, is based on the emission limits achievable by a well-operated, uncontrolled (*i.e.*, afterburner), two-chamber incinerator.

Because there were not any emissions test data available for the actual OSWI units in our inventory, EPA looked to similar source categories for test data. The EPA found test data for small uncontrolled, modular/starved air MWC units that were collected during the MWC regulatory development process. These units are two-chamber units that are the same in design and waste burned as the units within the OSWI category. Therefore, these data were used to establish the MACT floor emission limits. Table 5 of this preamble shows the emission limits associated with the MACT floor for existing VSMWC units.

TABLE 5.—EXISTING VSMWC AND IWI MACT FLOOR EMISSION LIMITS

Pollutant (concentration units @ 7% O ₂)	Emission limit
PM (gr/dscf)	0.1
HCl (ppmdv)	500
SO ₂ (ppmdv)	200
CO (ppmdv)	50
NO _x (ppmdv)	215
Dioxins/Furans, Total Mass Basis (ng/dscm)	300
Hg (μg/dscm)	500
Cd (μg/dscm)	310
Pb (μg/dscm)	4,300

Existing IWI MACT floor. The IWI inventory contains 358 units. Of these, there is one unit controlled with a medium efficiency wet scrubber. The rest of the IWI units are "afterburner/uncontrolled" units (see VSMWC discussion above). Twelve percent of 358 units is 43 units. Therefore, the average of the best performing 12 percent, or MACT floor, is based on the emission limits achievable by a well-operated, uncontrolled, two-chamber incinerator. Because there were not any emissions test data available for the actual OSWI units in our inventory, EPA looked to similar source categories for test data. The EPA found test data for

small uncontrolled, modular/starved air MWC units that were collected during the MWC regulatory development process. These units are two-chamber units that are the same in design and waste burned as the units within the OSWI category. Therefore, these data were used to establish the emission limits for uncontrolled units. Table 5 of this preamble shows the emission limits associated with the MACT floor for existing IWI units.

2. How Did EPA Determine Whether Options More Stringent Than the MACT Floor Were Appropriate for Existing OSWI Units?

In determining MACT, CAA section 129 directs EPA to " * * * require the maximum degree of reduction in emissions * * * that the Administrator, taking into consideration the cost of achieving such emission reduction and any non-air quality health and environmental impacts and energy requirements, determines is achievable. * * * " The MACT standards may be more stringent than the MACT floor. The MACT floors for both the existing VSMWC subcategory and the existing IWI subcategory of OSWI are based on the emission limits achievable by a well-operated, uncontrolled, two-chamber unit. For existing VSMWC and IWI units, EPA identified one regulatory option beyond the floor: Emission limits based on the use of a wet scrubber. One OSWI unit (an IWI unit) currently uses a wet scrubber, and this control technology could be applied to both IWI and VSMWC units and would substantially reduce emissions. After considering the emission reduction benefits, costs, and other impacts, EPA has decided to base the emission guidelines for the existing VSMWC subcategory and for the existing IWI subcategory of OSWI on the emission limits achievable through the use of a wet scrubber. These emission limits are significantly more stringent than the MACT floors for these subcategories. The EPA expects that the cost impacts of the emission guidelines for existing VSMWC and IWI units would be minimal for reasons described below.

Table 6 of this preamble shows the emission levels associated with the MACT floor for existing VSMWC and IWI units and the wet scrubber beyond-the-floor regulatory option. These emission levels were established from the data described earlier in this preamble. Because the MACT floors for existing VSMWC and IWI are based on units without controls, the emission reduction that would be achieved by requiring existing VSMWC and IWI units to meet the MACT floor is

negligible. In contrast, the total emissions reductions for the nine regulated pollutants that would be achieved by requiring any existing units to meet the beyond-the-floor option would range from 2.3 tpy to 67 tpy for a VSMWC model unit and from 2.3 to 34 tpy for an IWI model unit, depending on the unit's capacity and hours of operation. The lower end of each range is based on a model batch unit with a capacity of 1 tpd, and the upper end is based on an intermittently operated model unit with a capacity of 30 tpd for VSMWC units and 15 tpd for IWI units. These represent the size ranges of existing units in each subcategory.

TABLE 6.—EMISSION LEVELS FOR MACT FLOOR AND BEYOND-THE-FLOOR REGULATORY OPTIONS FOR THE EXISTING VSMWC AND IWI SUBCATEGORIES OF OSWI

Pollutant (concentration units @ 7% O ₂)	MACT floor emission limit	Emission limit based on wet scrubber
PM (gr/dscf)	0.1	0.013
HCl (ppmdv)	500	3.7
SO ₂ (ppmdv)	200	3.1
CO (ppmdv)	50	5.0
NO _x (ppmdv)	215	103
Dioxins/Furans, Total Mass Basis (ng/dscm)	300	33
Hg (μg/dscm)	500	74
Cd (μg/dscm)	310	18
Pb (μg/dscm)	4,300	226

In comparing the cost impacts of the floor and the beyond-the-floor regulatory option, the cost impacts of both options are estimated to be minimal because facilities would elect to use a lower-cost alternative waste disposal method. The EPA analyzed the compliance costs for model existing VSMWC and IWI units for the floor regulatory option, the wet scrubbing regulatory option, and an alternative waste disposal method. The analysis indicates that, even though the floor option is based on units with no control, the cost of meeting emission guidelines based on the MACT floor would be significant, and municipalities and institutions would likely choose to shut down existing VSMWC or IWI units and would instead use alternative waste disposal options such as landfilling or sending their waste to a regional MWC unit that is already subject to the small or large MWC regulations.

The costs of complying with emission guidelines based on the MACT floor would be significant because all emission guidelines developed under

CAA section 129 must include operator training and qualification requirements as well as testing, permitting, monitoring, and reporting requirements. State and Federal plans developed to implement the emission guidelines must also contain these requirements. Even if an existing VSMWC or IWI unit did not need to install air pollution controls to meet the MACT floor emission levels, EPA estimates significant costs to meet all of these other requirements. For example, EPA estimates that operator training, testing, permitting, monitoring, recordkeeping, and reporting costs to comply with the MACT floor option would be over \$116,000 per year for an existing VSMWC or IWI unit. This cost is significantly more than the annual cost of operating most VSMWC and IWI units. In fact, it could double, triple, or quadruple the annual costs of an existing VSMWC or IWI unit, depending on its size. The EPA estimates the annual costs of installing and operating a wet scrubber and meeting the training, testing, permitting, monitoring, recordkeeping, and reporting requirements of the emission guidelines would range from \$162,000 to \$253,000 per year for existing VSMWC units and from \$162,000 to \$207,000 for existing IWI units, depending on the unit's size and operating schedule. Therefore, the likely response to the emission guidelines (regardless of whether it is based on the floor or the beyond-the-floor option) would be for municipalities and institutions to examine and select alternative waste disposal options.

Information available on the response by existing sources to other CAA section 129 rulemakings indicates that many sources chose to close and rely on alternatives to incineration in managing their solid waste, rather than incur the costs of compliance with the regulation. The EPA anticipates a similar response would appeal to sources subject to OSWI emission guidelines. The model plant analysis indicates that, even in the absence of the emission guidelines, it typically would be less expensive to shut down an incinerator and send waste to a landfill than it would be to continue operating an existing VSMWC or IWI unit. The general findings of this analysis are reinforced by the trend of closure of many units over the past several years. However, EPA realizes that many site-specific factors influence both the cost of operating a specific existing waste combustion unit and the cost of sending the waste to a landfill or other alternative disposal method, and therefore, some facilities may

experience a small increase over their current costs by switching to an alternative disposal method. Given the widespread availability of waste disposal alternatives such as landfilling, the trend toward closure of VSMWC and IWI units, the results of the model plant cost analysis, and the response of sources to other CAA section 129 regulations, EPA expects that the cost impacts of the beyond-the-floor option for existing VSMWC and IWI units would be minimal because most municipalities and institutions would choose to shut down their existing VSMWC and IWI units and would select an alternative waste disposal method. Use of an alternative disposal method would result in a negligible increase in costs, and may even result in cost savings for some units.

While EPA's objective is to adopt MACT emission guidelines that fulfill the requirements of CAA section 129 and not to cause the shutdown of most existing VSMWC and IWI units, EPA considers the replacement of poorly controlled incinerators with cost effective alternative disposal techniques that significantly reduce toxic emissions as an appropriate outcome. From a national perspective, emission guidelines for existing VSMWC and IWI units based on the use of wet scrubbing (and the switching to alternative waste disposal options that would result) would minimize emissions of PM, dioxin, acid gases, and metals from VSMWC and IWI units at a relatively low cost, due to the availability of alternative means of waste disposal. As a result, the proposed emission guidelines for both subcategories of OSWI are based on emission limits achievable through the use of wet scrubbers. These emission limits are substantially more stringent than the MACT floors for existing VSMWC and IWI units.

F. How did EPA Determine Testing and Monitoring Requirements for the Proposed Rules?

The EPA determined testing and monitoring requirements for the proposed rules that are consistent with the CAA. Section 129(c) of the CAA requires EPA to develop regulations that include monitoring and testing requirements. The purpose of these requirements is to allow EPA to determine whether a source is operating in compliance with the proposed rules. The proposed monitoring and testing requirements are discussed below.

1. Continuous Emission Monitoring Systems

The most direct means of ensuring compliance with emission limits is the use of continuous emission monitoring systems (CEMS). As a matter of policy, the first and foremost option considered by EPA is to require the use of CEMS to demonstrate continuous compliance with specific emission limits. The EPA considers other options only when CEMS are not available or when the impacts of including such requirements are considered unreasonable.

Continuous emissions monitoring of CO is feasible and is proposed to determine compliance with the CO emission limit and to indicate proper operation of the combustion unit. Monitoring emissions of CO on a continuous basis is the most effective way to ensure that the combustion unit is operating properly. Low CO emissions indicate good combustion, which, in turn, ensures destruction of other pollutants such as organics. In addition, good combustion helps to keep PM emissions lower.

Compliance with the CO emission limit would be determined on a 3-hour rolling average basis using CEMS data. The EPA would require CEMS for CO to ensure proper combustion performance. Data provided by CO CEMS assures EPA and the public that the combustion unit is operating properly.

Continuous emission monitors are not readily available for many of the other pollutants regulated under the proposed rules. For example, CEMS for metals and dioxins/furans are either very expensive or are still being developed. Thus, the proposed rules require monitoring of operating parameters to ensure proper operation of the air pollution control devices.

Although monitoring of operating parameters cannot provide a direct measurement of emissions, it is often a suitable substitute for CEMS. The information provided can be used to ensure that the air pollution control equipment is operating properly. This information reasonably assures EPA and the public that the reductions in acid gases, organic pollutants, metals, and PM envisioned by the regulations are being achieved. The proposed rules include requirements for initial and annual stack testing using EPA methods, coupled with monitoring of operating parameters. The owner or operator of each OSWI unit would use the initial stack test to calibrate the monitoring parameters.

Parameter monitoring is proposed to indicate proper operation of the wet scrubber. Parameter monitoring is

proposed on a rolling 3-hour basis to correspond to the approximate length of the required emission tests. The EPA selected parameters to monitor that indicate the proper operation of a wet scrubber and that can be monitored continuously at a reasonable expense. Maximum or minimum values for the operating parameters must be established during emission testing. For the OSWI unit, the maximum charge rate must be established as the average charge rate during the emission test. Likewise, for the wet scrubber, the minimum operating parameters (*i.e.*, pressure drop or amperage, scrubber liquor flow rate, and scrubber liquor pH) must be established as the average value during the emission test. An owner or operator of OSWI units that chooses to comply with the emission limits using controls other than wet scrubbers would be required to petition the Administrator for approval of alternative operating parameters.

2. Stack Testing

The proposed rules require the owner or operator of each new and existing OSWI unit to perform an initial stack test for emissions of the pollutants identified in CAA section 129 (Cd, CO, dioxins/furans, HCl, Pb, Hg, NO_x, PM, and SO₂), plus an initial opacity test. Additionally, the proposed rules require annual stack tests. The annual testing would ensure, on an ongoing basis, that the air pollution control device is operating properly and its performance has not deteriorated. An average of the results from three test runs would be required to determine compliance with the proposed regulations. The owner or operator would be allowed to skip two annual tests for a pollutant if all three previous annual stack tests show compliance with the emission limit for that pollutant. The EPA considers testing every 3 years sufficient to provide certainty about control device performance while reducing the overall costs of testing to the regulated source.

The emission tests upon which the proposed emission limits are based were conducted using approved EPA test methods. No applicable voluntary consensus standards were identified during the development of the proposed rules. Therefore, EPA proposes that the identified EPA test methods be followed when performing any emission testing required to determine compliance with the emission limits. This requirement would ensure that compliance testing follows the same procedures used to generate the emission data upon which the emission limits in the proposed rules are based.

G. How did EPA Determine Compliance Times for the Proposed Rules?

Section 129(f) of the CAA specifies the dates by which affected or designated facilities must comply with the NSPS or emission guidelines, respectively. New units must be in compliance with the NSPS within 6 months after the date of promulgation or 6 months after start-up, whichever is later. Existing units must be in compliance with the guidelines as expeditiously as practicable after approval of a State plan, but no later than 3 years after the effective date of State plan approval or 5 years after promulgation of the guidelines, whichever is earlier.

The EPA has chosen to include the full compliance time allowed by CAA section 129 in the emission guidelines for OSWI units. The OSWI units are small and are located at small municipalities and institutions that do not always have full-time environmental staff. They will need time to investigate the regulatory, technical, cost, financing, and economic implications of control techniques and alternative waste disposal options available to their facility. The EPA wants to allow sufficient time for owners and operators of OSWI units to investigate, plan, and carry out activities for compliance or, as expected in most cases, a closure of their waste combustion units and an orderly transition to the use of alternative waste disposal methods. State plans or the Federal plan developed to implement the emission guidelines will establish specific compliance schedules within these constraints.

H. How Did EPA Determine the Required Records and Reports for the Proposed Rules?

Section 129 of the CAA requires EPA to develop regulations that include requirements for reporting the results of testing and monitoring performed to determine compliance with the proposed rules. The requirements must specify the form and frequency of the reports demonstrating compliance. If there are no deviations, compliance reports are submitted annually. However, if there is a deviation from any emission limit, operating limit, or other requirement, reports showing the deviation must be submitted separately for review and potential enforcement action. Semiannual reporting of deviations allows both the facility and the enforcement agency to move more quickly to address and correct any possible noncompliance issues. This deviation report is due on August 1 if

the deviation occurs during the first 6 months of the year, and February 1 of the next year if the deviation occurs during the second 6 months of the year. Other types of records are necessary to ensure that all provisions of the proposed rules are being met. Examples include siting analyses for new OSWI units and operator training and qualification records for new and existing OSWI units.

Copies of testing and monitoring results and other records must be maintained by the affected facility for 5 years. Records must be kept on site for the first 2 years, but can be maintained off site for the remaining 3 years. To reduce the storage burden, records can be maintained in hard copy or in electronic format.

I. How Did EPA Determine Operator Training and Qualification Requirements for the Proposed Rules?

The proposed rules include operator training and qualification requirements for OSWI unit operators, as required by CAA section 129(d). These requirements provide flexibility by allowing State-approved training and qualification programs. Where there are no State-approved programs, the proposed rules include minimum requirements for training and qualification. The minimum requirements include completion of a training course covering specified topics, plus annual review or a refresher course.

J. How Did EPA Determine the Waste Management Plan Requirements for the Proposed Rules?

The proposed rules require owners or operators of new or existing OSWI units to submit a waste management plan. Each facility is unique, and site-specific strategies are needed to achieve the most efficient results. Through the development of individual waste management programs, owners or operators of OSWI units may be able to reduce or eliminate certain materials in their waste streams, thereby reducing the amount of air pollution emissions associated with waste incineration.

The waste management plan would identify both the feasibility and the approach to reduce or separate certain materials from the waste stream to reduce the amount of toxic emissions from incinerated waste. The waste management plan may include the reduction or separation of waste stream elements such as paper, cardboard, plastics, glass, batteries, or metals; or the use of recyclable materials. The plan should identify any additional waste management measures that are practical and feasible, taking into account the

effectiveness of waste management measures already in place, the costs of additional measures, the emissions reductions expected to be achieved, and any other associated environmental or energy impacts.

K. How Did EPA Determine the Siting Requirements for New Units for the Proposed Rules?

Section 129 of the CAA states that standards for new solid waste incineration units must incorporate siting requirements that minimize, on a site-specific basis and to the maximum extent practicable, potential risks to public health or the environment. In accordance with CAA section 129, EPA is proposing site selection criteria for OSWI units that commence construction after the date of proposal (*i.e.*, "new" units). The siting requirements would not apply to existing OSWI units.

The siting requirements would require you (the owner or operator of a new OSWI unit) to prepare an analysis of the impacts of the new unit. You must consider air pollution control alternatives that minimize, on a site-specific basis, to the maximum extent practicable, potential risks to public health or the environment. In considering such alternatives, you may consider costs, energy impacts, non-air

environmental impacts, or any other factors related to the practicability of the alternatives. To avoid duplication, analyses of facility impacts prepared to comply with State, local, or other Federal regulatory requirements may be used to satisfy this requirement, provided they include the consideration of air pollution control alternatives specified above. Such State, local, or Federal requirements may include, but are not limited to, State-specific criteria or national criteria established by the National Environmental Policy Act or new source permitting requirements. You would be required to submit the siting information to EPA prior to commencing construction of the OSWI unit.

V. Impacts of the Proposed Rules for New Units

Information provided to EPA indicates that no or negative growth has been the trend for OSWI units for the past several years. The information indicates that this trend is expected to continue even in the absence of a regulation. Furthermore, as experience with other CAA section 129 regulations has shown, sources would likely respond to the proposed rules by choosing not to construct new waste

incineration units and would utilize alternative waste disposal options rather than incur the costs of compliance.

Considering this information, EPA does not anticipate any new OSWI units, and therefore, no impacts of the proposed NSPS for new units. However, for the sake of demonstrating that emissions reductions would result from the NSPS in the unlikely event that a new unit is constructed, EPA has presented emissions reductions expected for each of the four OSWI model plants.

A. What Are the Air Impacts?

The EPA estimated emissions reductions for each of the model plants to demonstrate that the NSPS would, if a new unit were built, reduce emissions compared to an uncontrolled OSWI unit. Based on available information and past experience, EPA does not anticipate any new OSWI units to be constructed. Table 7 of this preamble presents the emissions reductions for the OSWI model plants. The same model plants are used to represent IWI units and VSMWC units. The first three model plants (with capacities of 1 tpd, 5 tpd, and 15 tpd) represent typical IWI units. All four models represent typical VSMWC units.

TABLE 7.—EMISSIONS REDUCTIONS ON A MODEL PLANT BASIS

Pollutant	Emission reduction for OSWI model plants (tpy)			
	1 tpd capacity	5 tpd 15 capacity	15 tpd capacity	30 tpd capacity
Cd	3.8×10^{-41}	1.9×10^{-31}	5.7×10^{-31}	1.1×10^{-21}
Co	9.0×10^{-21}	0.4	1.0	2.0
Dioxins/furans	3.6×10^{-71}	1.7×10^{-61}	5.2×10^{-61}	1.0×10^{-51}
HCl	1.0	4.9	15	29
Pb	9.7×10^{-31}	2.9×10^{-21}	7.6×10^{-21}	0.2
Hg	4.0×10^{-41}	2.7×10^{-31}	8.2×10^{-31}	1.6×10^{-21}
NO _x	0.2	1.3	4.1	8.2
PM	0.3	1.3	3.8	7.7
SO ₂	0.7	3.3	10	20
Total	2.3	11	34	67

B. What Are the Water and Solid Waste Impacts?

The EPA does not anticipate any new OSWI units to be constructed, and, therefore, does not expect there to be any water or solid waste impacts associated with the proposed NSPS.

C. What Are the Energy Impacts?

The EPA does not anticipate any new OSWI units to be constructed, and, therefore, does not expect there to be any energy impacts associated with the proposed NSPS.

D. What Are the Cost and Economic Impacts?

The EPA does not anticipate any new OSWI units to be constructed, and, therefore, does not expect there to be any cost and economic impacts associated with the proposed NSPS.

VI. Impacts of the Proposed Rules for Existing Units

Information provided to EPA indicates that many existing OSWI units have closed in recent years. The information indicates that this trend is

expected to continue even in the absence of a regulation. Furthermore, as experience with other CAA section 129 regulations has shown, sources would likely respond to the proposed rules by choosing to shut down existing waste incineration units and Would utilize alternative waste disposal options rather than incur the costs of compliance.

The EPA's objective is not to encourage the use of alternatives or to discourage continued use of VSMWC units or IWI units; EPA's objective is to adopt emission guidelines for existing

OSWI units that fulfill the requirements of CAA section 129. In doing so the primary outcome associated with adoption of these emission guidelines is projected to be an increase in the use of alternative waste disposal and a decrease in the use of VSMWC units and IWI units. Consequently, EPA acknowledges and incorporates this outcome into the analyses of cost, environmental, and energy impacts associated with the emission guidelines.

A. What Are the Air Impacts?

The EPA estimated emissions reductions for each of the model plants to demonstrate that the emission

guidelines reduce emissions compared to an uncontrolled OSWI unit. These emissions reductions are based on installation of a wet scrubber to meet the emission guidelines. Table 7 of this preamble presents the emissions reductions for the OSWI model plants used to represent typical VSMWC units and IWI units. Table 8 of this preamble presents estimated national emissions reductions for each pollutant if all VSMWC and IWI units in the OSWI inventory comply with the emission guidelines. As shown, total emissions reductions would be over 2,750 tpy. However, based on the information and

past experience, EPA anticipates that most existing OSWI units would elect to shut down and utilize alternative waste disposal options (e.g., send waste to a landfill or a large or small MWC unit). If OSWI units close and the waste is sent to a landfill, the emissions reductions of the nine pollutants would be slightly greater than shown on Tables 7 and 8 of this preamble. If all OSWI units close and the waste is landfilled, the estimated national emissions reductions would be approximately 428 tpy for VSMWC units and 2,680 tpy for IWI units, which totals over 3,100 tpy for all OSWI units.

TABLE 8.—NATIONAL EMISSIONS REDUCTIONS IF ALL EXISTING OSWI UNITS COMPLY WITH THE EMISSION GUIDELINES

Pollutant	Emission reduction (tpy)		
	VSMWC	IWI	Total
Cd	0.1	0.4	0.5
CO	11	71	83
Dioxins/furans,	5.8E-05	3.6E-04	4.2E-04
HCl	163	1,024	1,187
Pb	1	6	6
Hg	0.1	1	1
NO _x	46	292	338
PM	43	271	314
SO ₂	114	714	828
Total	379	2,378	2,757

B. What Are the Water and Solid Waste Impacts?

The EPA anticipates that very few, if any existing OSWI facilities would elect to continue to operate their OSWI units, and that they would use an alternative waste disposal method. As a result, EPA does not anticipate significant water impacts due to increased use of wet scrubbers. In the cases where the OSWI facility elects to comply with the emission guidelines and installs and operates a wet scrubber, it would have an increase in water usage and waste water generation. However, due to the small size of these units (and that there will likely be very few of them continuing to operate), the water impacts would be negligible.

Because most, if not all, of the existing OSWI units would shut down and the waste would be disposed of in alternate ways, EPA anticipates that there could be solid waste impacts of the OSWI regulation. These impacts would be the result of institutional waste or municipal solid waste that otherwise would have been burned in an OSWI unit being diverted to a nearby landfill or to a small or large MWC unit. However, OSWI units are small units with small annual waste throughput. The EPA estimates that the national

OSWI population is used to dispose of approximately 85,000 tpy of solid waste. Considering that over 100 million tpy of municipal waste is disposed of in landfills, the amount of additional waste that would be sent to landfills due to adoption of the emission guidelines is insignificant.

C. What Are the Energy Impacts?

The EPA anticipates that very few, if any existing OSWI facilities would elect to continue to operate their OSWI units, and that they would use an alternative waste disposal method. As a result, EPA does not anticipate significant energy impacts due to increased use of wet scrubbers. In the cases where the OSWI facility elects to comply with the emission guidelines and installs and operates a wet scrubber, it would have an increase in power consumption. However, due to the small size of these units (and that there will likely be very few of them continuing to operate), the energy impacts would be negligible.

D. What Are the Cost and Economic Impacts?

The EPA's analysis has shown that the national total costs for all existing OSWI units to comply with the emission guidelines (i.e., installing

controls, operator training, performance testing, monitoring, etc.) would be approximately \$63 million a year.⁴ However, the model plant analysis has also shown that alternative disposal options are readily available for institutional and municipal solid waste, and that most existing OSWI sources would incur no additional cost or perhaps a slight savings by shutting down their waste combustion unit and sending the waste to a landfill, or to a small or large MWC unit. However, EPA recognizes that there are many site-specific factors that affect the cost of operating a specific OSWI unit and the cost of alternative disposal methods. Therefore, some facilities may experience a small cost increase if they switch to an alternative disposal method. Nonetheless, as discussed previously, available information

⁴ EPA believes that the actual cost of emissions reductions achieved under this rule will be substantially less than the costs associated with the MACT floor and beyond the floor regulatory options suggested by this analysis. This is a result of the finding of our analysis that regulated entities will use landfilling rather than incur the costs associated with rule compliance (i.e., installing scrubbers). Assuming that all regulated entities switch to landfilling, and assuming, for purposes of this analysis only, no cost saving associated with abandonment of incineration, EPA estimates an actual cost of \$1,380/ton of emission reduction.

indicates that the OSWI population has been steadily declining over the past several years, and this trend would likely continue in the absence of an OSWI regulation. This trend confirms EPA's analysis that it is often more economical to shut down OSWI units and use an alternative waste disposal method. Because most OSWI units would close and utilize an economical alternative waste disposal method, the cost impacts of the guidelines would be negligible, and some facilities may even experience a small cost savings.

VII. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), EPA must determine whether the regulatory action is "significant" and, therefore, subject to review by OMB and the requirements of the Executive Order. The Executive Order defines "significant regulatory action" as one that is likely to result in a rule that may:

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

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

(3) Materially alter the budgetary impact of entitlements, grants, user fees,

or loan programs, or the rights and obligations of recipients thereof; or

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

Pursuant to the terms of Executive Order 12866, it has been determined that the proposed rules are a "significant regulatory action" because they raise novel legal or policy issues within the meaning of paragraph (4) above. Consequently, the proposed rules were submitted to OMB for review under Executive Order 12866. Any written comments from OMB and written EPA responses are available in the docket (see **ADDRESSES** section of this preamble).

B. Paperwork Reduction Act

The information collection requirements in the proposed rules have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) documents have been prepared by EPA (ICR No. 2163.01 for subpart EEEE and 2164.01 for subpart FFFF), and copies may be obtained from Susan Auby by mail at the Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Avenue, NW., Washington, DC 20460, by e-mail at auby.susan@epa.gov, or by calling (202) 566-1672. A copy may also be downloaded off the Internet at <http://www.epa.gov/icr>.

The proposed rules contain monitoring, reporting, and recordkeeping requirements. The information would be used by EPA to

identify any new, modified, or reconstructed incineration units subject to the NSPS and to ensure that any new incineration units undergo a siting analysis and comply with the emission limits and other requirements. Similarly, the information specified in the emission guidelines would be used by States or EPA to identify existing units subject to the State or Federal plans that implement the emission guidelines, and to ensure that these units comply with their emission limits and other requirements. Records and reports would be necessary to enable EPA or States to identify waste incineration units that may not be in compliance with the requirements. Based on reported information, EPA would decide which units and what records or processes should be inspected.

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

The EPA estimates that there is no burden for the first 3 years after promulgation of the NSPS for industry and the implementing agency. This is because EPA expects no new OSWI units to be constructed over this 3-year period.

The estimated average annual burden for the first 3 years after promulgation of the emission guidelines for industry and the implementing agency is outlined below.

Affected entity	Average annual hours	Labor costs	Capital costs	O&M costs	Total annual costs
Industry	5,704	\$262,055	\$0	\$0	\$262,055
Implementing agency	383	17,611	0	0	17,611

The EPA expects the emission guidelines to affect a maximum of 372 OSWI units over the first 3 years. There would be no capital, start-up, or operation and maintenance costs for existing units during the first 3 years, because compliance with the emission guidelines is not required until 5 years after promulgation of the emission guidelines (or 3 years after the effective date of approval of a State or Federal plan to implement the guidelines). Costs in the first 3 years include time to review the guidelines and the State or Federal plan. The implementing agency would not incur any capital or start-up costs.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or 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 in 40 CFR are listed in 40 CFR part 9 and 48 CFR chapter 15.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA

has established a public docket for this ICR under Docket ID No. OAR-2003-0156, which is available for public viewing at the Air and Radiation Docket and Information Center in the EPA Docket Center (EPA/DC), EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742. An electronic version of the public docket is available through EPA Dockets (EDOCKET) at <http://www.epa.gov/edocket>. Use EDOCKET to submit or view public comments, access the index listing of the contents of the public docket, and to access those documents in the public docket that are available electronically. Once in the system, select "search," then key in the docket ID number identified above. Also, you can send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW., Washington, DC 20503, Attention: Desk Office for EPA. Please include the EPA Docket ID No. (OAR-2003-0156) and OMB control number () in any correspondence.

Since OMB is required to make a decision concerning the ICR between 30 and 60 days after December 9, 2004, a comment to OMB is best assured of having its full effect if OMB receives it by January 10, 2005. In the final rules, EPA will respond to any OMB or public comments on the information collection requirements contained in the proposed rules.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedures Act or any other statute unless the agency certifies that the proposed rules will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small government organizations, and small government jurisdictions.

For purposes of assessing the impacts of the proposed rules on small entities, small entity is defined as follows:

1. A small business that is an ultimate parent entity in the regulated industry that has a gross annual revenue less than \$6.5 million (this varies by industry category, ranging up to \$10.5 million for North American Industrial Classification System (NAICS) code

562213 (VSMWC)), based on Small Business Administration's size standards;

2. A small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; or

3. A small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field.

After considering the economic impacts of the proposed rules on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. The economic impacts on small entities will not be significant because the costs of the proposed rules would be negligible or may actually be cost savings. Ten of the 14 entities that own VSMWC units likely to be affected by the proposed rules are small, and all of these may experience cost savings. It is uncertain how many affected IWI units that are OSWI units are owned by small entities, but it is expected that many of these may realize a cost savings under the likely response to the proposed rules that the EPA believes will occur. Alternative waste disposal methods, such as landfilling, are available. The annual cost of landfilling is typically less expensive than the annual cost of using an OSWI unit for waste disposal. Thus, the likely response to the proposed rules will be for small entities that own and operate OSWI units to close the units and use an alternative waste disposal method. Moreover, EPA believes that most small entities for which this might not be the case are covered by one of the exclusions we have provided and thus are not negatively impacted by the rule. We continue to be interested in the potential impacts of the proposed rules on small entities and welcome comments on issues related to such impacts.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act (UMRA) of 1995, Public Law 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 by 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 proposed rules. The provisions of section 205 do not apply when they are inconsistent with applicable law.

Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if EPA 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, EPA must develop a small government agency plan under section 203 of the UMRA. 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's regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

The EPA has determined that the proposed rules 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. Thus, the proposed rules are not subject to the requirements of section 202 and 205 of the UMRA. In addition, EPA has determined that the proposed rules contain no regulatory requirements that might significantly or uniquely affect small governments because the burden is small and the regulation does not unfairly apply to small governments. Therefore, the proposed rules are not subject to the requirements of section 203 of the UMRA.

E. Executive Order 13132: Federalism

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

responsibilities among the various levels of government.”

Under section 6 of Executive Order 13132, EPA may not issue a regulation that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. Also, EPA may not issue a regulation that has federalism implications and that preempts State law, unless EPA consults with State and local officials early in the process of developing the proposed regulation.

The proposed rules do not have federalism implications. They will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The proposed rules will not impose substantial direct compliance costs on State or local governments, and will not preempt State law. Thus, Executive Order 13132 does not apply to the proposed rules.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

Executive Order 13175, (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure “meaningful and timely input by Tribal officials in the development of regulatory policies that have Tribal implications.” “Policies that have Tribal implications” is defined in the Executive Order to include regulations that have “substantial direct effects on relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes.”

The proposed rules do not have Tribal implications, as specified in Executive Order 13175. They will not have substantial direct effects on Tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes, as specified in Executive Order 13175. Thus, Executive Order 13175 does not apply to the proposed rules.

G. Executive Order 13045: Protection of Children from Environmental Health and Safety Risks

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

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. The proposed rules are not subject to Executive Order 13045 because they are based on technology performance and not on health and safety risks. Also, the proposed rules are not “economically significant.”

H. Executive Order 13211: Actions that Significantly Affect Energy Supply, Distribution or Use

Executive Order 13211 (66 FR 28355, May 22, 2001) provides that agencies shall prepare and submit to the Administrator of the Office of Information and Regulatory Affairs, OMB, a Statement of Energy Effects for certain actions identified as “significant energy actions.” Section 4(b) of Executive Order 13211 defines “significant energy actions” as “* * * any action by an agency (normally published in the **Federal Register**) that promulgates or is expected to lead to the promulgation of a final rule or regulation, including notices of inquiry, advance notices of proposed rulemaking, and notices of proposed rulemaking: (1)(i) That is a significant regulatory action under Executive Order 12866 or any successor order, and (ii) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (2) that is designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action. * * *” Although the proposed rules are considered to be a significant regulatory action under Executive Order 12866, they are not a “significant energy action” because they are not likely to have a significant adverse effect on the supply, distribution, or use of energy.

The basis for the determination is as follows.

The EPA expects that few, if any, OSWI facilities would elect to continue to operate OSWI units, and that most facilities would respond to the proposed rules by closing existing OSWI units and utilizing alternative waste disposal techniques. This response is likely because the annual cost of landfilling, an alternative waste disposal method, is typically less expensive than the annual cost of using an OSWI unit for waste disposal. In the few cases where an OSWI facility elects to comply with the proposed rules by installing a wet scrubber, the operation of the scrubber would result in a small increase in power consumption. However, due to the small size of these units (and that there will likely be very few of them continuing to operate), the energy impacts would be negligible.

Given the negligible change in energy consumption resulting from the proposed rules, EPA does not expect any price increase for any energy type. The cost of energy distribution should not be affected by the proposed rules at all since the rules would not affect energy distribution facilities. We also expect that there would be no impact on the import of foreign energy supplies, and no other adverse outcomes are expected to occur with regards to energy supplies.

Therefore, EPA concludes that the proposed rules are not likely to have a significant adverse effect on the supply, distribution, or use of energy.

I. National Technology Transfer Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Pub. L. 104–113; 15 U.S.C. 272 note) directs EPA 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 directs EPA to provide Congress, through annual reports to OMB, with explanations when an agency does not use available and applicable voluntary consensus standards.

The proposed rules involve technical standards. The EPA proposes to use EPA Methods 1, 2, 3A, 3B, 4, 5, 6 or 6C, 7 or 7A, 7C, 7D, or 7E, 9, 10, 10A or 10B, 23, 26A, and 29 of 40 CFR part 60, appendix A.

Consistent with the NTTAA, EPA conducted searches to identify voluntary consensus standards in addition to these EPA methods. No applicable voluntary consensus standards were identified for EPA Methods 7D, 9, and 10A. The search and review results have been documented and are placed in the docket for the proposed rules.

One voluntary consensus standard was identified as an acceptable alternative to EPA test methods for the purposes of the proposed rules. The voluntary consensus standard ASME PTC 19-10-1981-Part 10, "Flue and Exhaust Gas Analyses," is cited in the proposed rules for its manual methods for measuring the nitrogen oxide, oxygen, and sulfur dioxide content of exhaust gas. These parts of ASME PTC 19-10-1981-Part 10 are acceptable alternatives to Methods 3B, 6, 7, and 7C.

The search for emissions measurement procedures identified 29 voluntary consensus standards applicable to the proposed rules. The EPA determined these 29 standards identified for measuring emissions of Cd, CO, dioxins/furans, HCl, Hg, Pb, PM, NO_x, and SO₂ subject to the emission limits were impractical alternatives to EPA test methods for the purposes of the proposed rules. Therefore, EPA does not intend to adopt the standards for this purpose. (See Docket ID No. OAR-2003-0156 for further information on the methods.)

Four of the 29 voluntary consensus standards identified in this search were not available at the time the review was conducted because they are under development by a voluntary consensus body: ASME/BSR MFC 13M, "Flow Measurement by Velocity Traverse," for EPA Method 2 (and possibly 1); ASME/BSR MFC 12M, "Flow in Closed Conduits Using Multiport Averaging Pitot Primary Flowmeters," for EPA Method 2; ISO/DIS 12039, "Stationary Source Emissions-Determination of Carbon Monoxide, Carbon Dioxide, and Oxygen-Automated Methods" for EPA Method 3A; and ASTM Z6590Z, "Manual Method for Both Speciated and Elemental Mercury" for EPA Method 29 (portion for Hg only).

Tables 1 and 3 of subpart EEEE of 40 CFR part 60 and tables 2 and 4 of subpart FFFF of 40 CFR part 60 list the EPA testing methods included in the proposed rules. Under 40 CFR 60.8(b) and 60.13(i) of subpart A (General Provisions), a source may apply to EPA for permission to use alternative test methods or alternative monitoring requirements in place of any of the EPA testing methods, performance specifications, or procedures.

List of Subjects in 40 CFR Part 60

Environmental protection, Administrative practice and procedure, Air pollution control, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: November 30, 2004.

Michael O. Leavitt,

Administrator.

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

PART 60—[AMENDED]

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

Authority: 42 U.S.C. 7401, *et seq.*

Subpart A—[Amended]

2. Section 60.17 is amended by adding paragraph (h)(4) to read as follows:

§ 60.17 Incorporation by Reference.

* * * * *

(h) * * *

(4) ASME PTC 19-10-1981-Part 10, Flue and Exhaust Gas Analyses (manual methods for measuring nitrogen oxide, oxygen, and sulfur dioxide content only), IBR approved for Tables 1 and 3 of subpart EEEE, and Tables 2 and 4 of subpart FFFF of this part.

3. Part 60 is amended by adding subpart EEEE to read as follows:

Subpart EEEE—Standards of Performance for Other Solid Waste Incineration Units for Which Construction Is Commenced After December 9, 2004, or for Which Modification or Reconstruction Is Commenced on or After [Date 6 Months After Date Final Rule is Published in the *Federal Register*].

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Introduction

§ 60.2880 What does this subpart do?

This subpart establishes new source performance standards for other solid waste incineration (OSWI) units. Other solid waste incineration units are very small municipal waste combustion units and institutional waste incineration units.

§ 60.2881 When does this subpart become effective?

This subpart takes effect 6 months after [DATE THE FINAL RULE IS PUBLISHED IN THE **Federal Register**]. Some of the requirements in this subpart apply to planning the OSWI unit and must be completed even before construction is initiated on the OSWI unit (*i.e.*, the preconstruction requirements in §§ 60.2894 and 60.2895). Other requirements such as the emission limitations and operating limits apply when the OSWI unit begins operation.

Applicability

§ 60.2885 Does this subpart apply to my incineration unit?

Yes, if your incineration unit meets all the requirements specified in paragraphs (a) through (c) of this section.

- (a) Your incineration unit is a new incineration unit as defined in § 60.2886.

- (b) Your incineration unit is an OSWI unit as defined in § 60.2977. Other solid waste incineration units are very small municipal waste combustion units and institutional waste incineration units as defined in § 60.2977.

- (c) Your incineration unit is not excluded under § 60.2887.

§ 60.2886 What is a new incineration unit?

- (a) A new incineration unit is an incineration unit that meets either of the two criteria specified in paragraph (a)(1) or (2) of this section.

- (1) Commenced construction after December 9, 2004.

- (2) Commenced reconstruction or modification on or after [DATE 6 MONTHS AFTER DATE FINAL RULE IS PUBLISHED IN THE **Federal Register**].

(b) This subpart does not affect your incineration unit if you make physical or operational changes to your incineration unit primarily to comply with the emission guidelines in subpart FFFF of this part. Such changes do not qualify as reconstruction or modification under this subpart.

§ 60.2887 What combustion units are excluded from this subpart?

This subpart excludes the types of units described in paragraphs (a) through (p) of this section, as long as you meet the requirements of this section.

- (a) *Cement kilns*. Your unit is excluded if it is regulated under subpart LLL of part 63 of this chapter (National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry).

- (b) *Co-fired combustors*. Your unit, that would otherwise be considered a very small municipal waste combustion unit, is excluded if you meet four requirements:

- (1) Your unit has a Federally enforceable permit limiting the combustion of municipal solid waste to 30 percent of the total fuel input by weight.

- (2) You notify the Administrator that the unit qualifies for the exclusion.

- (3) You provide the Administrator with a copy of the Federally enforceable permit.

- (4) You record the weights, each calendar quarter, of municipal solid waste and of all other fuels combusted.

- (c) *Cogeneration facilities*. Your unit is excluded if it meets the three requirements specified in paragraphs (c)(1) through (3) of this section.

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

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

- (3) You notify the Administrator that the unit meets all of these criteria.

- (d) *Commercial and industrial solid waste incineration units*. Your unit is excluded if it is regulated under subparts CCCC or DDDD of this part and is required to meet the emission limitations established in those subparts.

(e) *Hazardous waste combustion units.* Your unit is excluded if it meets either of the two criteria specified in paragraph (e)(1) or (2) of this section.

(1) You are required to get a permit for your unit under section 3005 of the Solid Waste Disposal Act.

(2) Your unit is regulated under 40 CFR part 63, subpart EEE (National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors).

(f) *Hospital/medical/infectious waste incinerators.* Your unit is excluded if it is regulated under subparts Ce or Ec of this part (New Source Performance Standards and Emission Guidelines for Hospital/Medical/Infectious Waste Incinerators).

(g) *Incinerators and air curtain incinerators in isolated areas of Alaska.* Your incineration unit is excluded if it is used at a solid waste disposal site in Alaska that is classified as a Class II or Class III municipal solid waste landfill, as defined in § 60.2977.

(h) *Rural institutional waste incinerators.* Your incineration unit is excluded if it is an institutional waste incinerator, as defined in § 60.2977, and located more than 50 miles from the boundary of the nearest Metropolitan Statistical Area.

(i) *Institutional boilers and process heaters.* Your unit is excluded if it is regulated under 40 CFR part 63, subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters).

(j) *Laboratory Analysis Units.* Your unit is excluded if it burns samples of materials only for the purpose of chemical or physical analysis.

(k) *Materials recovery units.* Your unit is excluded if it combusts waste for the primary purpose of recovering metals, such as primary and secondary smelters.

(l) *Pathological waste incineration units.* Your institutional waste incineration unit or very small municipal waste combustion unit is excluded from this subpart if it burns 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste as defined in § 60.2977 and you notify the Administrator that the unit meets these criteria.

(m) *Small or large municipal waste combustion units.* Your unit is excluded if it is regulated under subparts AAAA, BBBB, Ea, Eb, or Cb, of this part and is required to meet the emission

limitations established in those subparts.

(n) *Small power production facilities.* Your unit is excluded if it meets the three requirements specified in paragraphs (n)(1) through (3) of this section.

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

(2) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity.

(3) You notify the Administrator that the unit meets all of these criteria.

(o) *Temporary-use incinerators used in disaster recovery.* Your incinerator is excluded if it is used on a temporary basis to combust debris from a disaster or emergency such as a tornado, hurricane, flood, or act of bioterrorism and you comply with the requirements in § 60.2969.

(p) *Units that combust contraband or prohibited goods.* Your unit is excluded if the unit is used by a government agency such as police, customs, agricultural inspection, or a similar agency to destroy only illegal or prohibited goods such as illegal drugs, or agricultural food products that can not be transported into the country or across state lines to prevent biocontamination.

§ 60.2888 Are air curtain incinerators regulated under this subpart?

(a) Air curtain incinerators that burn less than 35 tons per day of municipal solid waste or air curtain incinerators located at institutional facilities burning any amount of institutional waste generated at that facility are subject to all requirements of this subpart, including the emission limitations specified in Table 1 of this subpart.

(b) Air curtain incinerators that burn only the materials listed in paragraphs (b)(1) through (4) of this section must meet only the requirements in §§ 60.2970 through 60.2974 and the title V operating permit requirements of §§ 60.2966 and 60.2967, and are exempt from all other requirements of this subpart.

(1) 100 percent wood waste.

(2) 100 percent clean lumber.

(3) 100 percent yard waste.

(4) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

§ 60.2889 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator

has delegated authority to your State, local, or tribal agency, then that agency (as well as EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency, the authorities contained in paragraphs (b)(1) through (6) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(1) Approval of alternatives to the emission limitations in Table 1 of this subpart and operating limits established under § 60.2916 and Table 2 of this subpart.

(2) Approval of petitions for specific operating limits in § 60.2917.

(3) Approval of major alternatives to test methods.

(4) Approval of major alternatives to monitoring.

(5) Approval of major alternatives to recordkeeping and reporting.

(6) The status report requirements in § 60.2911(c)(2).

§ 60.2890 How are these new source performance standards structured?

These new source performance standards contain nine major components, as follows:

(a) Preconstruction siting analysis.

(b) Waste management plan.

(c) Operator training and qualification.

(d) Emission limitations and operating limits.

(e) Performance testing.

(f) Initial compliance requirements.

(g) Continuous compliance requirements.

(h) Monitoring.

(i) Recordkeeping and reporting.

§ 60.2891 Do all components of these new source performance standards apply at the same time?

No, you must meet the preconstruction siting analysis and waste management plan requirements before you commence construction of the OSWI unit. The operator training and qualification, emission limitations, operating limits, performance testing and compliance, monitoring, and most recordkeeping and reporting requirements are met after the OSWI unit begins operation.

Preconstruction Siting Analysis

§ 60.2894 Who must prepare a siting analysis?

(a) You must prepare a siting analysis if you commence construction of an

OSWI unit after [DATE 6 MONTHS AFTER DATE FINAL RULE IS PUBLISHED IN THE **Federal Register**].

(b) If you commence construction of your OSWI unit after December 9, 2004, but before [DATE 6 MONTHS AFTER DATE FINAL RULE IS PUBLISHED IN THE **Federal Register**], you are not required to prepare the siting analysis specified in this subpart.

(c) You must prepare a siting analysis if you are required to submit an initial application for a construction permit under 40 CFR part 51, subpart I, or 40 CFR part 52, as applicable, for the reconstruction or modification of your OSWI unit.

§ 60.2895 What is a siting analysis?

(a) The siting analysis must consider air pollution control alternatives that minimize, on a site-specific basis, to the maximum extent practicable, potential risks to public health or the environment. In considering such alternatives, you may consider costs, energy impacts, nonair environmental impacts, or any other factors related to the practicability of the alternatives.

(b) Analyses of your OSWI unit's impacts that are prepared to comply with State, local, or other Federal regulatory requirements may be used to satisfy the requirements of this section, provided they include the consideration of air pollution control alternatives specified in paragraph (a) of this section.

(c) You must complete and submit the siting requirements of this section as required under § 60.2952(c) prior to commencing construction.

Waste Management Plan

§ 60.2899 What is a waste management plan?

A waste management plan is a written plan that identifies both the feasibility and the methods used to reduce or separate certain components of solid waste from the waste stream in order to reduce or eliminate toxic emissions from incinerated waste.

§ 60.2900 When must I submit my waste management plan?

You must submit a waste management plan prior to commencing construction.

§ 60.2901 What should I include in my waste management plan?

A waste management plan must include consideration of the reduction or separation of waste-stream elements such as paper, cardboard, plastics, glass, batteries, or metals; or the use of recyclable materials. The plan must identify any additional waste management measures and implement

those measures the source considers practical and feasible, considering the effectiveness of waste management measures already in place, the costs of additional measures, the emissions reductions expected to be achieved, and any other environmental or energy impacts they might have.

Operator Training and Qualification

§ 60.2905 What are the operator training and qualification requirements?

(a) No OSWI unit can be operated unless a fully trained and qualified OSWI unit operator is accessible, either at the facility or can be at the facility within 1 hour. The trained and qualified OSWI unit operator may operate the OSWI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified OSWI unit operators are temporarily not accessible, you must follow the procedures in § 60.2911.

(b) Operator training and qualification must be obtained through a State-approved program or by completing the requirements included in paragraph (c) of this section.

(c) Training must be obtained by completing an incinerator operator training course that includes, at a minimum, the three elements described in paragraphs (c)(1) through (3) of this section.

(1) Training on the thirteen subjects listed in paragraphs (c)(1)(i) through (xiii) of this section.

(i) Environmental concerns, including types of emissions.

(ii) Basic combustion principles, including products of combustion.

(iii) Operation of the specific type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures.

(iv) Combustion controls and monitoring.

(v) Operation of air pollution control equipment and factors affecting performance (if applicable).

(vi) Inspection and maintenance of the incinerator and air pollution control devices.

(vii) Methods to monitor pollutants (including monitoring of incinerator and control device operating parameters) and monitoring equipment calibration procedures, where applicable.

(viii) Actions to correct malfunctions or conditions that may lead to malfunction.

(ix) Bottom and fly ash characteristics and handling procedures.

(x) Applicable Federal, State, and local regulations, including Occupational Safety and Health Administration workplace standards.

(xi) Pollution prevention.

(xii) Waste management practices.

(xiii) Recordkeeping requirements.

(2) An examination designed and administered by the instructor.

(3) Written material covering the training course topics that may serve as reference material following completion of the course.

§ 60.2906 When must the operator training course be completed?

The operator training course must be completed by the latest of the three dates specified in paragraphs (a) through (c) of this section.

(a) Six months after your OSWI unit startup.

(b) One year after [DATE FINAL RULE IS PUBLISHED IN THE **Federal Register**].

(c) The date before an employee assumes responsibility for operating the OSWI unit or assumes responsibility for supervising the operation of the OSWI unit.

§ 60.2907 How do I obtain my operator qualification?

(a) You must obtain operator qualification by completing a training course that satisfies the criteria under § 60.2905(c).

(b) Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under § 60.2905(c)(2).

§ 60.2908 How do I maintain my operator qualification?

To maintain qualification, you must complete an annual review or refresher course covering, at a minimum, the five topics described in paragraphs (a) through (e) of this section.

(a) Update of regulations.

(b) Incinerator operation, including startup and shutdown procedures, waste charging, and ash handling.

(c) Inspection and maintenance.

(d) Responses to malfunctions or conditions that may lead to malfunction.

(e) Discussion of operating problems encountered by attendees.

§ 60.2909 How do I renew my lapsed operator qualification?

You must renew a lapsed operator qualification by one of the two methods specified in paragraphs (a) and (b) of this section.

(a) For a lapse of less than 3 years, you must complete a standard annual refresher course described in § 60.2908.

(b) For a lapse of 3 years or more, you must repeat the initial qualification requirements in § 60.2907(a).

§ 60.2910 What site-specific documentation is required?

(a) Documentation must be available at the facility and readily accessible for all OSWI unit operators that addresses the nine topics described in paragraphs (a)(1) through (9) of this section. You must maintain this information and the training records required by paragraph (c) of this section in a manner that they can be readily accessed and are suitable for inspection upon request.

(1) Summary of the applicable standards under this subpart.

(2) Procedures for receiving, handling, and charging waste.

(3) Incinerator startup, shutdown, and malfunction procedures.

(4) Procedures for maintaining proper combustion air supply levels.

(5) Procedures for operating the incinerator and associated air pollution control systems within the standards established under this subpart.

(6) Monitoring procedures for demonstrating compliance with the operating limits established under this subpart.

(7) Reporting and recordkeeping procedures.

(8) The waste management plan required under §§ 60.2899 through 60.2901.

(9) Procedures for handling ash.

(b) You must establish a program for reviewing the information listed in paragraph (a) of this section with each incinerator operator.

(1) The initial review of the information listed in paragraph (a) of this section must be conducted by [6 months after the effective date of this subpart] or prior to an employee's assumption of responsibilities for operation of the OSWI unit, whichever date is later.

(2) Subsequent annual reviews of the information listed in paragraph (a) of this section must be conducted not later than 12 months following the previous review.

(c) You must also maintain the information specified in paragraphs (c)(1) through (3) of this section.

(1) Records showing the names of OSWI unit operators who have completed review of the information in paragraph (a) of this section as required by paragraph (b) of this section, including the date of the initial review and all subsequent annual reviews.

(2) Records showing the names of the OSWI operators who have completed the operator training requirements under § 60.2905, met the criteria for qualification under § 60.2907, and maintained or renewed their qualification under § 60.2908 or § 60.2909. Records must include

documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.

(3) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

§ 60.2911 What if all the qualified operators are temporarily not accessible?

If all qualified operators are temporarily not accessible (*i.e.*, not at the facility and not able to be at the facility within 1 hour), you must meet one of the three criteria specified in paragraphs (a) through (c) of this section, depending on the length of time that a qualified operator is not accessible.

(a) When all qualified operators are not accessible for 12 hours or less, the OSWI unit may be operated by other plant personnel familiar with the operation of the OSWI unit who have completed review of the information specified in § 60.2910(a) within the past 12 months. You do not need to notify the Administrator or include this as a deviation in your annual report.

(b) When all qualified operators are not accessible for more than 12 hours, but less than 2 weeks, the OSWI unit may be operated by other plant personnel familiar with the operation of the OSWI unit who have completed a review of the information specified in § 60.2910(a) within the past 12 months. However, you must record the period when all qualified operators were not accessible and include this deviation in the annual report as specified under § 60.2956.

(c) When all qualified operators are not accessible for 2 weeks or more, you must take the two actions that are described in paragraphs (c)(1) and (2) of this section.

(1) Notify the Administrator of this deviation in writing within 10 days. In the notice, state what caused this deviation, what you are doing to ensure that a qualified operator is accessible, and when you anticipate that a qualified operator will be accessible.

(2) Submit a status report to the Administrator every 4 weeks outlining what you are doing to ensure that a qualified operator is accessible, stating when you anticipate that a qualified operator will be accessible and requesting approval from the Administrator to continue operation of the OSWI unit. You must submit the first status report 4 weeks after you notify the Administrator of the deviation under paragraph (c)(1) of this section. If the Administrator notifies

you that your request to continue operation of the OSWI unit is disapproved, the OSWI unit may continue operation for 90 days, then must cease operation. Operation of the unit may resume if you meet the two requirements in paragraphs (c)(2)(i) and (ii) of this section.

(i) A qualified operator is accessible as required under § 60.2905(a).

(ii) You notify the Administrator that a qualified operator is accessible and that you are resuming operation.

Emission Limitations and Operating Limits**§ 60.2915 What emission limitations must I meet and by when?**

You must meet the emission limitations specified in Table 1 of this subpart 60 days after your OSWI unit reaches the charge rate at which it will operate, but no later than 180 days after its initial startup.

§ 60.2916 What operating limits must I meet and by when?

(a) If you use a wet scrubber to comply with the emission limitations, you must establish operating limits for four operating parameters (as specified in Table 2 of this subpart) as described in paragraphs (a)(1) through (4) of this section during the initial performance test.

(1) Maximum charge rate, calculated using one of the two different procedures in paragraphs (a)(1)(i) or (ii) of this section, as appropriate.

(i) For continuous and intermittent units, maximum charge rate is the average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(ii) For batch units, maximum charge rate is the charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

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

(3) Minimum scrubber liquor flow rate, which is calculated as the average liquor flow rate at the inlet to the wet scrubber measured during the most recent performance test demonstrating

compliance with all applicable emission limitations.

(4) Minimum scrubber liquor pH, which is calculated as the average liquor pH at the inlet to the wet scrubber measured during the most recent performance test demonstrating compliance with the HCl and SO₂ emission limitation.

(b) You must meet the operating limits established during the initial performance test 60 days after your OSWI unit reaches the charge rate at which it will operate, but no later than 180 days after its initial startup.

§ 60.2917 What if I do not use a wet scrubber to comply with the emission limitations?

If you use an air pollution control device other than a wet scrubber or limit emissions in some other manner to comply with the emission limitations under § 60.2915, you must petition the Administrator for specific operating limits, the values of which are to be established during the initial performance test and then continuously monitored thereafter. You must not conduct the initial performance test until after the petition has been approved by the Administrator. Your petition must include the five items listed in paragraphs (a) through (e) of this section.

(a) Identification of the specific parameters you propose to use as operating limits.

(b) A discussion of the relationship between these parameters and emissions of regulated pollutants, identifying how emissions of regulated pollutants change with changes in these parameters, and how limits on these parameters will serve to limit emissions of regulated pollutants.

(c) A discussion of how you will establish the upper and/or lower values for these parameters that will establish the operating limits on these parameters.

(d) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments.

(e) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

§ 60.2918 What happens during periods of startup, shutdown, and malfunction?

The emission limitations and operating limits apply at all times except during OSWI unit startups, shutdowns, or malfunctions.

Performance Testing

§ 60.2922 How do I conduct the initial and annual performance test?

(a) All performance tests must consist of a minimum of three test runs conducted under conditions representative of normal operations.

(b) All performance tests must be conducted using the methods in Table 1 of this subpart.

(c) All performance tests must be conducted using the minimum run duration specified in Table 1 of this subpart.

(d) Method 1 of appendix A of this part must be used to select the sampling location and number of traverse points.

(e) Method 3A or 3B of appendix A of this part must be used for gas composition analysis, including measurement of oxygen concentration. Method 3A or 3B of appendix A of this part must be used simultaneously with each method.

(f) Adjust all pollutant concentrations, except for opacity, to 7 percent oxygen using Equation 1 in § 60.2975.

§ 60.2923 How are the performance test data used?

You use results of performance tests to demonstrate compliance with the emission limitations in Table 1 of this subpart.

Initial Compliance Requirements

§ 60.2927 How do I demonstrate initial compliance with the emission limitations and establish the operating limits?

You must conduct an initial performance test, as required under § 60.8, to determine compliance with the emission limitations in Table 1 of this subpart and to establish operating limits using the procedure in § 60.2916 or § 60.2917. The initial performance test must be conducted using the test methods listed in Table 1 of this subpart and the procedures in § 60.2922.

§ 60.2928 By what date must I conduct the initial performance test?

The initial performance test must be conducted within 60 days after your OSWI unit reaches the charge rate at which it will operate, but no later than 180 days after its initial startup.

Continuous Compliance Requirements

§ 60.2932 How do I demonstrate continuous compliance with the emission limitations and the operating limits?

(a) You must conduct an annual performance test for all of the pollutants in Table 1 of this subpart for each OSWI unit to determine compliance with the emission limitations. The annual performance test must be conducted

using the test methods listed in Table 1 of this subpart and the procedures in § 60.2922.

(b) You must continuously monitor carbon monoxide emissions to determine compliance with the carbon monoxide emissions limitation. Three-hour rolling average values are used to determine compliance. Operation above the carbon monoxide emission limit in Table 1 constitutes a deviation from the emission limitation.

(c) You must continuously monitor the operating parameters specified in § 60.2916 or established under § 60.2917. Operation above the established maximum or below the established minimum operating limits constitutes a deviation from the established operating limits. Three-hour rolling average values are used to determine compliance unless a different averaging period is established under § 60.2917. Operating limits do not apply during performance tests.

§ 60.2933 By what date must I conduct the annual performance test?

You must conduct annual performance tests within 12 months following the initial performance test. Conduct subsequent annual performance tests within 12 months following the previous one.

§ 60.2934 May I conduct performance testing less often?

(a) You can test less often for a given pollutant if you have test data for at least three consecutive annual tests, and all performance tests for the pollutant over that period show that you comply with the emission limitation. In this case, you do not have to conduct a performance test for that pollutant for the next 2 years. You must conduct a performance test during the third year and no more than 36 months following the previous performance test.

(b) If your OSWI unit continues to meet the emission limitation for the pollutant, you may choose to conduct performance tests for that pollutant every third year, but each test must be within 36 months of the previous performance test.

(c) If a performance test shows a deviation from an emission limitation for any pollutant, you must conduct annual performance tests for that pollutant until three consecutive annual performance tests for that pollutant all show compliance.

§ 60.2935 May I conduct a repeat performance test to establish new operating limits?

Yes, you may conduct a repeat performance test at any time to establish new values for the operating limits. The

Administrator may request a repeat performance test at any time.

Monitoring

§ 60.2939 What continuous emission monitoring systems must I install?

(a) You must install, calibrate, maintain, and operate continuous emission monitoring systems for carbon monoxide and for oxygen. You must monitor the oxygen concentration at each location where you monitor carbon monoxide.

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

§ 60.2940 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 carbon monoxide and oxygen.

(b) Complete your initial evaluation of the continuous emission monitoring systems within 60 days after your OSWI unit reaches the maximum load level at which it will operate, but no later than 180 days after its initial startup.

(c) For initial and annual evaluations, collect data concurrently (or within 30 to 60 minutes) using your carbon monoxide and oxygen continuous emission monitoring systems. To validate carbon monoxide concentration levels, use EPA Method 10, 10A, or 10B of appendix A of this part. Use EPA Method 3 or 3A to measure oxygen. Collect the data during each initial and annual evaluation of your continuous emission monitoring systems following the applicable performance specifications in appendix B of this part. Table 3 of this subpart shows the required span values and performance specifications that apply to each continuous emission monitoring system.

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

§ 60.2941 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.

§ 60.2942 What is the minimum amount of monitoring data I must collect with my continuous emission monitoring systems, and is the data collection requirement enforceable?

(a) Where continuous emission monitoring systems are required, obtain 1-hour arithmetic averages. Make sure the averages for carbon monoxide are in parts per million by dry volume at 7 percent oxygen. Use the 1-hour averages of oxygen data from your continuous emission monitoring system to determine the actual oxygen level and to calculate emissions at 7 percent oxygen.

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

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

(d) If you do not obtain the minimum data required in paragraphs (a) through (c) of this section, you have deviated from the data collection requirement regardless of the emission level monitored.

(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.

(f) If continuous emission monitoring systems are temporarily unavailable to meet the data collection requirements, refer to Table 3 of this subpart. It shows alternate methods for collecting data when systems malfunction or when repairs, calibration checks, or zero and span checks keep you from collecting the minimum amount of data.

§ 60.2943 How do I convert my 1-hour arithmetic averages into the appropriate averaging times and units?

(a) Use Equation 1 in § 60.2975 to calculate emissions at 7 percent oxygen.

(b) Use Equation 2 in § 60.2975 to calculate the 3-hour rolling averages for concentrations of carbon monoxide.

§ 60.2944 What operating parameter monitoring equipment must I install, and what operating parameters must I monitor?

(a) If you are using a wet scrubber to comply with the emission limitations under § 60.2915, you must install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for

monitoring the value of the operating parameters used to determine compliance with the operating limits listed in Table 2 of this subpart. These devices (or methods) must measure and record the values for these operating parameters at the frequencies indicated in Table 2 of this subpart at all times.

(b) You must install, calibrate (to manufacturers' specifications), maintain, and operate a device or method for measuring the use of any stack that could be used to bypass the control device. The measurement must include the date, time, and duration of the use of the bypass stack.

(c) If you are using a method or air pollution control device other than a wet scrubber to comply with the emission limitations under § 60.2915, you must install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor compliance with the site-specific operating limits established using the procedures in § 60.2917.

§ 60.2945 Is there a minimum amount of operating parameter monitoring data I must obtain?

(a) Except for monitor malfunctions, associated repairs, and required quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments of the monitoring system), you must conduct all monitoring at all times the OSWI unit is operating.

(b) You must obtain valid monitoring data for at least 75 percent of the operating hours per day for at least 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal or institutional solid waste.

(c) If you do not obtain the minimum data required in paragraphs (a) and (b) of this section, you have deviated from the data collection requirement regardless of the operating parameter level monitored.

(d) Do not use data recorded during monitor malfunctions, associated repairs, and required quality assurance or quality control activities for meeting the requirements of this subpart, including data averages and calculations. You must use all the data collected during all other periods in assessing compliance with the operating limits.

Recordkeeping and Reporting

§ 60.2949 What records must I keep?

You must maintain the 15 items (as applicable) as specified in paragraphs (a) through (o) of this section for a period of at least 5 years:

(a) Calendar date of each record.

(b) Records of the data described in paragraphs (b)(1) through (8) of this section:

(1) The OSWI unit charge dates, times, weights, and hourly charge rates.

(2) Liquor flow rate to the wet scrubber inlet every 15 minutes of operation, as applicable.

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

(4) Liquor pH as introduced to the wet scrubber every 15 minutes of operation, as applicable.

(5) For affected OSWI units that establish operating limits for controls other than wet scrubbers under § 60.2917, you must maintain data collected for all operating parameters used to determine compliance with the operating limits.

(6) All 1-hour average concentrations of carbon monoxide emissions.

(7) All 3-hour rolling average values of carbon monoxide emissions and all 3-hour rolling average values of continuously monitored operating parameters.

(8) Records of the dates, times, and durations of any bypass of the control device.

(c) Identification of calendar dates and times for which continuous emission monitoring systems or monitoring systems used to monitor operating limits were inoperative, inactive, malfunctioning, or out of control (except for downtime associated with zero and span and other routine calibration checks). Identify the pollutant emissions or operating parameters not measured, the duration, reasons for not obtaining the data, and a description of corrective actions taken.

(d) Identification of calendar dates, times, and durations of malfunctions, and a description of the malfunction and the corrective action taken.

(e) Identification of calendar dates and times for which monitoring data show a deviation from the carbon monoxide emissions limit in Table 1 of this subpart or a deviation from the operating limits in Table 2 of this subpart or a deviation from other operating limits established under § 60.2917 with a description of the deviations, reasons for such deviations, and a description of corrective actions taken.

(f) Calendar dates when continuous monitoring systems did not collect the minimum amount of data required under §§ 60.2942 and 60.2945.

(g) For carbon monoxide continuous emissions monitoring systems,

document the results of your daily drift tests and quarterly accuracy determinations according to Procedure 1 of appendix F of this part.

(h) Records of the calibration of any monitoring devices required under § 60.2944.

(i) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating limits, as applicable. Retain a copy of the complete test report including calculations and a description of the types of waste burned during the test.

(j) All documentation produced as a result of the siting requirements of §§ 60.2894 and 60.2895.

(k) Records showing the names of OSWI unit operators who have completed review of the information in § 60.2910(a) as required by § 60.2910(b), including the date of the initial review and all subsequent annual reviews.

(l) Records showing the names of the OSWI operators who have completed the operator training requirements under § 60.2905, met the criteria for qualification under § 60.2907, and maintained or renewed their qualification under § 60.2908 or § 60.2909. Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.

(m) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

(n) Equipment vendor specifications and related operation and maintenance requirements for the incinerator, emission controls, and monitoring equipment.

(o) The information listed in § 60.2910(a).

§ 60.2950 Where and in what format must I keep my records?

(a) You must keep each record on site for at least 2 years. You may keep the records off site for the remaining 3 years.

(b) All records must be available in either paper copy or computer-readable format that can be printed upon request, unless an alternative format is approved by the Administrator.

§ 60.2951 What reports must I submit?

See Table 4 of this subpart for a summary of the reporting requirements.

§ 60.2952 What must I submit prior to commencing construction?

You must submit a notification prior to commencing construction that

includes the five items listed in paragraphs (a) through (e) of this section.

(a) A statement of intent to construct.

(b) The anticipated date of commencement of construction.

(c) All documentation produced as a result of the siting requirements of § 60.2895.

(d) The waste management plan as specified in §§ 60.2899 through 60.2901.

(e) Anticipated date of initial startup.

§ 60.2953 What information must I submit prior to initial startup?

You must submit the information specified in paragraphs (a) through (e) of this section prior to initial startup.

(a) The type(s) of waste to be burned.

(b) The maximum design waste burning capacity.

(c) The anticipated maximum charge rate.

(d) If applicable, the petition for site-specific operating limits under § 60.2917.

(e) The anticipated date of initial startup.

§ 60.2954 What information must I submit following my initial performance test?

You must submit the information specified in paragraphs (a) and (b) of this section no later than 60 days following the initial performance test. All reports must be signed by the facilities manager.

(a) The complete test report for the initial performance test results obtained under § 60.2927, as applicable.

(b) The values for the site-specific operating limits established in § 60.2916 or § 60.2917.

§ 60.2955 When must I submit my annual report?

You must submit an annual report no later than 12 months following the submission of the information in § 60.2954. You must submit subsequent reports no more than 12 months following the previous report.

§ 60.2956 What information must I include in my annual report?

The annual report required under § 60.2955 must include the ten items listed in paragraphs (a) through (j) of this section. If you have a deviation from the operating limits or the emission limitations, you must also submit deviation reports as specified in §§ 60.2957, 60.2958, and 60.2959.

(a) Company name and address.

(b) Statement by the owner or operator, with their name, title, and signature, certifying the truth, accuracy, and completeness of the report. Such certifications must also comply with the requirements of 40 CFR 70.5(d) or 71.5(d).

(c) Date of report and beginning and ending dates of the reporting period.
(d) The values for the operating limits established pursuant to § 60.2916 or § 60.2917.

(e) If no deviation from any emission limitation or operating limit that applies to you has been reported, a statement that there was no deviation from the emission limitations or operating limits during the reporting period, and that no monitoring system used to determine compliance with the emission limitations or operating limits was inoperative, inactive, malfunctioning or out of control.

(f) The highest recorded 3-hour average and the lowest recorded 3-hour average, as applicable, for carbon monoxide emissions and for each operating parameter recorded for the calendar year being reported.

(g) Information recorded under § 60.2949(b)(6) and (c) through (e) for the calendar year being reported.

(h) If a performance test was conducted during the reporting period, the results of that test.

(i) If you met the requirements of § 60.2934(a) or (b), and did not conduct a performance test during the reporting period, you must state that you met the requirements of § 60.2934(a) or (b), and, therefore, you were not required to conduct a performance test during the reporting period.

(j) Documentation of periods when all qualified OSWI unit operators were unavailable for more than 12 hours, but less than 2 weeks.

§ 60.2957 What else must I report if I have a deviation from the operating limits or the emission limitations?

(a) You must submit a deviation report if any recorded 3-hour average parameter level is above the maximum operating limit or below the minimum operating limit established under this subpart, if any recorded 3-hour average carbon monoxide emission rate is above the emission limitation, if the control device was bypassed, or if a performance test was conducted that showed a deviation from any emission limitation.

(b) The deviation report must be submitted by August 1 of that year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data you collected during the second half of the calendar year (July 1 to December 31).

§ 60.2958 What must I include in the deviation report?

In each report required under § 60.2957, for any pollutant or operating

parameter that deviated from the emission limitations or operating limits specified in this subpart, include the seven items described in paragraphs (a) through (g) of this section.

(a) The calendar dates and times your unit deviated from the emission limitations or operating limit requirements.

(b) The averaged and recorded data for those dates.

(c) Durations and causes of each deviation from the emission limitations or operating limits and your corrective actions.

(d) A copy of the operating limit monitoring data during each deviation and any test report that documents the emission levels.

(e) The dates, times, number, duration, and causes for monitor downtime incidents (other than downtime associated with zero, span, and other routine calibration checks).

(f) Whether each deviation occurred during a period of startup, shutdown, or malfunction, or during another period.

(g) The dates, times, and durations of any bypass of the control device.

§ 60.2959 What else must I report if I have a deviation from the requirement to have a qualified operator accessible?

(a) If all qualified operators are not accessible for 2 weeks or more, you must take the two actions in paragraphs (a)(1) and (2) of this section.

(1) Submit a notification of the deviation within 10 days that includes the three items in paragraphs (a)(1)(i) through (iii) of this section.

(i) A statement of what caused the deviation.

(ii) A description of what you are doing to ensure that a qualified operator is accessible.

(iii) The date when you anticipate that a qualified operator will be available.

(2) Submit a status report to the Administrator every 4 weeks that includes the three items in paragraphs (a)(2)(i) through (iii) of this section.

(i) A description of what you are doing to ensure that a qualified operator is accessible.

(ii) The date when you anticipate that a qualified operator will be accessible.

(iii) Request approval from the Administrator to continue operation of the OSWI unit.

(b) If your unit was shut down by the Administrator, under the provisions of § 60.2911(c)(2), due to a failure to provide an accessible qualified operator, you must notify the Administrator that you are resuming operation once a qualified operator is accessible.

§ 60.2960 Are there any other notifications or reports that I must submit?

Yes, you must submit notifications as provided by § 60.7.

§ 60.2961 In what form can I submit my reports?

Submit initial, annual, and deviation reports electronically or in paper format, postmarked on or before the submittal due dates.

§ 60.2962 Can reporting dates be changed?

If the Administrator agrees, you may change the semiannual or annual reporting dates. See § 60.19(c) for procedures to seek approval to change your reporting date.

Title V Operating Permits

§ 60.2966 Am I required to apply for and obtain a title V operating permit for my unit?

Yes, if you are subject to this subpart, you are required to apply for and obtain a title V operating permit unless you meet the relevant requirements for an exemption specified in § 60.2887.

§ 60.2967 When must I submit a title V permit application for my new OSWI unit?

(a) If your new OSWI unit is not subject to an earlier permit application deadline, a complete title V permit application must be submitted on or before one of the dates specified in paragraphs (a)(1) or (2) of this section. (See section 503(c) of the Clean Air Act and 40 CFR 70.5(a)(1)(i) and 71.5(a)(1)(i).)

(1) For an OSWI unit that commenced operation as a new source as of [DATE FINAL RULE IS PUBLISHED IN THE **Federal Register**], then a complete title V permit application must be submitted not later than 12 months after [DATE FINAL RULE IS PUBLISHED IN THE **Federal Register**].

(2) For an OSWI unit that does not commence operation as a new source until after [DATE FINAL RULE IS PUBLISHED IN THE **Federal Register**], then a complete title V permit application must be submitted not later than 12 months after the date the OSWI unit commences operation as a new source.

(b) If your OSWI unit is subject to title V as a result of some triggering requirement(s) other than this subpart (for example, an OSWI unit may be a major source or part of a major source), then your unit may be required to apply for a title V permit prior to the deadlines specified in paragraph (a) of this section. If more than one requirement triggers a source's obligation to apply for a title V permit, the 12-month time

frame for filing a title V permit application is triggered by the requirement that first causes the source to be subject to title V. (See section 503(c) of the Clean Air Act and 40 CFR 70.3(a) and (b), 70.5(a)(1)(i), 71.3(a) and (b), and 71.5(a)(1)(i).)

(c) A "complete" title V permit application is one that has been determined or deemed complete by the relevant permitting authority under section 503(d) of the Clean Air Act and 40 CFR 70.5(a)(2) or 71.5(a)(2). You must submit a complete permit application by the relevant application deadline in order to operate after this date in compliance with Federal law. (See sections 503(d) and 502(a) of the Clean Air Act and 40 CFR 70.7(b) and 71.7(b).)

Temporary Use Incinerators Used in Disaster Recovery

§ 60.2969 What are the requirements for temporary use incinerators used in disaster recovery?

Your incinerator is excluded from the requirements of this subpart if it is used on a temporary basis to combust debris from a disaster or emergency such as a tornado, hurricane, flood, or act of bioterrorism, and you follow the requirements in paragraphs (a) or (b) of this section, depending on the extent of response necessary for disaster recovery.

(a) If the incinerator is used to combust debris in an area declared a State of Emergency by a State government, or the President, under the authority of the Stafford Act, has declared that an emergency or a major disaster exists in the area, then the incinerator is excluded from the requirements of this subpart.

(b) If the incinerator is used to combust debris in an area that is not declared a State of Emergency or major disaster, then you must meet the requirements of paragraphs (b)(1) through (b)(3) of this section, depending on the length of time the incinerator will be used at the same location.

(1) If the incinerator is used for less than 8 weeks at the same location, then it is excluded from the requirements of this subpart. You do not need to notify the Administrator of its use or meet the emission limits or other requirements of this subpart.

(2) If the incinerator will be used for 8 weeks or more at the same location, you must notify the Administrator that the temporary use incinerator will be used for 8 weeks or more and request permission to continue to operate the incinerator.

(i) The notification must be submitted in writing by the date 8 weeks after you

start operation of the temporary use incinerator at its current location.

(ii) The notification must contain the date the incinerator started operation at its current location, identification of the disaster or emergency for which the incinerator is being used, a description of the types of materials being burned in the incinerator, a brief description of the size and design of the incinerator (for example, an air curtain incinerator or a modular starved-air incinerator), the reasons the incinerator must be operated for more than 8 weeks, and the amount of time for which you request permission to operate including the date you expect to cease operation of the incinerator.

(3) If you submitted the notification containing the information in paragraph (b)(2)(ii) by the date specified in paragraph (b)(2)(i), you may continue to operate the incinerator for 8 additional weeks, which is a total of 16 weeks from the date the incinerator started operation in its current location. You do not have to meet the emission limits or other requirements of this subpart during this period.

(i) At the end of 16 weeks from the date the incinerator started operation in its current location, you must cease operation of the incinerator or comply with all requirements of this subpart, unless the Administrator has approved in writing your request to continue operation.

(ii) If the Administrator has approved in writing your request to continue operation, then you may continue to operate the incinerator until the date specified in the approval, and you do not need to comply with any other requirements of this subpart during the approved time period.

Air Curtain Incinerators That Burn Only Wood Waste, Clean Lumber, and Yard Waste

§ 60.2970 What is an air curtain incinerator?

(a) An air curtain incinerator operates by forcefully projecting a curtain of air across an open, integrated combustion chamber (fire box) or open pit or trench (trench burner) in which combustion occurs. For the purpose of this subpart and subpart FFFF only, air curtain incinerators include both firebox and trench burner units.

(b) Air curtain incinerators that burn only the materials listed in paragraphs (b)(1) through (4) of this section are required to meet only the requirements in § 60.2970 through § 60.2973 and are exempt from all other requirements of this subpart.

(1) 100 percent wood waste.

(2) 100 percent clean lumber.

(3) 100 percent yard waste.

(4) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

§ 60.2971 What are the emission limitations for air curtain incinerators that burn only wood waste, clean lumber, and yard waste?

(a) Within 60 days after your air curtain incinerator reaches the charge rate at which it will operate, but no later than 180 days after its initial startup, you must meet the two limitations specified in paragraphs (a)(1) and (2) of this section.

(1) The opacity limitation is 10 percent (6-minute average), except as described in paragraph (a)(2) of this section.

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

(b) The limitations in paragraph (a) of this section apply at all times except during malfunctions.

§ 60.2972 How must I monitor opacity for air curtain incinerators that burn only wood waste, clean lumber, and yard waste?

(a) Use Method 9 of appendix A of this part to determine compliance with the opacity limitation.

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

(c) After the initial test for opacity, conduct annual tests no more than 12 calendar months following the date of your previous test.

§ 60.2973 What are the recordkeeping and reporting requirements for air curtain incinerators that burn only wood waste, clean lumber, and yard waste?

(a) Prior to commencing construction on your air curtain incinerator, submit the three items described in paragraphs (a)(1) through (3) of this section.

(1) Notification of your intent to construct the air curtain incinerators.

(2) Your planned initial startup date.

(3) Types of materials you plan to burn in your air curtain incinerator.

(b) Keep records of results of all initial and annual opacity tests in either paper copy or computer-readable format that can be printed upon request, unless the Administrator approves another format, for at least 5 years. You must keep each record on site for at least 2 years. You may keep the records off site for the remaining 3 years.

(c) Make all records available for submittal to the Administrator or for an inspector's review.

(d) You must submit the results (each 6-minute average) of the initial opacity tests no later than 60 days following the initial test. Submit annual opacity test

results within 12 months following the previous report.

(e) Submit initial and annual opacity test reports as electronic or paper copy on or before the applicable submittal date.

(f) Keep a copy of the initial and annual reports on site for a period of 5 years. You must keep each report on site

for at least 2 years. You may keep the reports off site for the remaining 3 years.

§ 60.2974 Am I required to apply for and obtain a title V operating permit for my air curtain incinerator that burns only wood waste, clean lumber, and yard waste?

Yes, if your air curtain is subject to this subpart, you are required to apply

for and obtain a title V operating permit as specified in §§ 60.2966 and 60.2967.

Equations

§ 60.2975 What equations must I use?

(a) *Percent oxygen.* Adjust all pollutant concentrations to 7 percent oxygen using Equation 1 of this section.

$$C_{adj} = C_{meas} * (20.9 - 7) / (20.9 - \%O_2) \quad (\text{Eq. 1})$$

Where:

C_{adj} = pollutant concentration adjusted to 7 percent oxygen

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

$(20.9 - 7)$ = 20.9 percent oxygen - 7 percent oxygen (defined oxygen correction basis)

20.9 = oxygen concentration in air, percent

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

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

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

(i) If your very small 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 very small 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 very small municipal waste combustion units with a design not based on heat input capacity, use the maximum design charging rate.

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

combust 24/16, or 1.5 batches, in 24 hours.

(d) *Carbon monoxide pollutant rate.* When hourly average pollutant rates (E_h) are obtained (e.g., CEMS values), compute the rolling average carbon monoxide pollutant rate (E_a) for each 3-hour period using the following equation:

$$E_a = \frac{1}{3} \sum_{j=1}^3 E_{hj} \quad (\text{Eq. 2})$$

Where:

E_a = Average carbon monoxide pollutant rate for the 3-hour period, ppm corrected to 7 percent O_2 .

E_{hj} = Hourly arithmetic average pollutant rate for hour "j," ppm corrected to 7 percent O_2 .

Definitions

§ 60.2977 What definitions must I know?

Terms used but not defined in this subpart are defined in the Clean Air Act and subpart A (General Provisions) of this part.

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

Air curtain incinerator means an incineration unit operating by forcefully projecting a curtain of air across an open, integrated combustion chamber (fire box) or open pit or trench (trench burner) in which combustion occurs. For the purpose of this subpart and subpart FFFF only, air curtain incinerators include both firebox and trench burner units.

Auxiliary fuel means natural gas, liquified petroleum gas, fuel oil, or diesel fuel.

Batch OSWI unit means an OSWI unit that is designed such that neither waste charging nor ash removal can occur during combustion.

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

Calendar year means 365 consecutive days starting on January 1 and ending on December 31.

Chemotherapeutic waste means waste material resulting from the production or use of anti-neoplastic agents used for the purpose of stopping or reversing the growth of malignant cells.

Class II municipal solid waste landfill means a landfill that meets four criteria:

(1) Accepts, for incineration or disposal, less than 20 tons per day of municipal solid waste or other solid wastes based on an annual average;

(2) Is located on a site where there is no evidence of groundwater pollution caused or contributed to by the landfill;

(3) Is not connected by road to a Class I municipal solid waste landfill, as defined by Alaska regulatory code 18 AAC 60.300(c) or, if connected by road, is located more than 50 miles from a Class I municipal solid waste landfill; and

(4) Serves a community that meets one of two criteria:

(i) Experiences for at least three months each year, an interruption in access to surface transportation, preventing access to a Class I municipal solid waste landfill; or

(ii) Has no practicable waste management alternative, with a landfill located in an area that annually receives 25 inches or less of precipitation.

Class III municipal solid waste landfill is a landfill that is not connected by road to a Class I municipal solid waste landfill, as defined by Alaska regulatory code 18 AAC 60.300(c) or, if connected by road, is located more than 50 miles from a Class I municipal solid waste landfill, and that accepts, for disposal, either of the following two criteria:

(1) Ash from incinerated municipal waste in quantities less than one ton per day on an annual average, which ash must be free of food scraps that might attract animals; or

(2) Less than five tons per day of municipal solid waste, based on an annual average, and is not located in a place that meets either of the following criteria:

(i) Where public access is restricted, including restrictions on the right to move to the place and reside there; or

(ii) That is provided by an employer and that is populated totally by persons who are required to reside there as a condition of employment and who do not consider the place to be their permanent residence.

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

Collected from means the transfer of material from the site at which the material is generated to a separate site where the material is burned.

Contained gaseous material means gases that are in a container when that container is combusted.

Continuous emission monitoring system or CEMS means a monitoring system for continuously measuring and recording the emissions of a pollutant from an affected OSWI unit.

Continuous OSWI unit means an OSWI unit that is designed to allow waste charging and ash removal during combustion.

Deviation means any instance in which an OSWI unit that meets the requirements in § 60.2885, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation, operating limit, or operator qualification and accessibility requirements;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any OSWI unit that meets the requirements in § 60.2885 and is required to obtain such a permit; or

(3) Fails to meet any emission limitation, operating limit, or operator qualification and accessibility requirement in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is allowed by this subpart.

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

Energy recovery means the process of recovering thermal energy from combustion for useful purposes such as steam generation or process heating.

Institution means organizations having a governmental, educational, civic, or religious purpose such as schools, prisons, government facilities,

churches, and other similar establishments or facilities.

Institutional waste means solid waste combusted for reasons that do not include the recovery of heat for a useful purpose, or combusted without heat recovery or with only waste heat recovery (*i.e.*, no heat recovery in the combustion firebox), in an enclosed unit using controlled flame combustion that is a distinct operating unit of the institutional facility. Institutional waste also includes solid waste combusted on site in an air curtain incinerator that is a distinct operating unit of the institutional facility that generated the waste.

Institutional waste incineration unit means any combustion unit that combusts institutional waste (as defined in this subpart), that is a distinct operating unit of the institutional facility that generated the waste. Institutional waste incineration units include field-erected, modular, and custom built incineration units operating with starved or excess air, and any air curtain incinerator that is a distinct operating unit of the institutional facility that generated the institutional waste (except those air curtain incinerators listed in § 60.2888(b)).

Intermittent OSWI unit means an OSWI unit that is designed to allow waste charging, but not ash removal, during combustion.

Low-level radioactive waste means waste material that contains radioactive nuclides emitting primarily beta or gamma radiation, or both, in concentrations or quantities that exceed applicable Federal or State standards for unrestricted release. Low-level radioactive waste is not high-level radioactive waste, spent nuclear fuel, or byproduct material as defined by the Atomic Energy Act of 1954 (42 U.S.C. 2014(e)(2)).

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused, in part, by poor maintenance or careless operation are not malfunctions.

Modification or modified OSWI unit means an OSWI unit you have changed on or after [DATE 6 MONTHS AFTER DATE FINAL RULE IS PUBLISHED IN THE **Federal Register**] 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 OSWI unit (not including the cost of land) updated to current costs (current dollars). To

determine what systems are within the boundary of the OSWI unit used to calculate these costs, see the definition of OSWI unit.

(2) Any physical change in the OSWI unit or change in the method of operating it that increases the amount of any air pollutant emitted for which section 129 or section 111 of the Clean Air Act has established standards.

Municipal solid waste means refuse (and refuse-derived fuel) collected from the general public and from residential, commercial, institutional, and industrial sources consisting of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials and non-combustible materials such as metal, glass and rock, provided that:

(1) The term does not include industrial process wastes or medical wastes that are segregated from such other wastes; and

(2) An incineration unit shall not be considered to be combusting municipal waste for purposes of this subpart if it combusts a fuel feed stream, 30 percent or less of the weight of which is comprised, in aggregate, of municipal waste, as determined by § 60.2887(c).

Municipal waste combustion unit means, for the purpose of this subpart and subpart FFFF, any setting or equipment that combusts municipal solid waste (as defined in this subpart) including, but not limited to, field-erected, modular, and custom built incineration units (with or without heat recovery) operating with starved or excess air, boilers, furnaces, pyrolysis/combustion units, and air curtain incinerators (except those air curtain incinerators listed in § 60.2887(a)).

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

(1) The combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and

(2) the combustion unit bottom ash system, which ends at the truck loading station or similar equipment that

transfers the ash to final disposal. The OSWI unit includes all ash handling systems connected to the bottom ash handling system.

Particulate matter means total particulate matter emitted from OSWI units as measured by Method 5 or Method 29 of appendix A of this part.

Pathological waste means waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable).

Reconstruction means rebuilding an OSWI unit and meeting two criteria:

(1) The reconstruction begins on or after [DATE 6 MONTHS AFTER DATE FINAL RULE IS PUBLISHED IN THE Federal Register].

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

Shutdown means the period of time after all waste has been combusted in the primary chamber. For continuous OSWI, shutdown shall commence no

less than 2 hours after the last charge to the incinerator. For intermittent OSWI, shutdown shall commence no less than 4 hours after the last charge to the incinerator. For batch OSWI, shutdown shall commence no less than 5 hours after the high-air phase of combustion has been completed.

Solid waste means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1342), or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C. 2014).

Standard conditions, when referring to units of measure, means a temperature of 68°F (20°C) and a pressure of 1 atmosphere (101.3 kilopascals).

Startup period means the period of time between the activation of the system and the first charge to the unit. For batch OSWI, startup means the period of time between activation of the system and ignition of the waste.

Very small municipal waste combustion unit means any municipal waste combustion unit that has the capacity to combust less than 35 tons per day of municipal solid waste or

refuse-derived fuel, as determined by the calculations in § 60.2975.

Waste heat recovery means the process of recovering heat from the combustion flue gases by convective heat transfer only.

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

Wood waste means untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include:

(1) Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands.

(2) Construction, renovation, or demolition wastes.

(3) Clean lumber.

Yard waste means grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs. Yard waste comes 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.

(2) Clean lumber.

Tables to Subpart EEEE of Part 60

As stated in § 60.2915, you must comply with the following:

TABLE 1 TO SUBPART EEEE OF PART 60.—EMISSION LIMITATIONS

For the air pollutant	You must meet this emission limitation ^a	Using this averaging time	And determining compliance using this method
1. Cadmium	18 micrograms per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Method 29 of appendix A of this part.
2. Carbon monoxide	5.0 parts per million by dry volume.	3-run average hour minimum sample time per run during performance test, and 3-hour rolling averages measured using continuous emissions monitoring system ^b .	Method 10, 10A, or 10B of appendix A of this part.
3. Dioxins/furans (total basis)	33 nanograms per dry standard cubic meter.	3-run average hour minimum sample time per run.	Method 23 of appendix A of this part.
4. Hydrogen chloride	3.7 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Method 26A of appendix A of this part.
5. Lead	226 micrograms per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Method 29 of appendix A of this part.
6. Mercury	74 micrograms per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Method 29 of appendix A of this part.
7. Opacity	10 percent	6-run average (1 hour minimum sample time per run).	Method 9 of appendix A of this part.

TABLE 1 TO SUBPART EEEE OF PART 60.—EMISSION LIMITATIONS—Continued

For the air pollutant	You must meet this emission limitation ^a	Using this averaging time	And determining compliance using this method
8. Oxides of nitrogen	103 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Method 7, 7A, 7C, 7D, or 7E of appendix A of this part. ASME PTC 19-10-1981—Part 10 is an acceptable alternative to Methods 7 and 7C only (IBR, see § 60.17(h)).
9. Particulate matter	0.013 grains per dry standard cubic foot.	3-run average (1 hour minimum sample time per run).	Method 5 or 29 of appendix A of this part.
10. Sulfur dioxide	3.1 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Method 6 or 6c of appendix A of this part. ASME PTC 19-10-1981—Part 10 is an acceptable alternative to Method 6 only (IBR, see § 60.17(h)).

^a All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions.

^b Calculated each hour as the average of the previous 3 operating hours.

As stated in § 60.2916, you must comply with the following:

TABLE 2 TO SUBPART EEEE OF PART 60.—OPERATING LIMITS FOR INCINERATORS AND WET SCRUBBERS

For these operating parameters	You must establish these operating limits	And monitoring using these minimum frequencies		
		Data measurement	Data recording	Averaging time
1. Charge rate	Maximum charge rate.	Continuous	Every hour	Daily for batch units. 3-hour rolling for continuous and intermittent units ^a . 3-hour rolling ^a .
2. Pressure drop across the wet scrubber or amperage to wet scrubber.	Minimum pressure drop or amperage.	Continuous	Every 15 minutes	
3. Scrubber liquor flow rate	Minimum flow rate	Continuous	Every 15 minutes	3-hour rolling ^a .
4. Scrubber liquor pH	Minimum pH	Continuous	Every 15 minutes	3-hour rolling ^a .

^a Calculated each hour as the average of the previous 3 operating hours.

As stated in § 60.2951, you must comply with the following:

TABLE 3 TO SUBPART EEEE OF PART 60.—REQUIREMENTS FOR CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS)

For the following pollutants	Use the following span values for your CEMS	Use the following performance specifications (P.S.) in appendix B of this part for your CEMS	If needed to meet minimum data requirements, use the following alternate methods in appendix A of this part to collect data
1. Carbon Monoxide	125 percent of the maximum hourly potential carbon monoxide emissions of the waste combustion unit.	P.S.4A	Method 10.
2. Oxygen	25 percent oxygen	P.S.3	Method 3A or 3B. ASME PTC 19-10-1981—Part 10 is an acceptable alternative to Method 3B only (IBR, see § 60.17(h)).

As stated in § 60.2940, you must comply with the following:

TABLE 4 TO SUBPART EEEE OF PART 60—SUMMARY OF REPORTING REQUIREMENTS^a

Report	Due date	Contents	Reference
1. Preconstrucion report	a. Prior to commencing construction.	i. Statement of intent to construct; ii. Anticipated date of commencement of construction; iii. Documentation for siting requirements; iv. Waste management plan; and v. Anticipated date of initial startup	§ 60.2952. § 60.2952. § 60.2952. § 60.2952. § 60.2952.
2. Startup notification	a. Prior to initial startup	i. Types of waste to be burned; ii. Maximum design waste burning capacity; iii. Anticipated maximum charge rate; iv. If applicable, the petition for site-specific operating limits; and v. Anticipated date of initial startup	§ 60.2953. 60.2953. § 60.2953. § 60.2953. § 60.2953.
3. Initial test report	a. No later than 60 days following the initial performance test	i. Complete test report for the initial performance test; and ii. The values for the site-specific operating limits	§ 60.2954. § 60.2954.
4. Annual report	a. No later than 12 months following the submission of the initial test report. Subsequent reports are to be submitted no more than 12 months following the previous report.	i. Company Name and address; ii. Statement and signature by the owner or operator; iii. Date of report; iv. Values for the operating limits; v. If no deviations or malfunctions were reported, a statement that no deviations occurred during the reporting period; vi. Highest recorded 3-hour average and the lowest 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported; vii. Information for deviations or malfunctions recorded under § 60.2949(b)(6) and (c) through (e); viii. If a performance test was conducted during the reporting period, the results of the test; ix. If a performance test was not conducted during the reporting period, a statement that the requirements of § 60.2934(a) or (b) were met; and x. Documentation of periods when all qualified OSWI unit operators were unavailable for more than 12 hours but less than 2 weeks	§§ 60.2955 and 60.2956. §§ 60.2955 and 60.2956. §§ 60.2955 and 60.2956. §§ 60.2955 and 60.2956. §§ 60.2955 and 60.2956. §§ 60.2955 and 60.2956. §§ 60.2955 and 60.2956. §§ 60.2955 and 60.2956. §§ 60.2955 and 60.2956. §§ 60.2955 and 60.2956.
5. Emission limitation or operating limit deviation report.	a. By August 1 of that year for data collected during the first half of the calendar year. By February 1 of the following year for data collected during the second half of the calendar year.	i. Dates and times of deviation; ii. Averaged and recorded data for those dates; iii. Duration and causes of each deviation and the corrective actions taken; iv. Copy of operating limit monitoring data and any test reports; v. Dates, times, and causes for monitor downtime incidents; vi. Whether each deviation occurred during a period of startup, shutdown, or malfunction; and vii. Dates, times, and durations of any bypass of the control device	§§ 60.2957 and 60.2958. §§ 60.2957 and 60.2958. §§ 60.2957 and 60.2958. §§ 60.2957 and 60.2958. §§ 60.2957 and 60.2958. §§ 60.2957 and 60.2958. §§ 60.2957 and 60.2958.
6. Qualified operator deviation notification.	a. Within 10 days of deviation.	i. Statement of cause of deviation ii. Description of efforts to have an accessible qualified operator; and iii. The date a qualified operator will be accessible	§ 60.2959(a)(1). § 60.2959(a)(1). § 60.2959(a)(1).
7. Qualified operation deviation status report.	a. Every 4 weeks following deviation.	i. Description of efforts to to have an accessible qualified operator; ii. The date a qualified operator will be accessible; and iii. Request to continue operation	§ 60.2959(a)(2). § 60.2959(a)(2). § 60.2959(a)(2).
8. Qualified operator deviation notification of resumed operation.	a. Prior to resuming operation.	i. Notification that you are resuming operation	§ 60.2959(b).

^a This table is only a summary, see the referenced sections of the rule for the complete requirements.

4. Part 60 is amended by adding subpart FFFF to read as follows:

Subpart FFFF—Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units That Commenced Construction On or Before December 9, 2004

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Introduction

§ 60.2980 What is the purpose of this subpart?

This subpart establishes emission guidelines and compliance schedules for the control of emissions from other solid waste incineration (OSWI) units. The pollutants addressed by these emission guidelines are listed in Table 2 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.

§ 60.2981 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 OSWI units that commenced construction on or before December 9, 2004, you must submit a State plan to EPA that implements the emission guidelines contained in this subpart.

(b) You must submit the State plan to EPA within 1 year after [DATE THE FINAL RULE IS PUBLISHED IN THE Federal Register].

§ 60.2982 Is a State plan required for all States?

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

§ 60.2983 What must I include in my State plan?

(a) You must include the following nine items in your State plan:

(1) Inventory of affected OSWI units, including those that have ceased operation but have not been dismantled.

(2) Inventory of emissions from affected OSWI units in your State.

(3) Compliance schedules for each affected OSWI unit.

(4) For each affected OSWI unit, emission limitations, operator training and qualification requirements, a waste management plan, and operating parameter requirements that are at least as protective as the emission guidelines contained in this subpart.

(5) Stack testing, 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 the emission guidelines of this subpart.

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

(b) Your State plan may deviate from the format and content of the emission guidelines contained in this subpart. However, if your State plan does deviate, you must demonstrate that your State plan is at least as protective as the emission guidelines contained in this subpart. Your State plan must address regulatory applicability, compliance schedule, operator training and qualification, a waste management plan, emission limitations, stack testing, operating parameter requirements, monitoring, recordkeeping and reporting, and air curtain incinerator requirements.

(c) You must follow the requirements of subpart B of this part (Adoption and Submittal of State Plans for Designated Facilities) in your State plan.

§ 60.2984 Is there an approval process for my State plan?

Yes, the EPA will review your State plan according to § 60.27.

§ 60.2985 What if my State plan is not approvable?

If you do not submit an approvable State plan (or a negative declaration letter) within 2 years after [DATE THE FINAL RULE IS PUBLISHED IN THE Federal Register], EPA will develop a Federal plan according to § 60.27 to implement the emission guidelines contained in this subpart. Owners and operators of OSWI units not covered by an approved State plan must comply with the Federal plan. The Federal plan is an interim action and applies to OSWI units until a State plan covering those units is approved and becomes effective.

§ 60.2986 Is there an approval process for a negative declaration letter?

No, the EPA has no formal review process for negative declaration letters. Once we receive your negative declaration letter, we will place a copy in the public docket and publish a notice in the Federal Register. If, at a later date, an existing OSWI unit is found in your State, the Federal plan implementing the emission guidelines contained in this subpart would automatically apply to that OSWI unit until your State plan is approved.

§ 60.2987 What compliance schedule must I include in my State plan?

Your State plan must include compliance schedules that require OSWI units to achieve final compliance as expeditiously as practicable after approval of the State plan but not later than the earlier of the following two dates:

(a) Five years after [DATE THE FINAL RULE IS PUBLISHED IN THE Federal Register].

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

§ 60.2988 Are there any State plan requirements for this subpart that apply instead of the requirements specified in subpart B?

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

(a) State plans developed to implement this subpart must be as protective as the emission guidelines contained in this subpart. State plans must require all OSWI units to comply within 5 years after [DATE THE FINAL RULE IS PUBLISHED IN THE Federal Register] or 3 years after the effective date of State plan approval, whichever is sooner. This applies instead of the option for case-by-case less stringent emission standards and longer compliance schedules in § 60.24(f).

(b) State plans developed to implement this subpart are required to include only one increment of progress for the affected OSWI units. This increment is the final compliance date in § 60.21(h)(5). This applies instead of the requirement of § 60.24(e)(1).

§ 60.2989 Does this subpart directly affect OSWI unit owners and operators in my State?

(a) No, this subpart does not directly affect OSWI unit owners and operators in your State. However, OSWI unit owners and operators must comply with the State plan you develop to implement the emission guidelines contained in this subpart. Some States may choose to incorporate sections of the emission guidelines contained in this subpart into their State plans by direct incorporation by reference. Others may want to include components of the model rule text directly in their State plan.

(b) If you do not submit an approvable plan to implement and enforce the guidelines contained in this subpart within 2 years after [DATE THE FINAL RULE IS PUBLISHED IN THE Federal Register], the EPA will implement and enforce a Federal plan, as provided in

§ 60.2985, to ensure that each unit within your State reaches compliance with all the provisions of this subpart within 5 years after [DATE THE FINAL RULE IS PUBLISHED IN THE **Federal Register**].

Applicability of State Plans

§ 60.2991 What OSWI units must I address in my State plan?

Your State plan must address all OSWI units in your State that meet all the requirements specified in paragraphs (a) through (c) of this section.

(a) The incineration unit is an existing incineration unit as defined in § 60.2992.

(b) The incineration unit is an OSWI unit as defined in § 60.3078. OSWI units are very small municipal waste combustion units and institutional waste incineration units as defined in § 60.3078.

(c) The incineration unit is not excluded under § 60.2993.

§ 60.2992 What is an existing OSWI unit?

An existing OSWI unit is an OSWI unit that commenced construction on or before December 9, 2004, except as provided in paragraph (a) of this section.

(a) If the owner or operator of an OSWI unit makes changes that meet the definition of modification or reconstruction on or after [DATE 6 MONTHS AFTER DATE THE FINAL RULE IS PUBLISHED IN THE **Federal Register**], the OSWI unit becomes subject to subpart EEEE of this part (New Source Performance Standards for Other Solid Waste Incineration Units) and the State plan no longer applies to that unit.

(b) If the owner or operator of an existing OSWI unit makes physical or operational changes to the unit primarily to comply with the State plan, then subpart EEEE of this part does not apply to that unit. Such changes do not qualify as modifications or reconstructions under subpart EEEE of this part.

§ 60.2993 Are any combustion units excluded from my State plan?

This subpart excludes the types of units described in paragraphs (a) through (p) of this section, as long as the owner/operator meets the requirements of this section.

(a) *Cement kilns*. The unit is excluded if it is regulated under subpart LLL of part 63 of this chapter (National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry).

(b) *Co-fired combustors*. The unit, that would otherwise be considered a very small municipal waste combustion unit, is excluded if the owner/operator of the unit meets four requirements:

(1) Has a Federally enforceable permit limiting the combustion of municipal solid waste to 30 percent of the total fuel input by weight.

(2) Notifies the Administrator that the unit qualifies for the exclusion.

(3) Provides the Administrator with a copy of the Federally enforceable permit.

(4) Records the weights, each calendar quarter, of municipal solid waste and of all other fuels combusted.

(c) *Cogeneration facilities*. The unit is excluded if it meets the three requirements specified in paragraphs (c)(1) through (3) of this section.

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

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

(3) The owner/operator of the unit notifies the Administrator that the unit meets all of these criteria.

(d) *Commercial and industrial solid waste incineration units*. The unit is excluded if it is regulated under subparts CCCC or DDDD of this part and is required to meet the emission limitations established in those subparts.

(e) *Hazardous waste combustion units*. The unit is excluded if it meets either of the two criteria specified in paragraph (e)(1) or (2) of this section.

(1) The owner/operator of the unit is required to get a permit for the unit under section 3005 of the Solid Waste Disposal Act.

(2) The unit is regulated under 40 CFR part 63, subpart EEE (National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors).

(f) *Hospital/medical/infectious waste incinerators*. The unit is excluded if it is regulated under subparts Ce or Ec of this part (New Source Performance Standards and Emission Guidelines for Hospital/Medical/Infectious Waste Incinerators).

(g) *Incinerators and air curtain incinerators in isolated areas of Alaska*. The incineration unit is excluded if it is used at a solid waste disposal site in Alaska that is classified as a Class II or Class III municipal solid waste landfill, as defined in § 60.3078.

(h) *Rural institutional waste incinerators*. The incineration unit is

excluded if it is an institutional waste incinerator, as defined in § 60.3078, and located more than 50 miles from the boundary of the nearest Metropolitan Statistical Area.

(i) *Institutional boilers and process heaters*. The unit is excluded if it is regulated under 40 CFR part 63, subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters).

(j) *Laboratory Analysis Units*. The unit is excluded if it burns samples of materials only for the purpose of chemical or physical analysis.

(k) *Materials recovery units*. The unit is excluded if it combusts waste for the primary purpose of recovering metals, such as primary and secondary smelters.

(l) *Pathological waste incineration units*. The institutional waste incineration unit or very small municipal waste combustion unit is excluded from this subpart if it burns 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste as defined in § 60.3078 and the owner/operator of the unit notifies the Administrator that the unit meets these criteria.

(m) *Small or large municipal waste combustion units*. The unit is excluded if it is regulated under subparts AAAA, BBBB, Ea, Eb, or Cb, of this part and is required to meet the emission limitations established in those subparts.

(n) *Small power production facilities*. The unit is excluded if it meets the three requirements specified in paragraphs (n)(1) through (3) of this section.

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

(2) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity.

(3) The owner/operator of the unit notifies the Administrator that the unit meets all of these criteria.

(o) *Temporary-use incinerators used in disaster recovery*. The incinerator is excluded if it is used on a temporary basis to combust debris from a disaster or emergency such as a tornado, hurricane, flood, or act of bioterrorism and you comply with the requirements in § 60.3061.

(p) *Units that combust contraband or prohibited goods*. The unit is excluded if the unit is used by a government agency such as police, customs, agricultural inspection, or a similar

agency to destroy only illegal or prohibited goods such as illegal drugs, or agricultural food products that can not be transported into the country or across state lines to prevent biocontamination.

§ 60.2994 Are air curtain incinerators regulated under this subpart?

(a) Air curtain incinerators that burn less than 35 tons per day of municipal solid waste or air curtain incinerators located at institutional facilities burning any amount of institutional waste generated at that facility are subject to all requirements of this subpart, including the emission limitations specified in Table 2 of this subpart.

(b) Air curtain incinerators that burn only the materials listed in paragraphs (b)(1) through (4) of this section must meet only the requirements in §§ 60.3062 through 60.3069 and the title V operating permit requirements in §§ 60.3059 and 60.3060, and are exempt from all other requirements of this subpart.

- (1) 100 percent wood waste.
- (2) 100 percent clean lumber.
- (3) 100 percent yard waste.
- (4) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

Model Rule—Use of Model Rule

§ 60.2996 What is the purpose of the “model rule” in this subpart?

(a) The model rule provides the emission guidelines requirements in a standard regulation format. You must develop a State plan that is at least as protective as the model rule. You may use the model rule language as part of your State plan. Alternative language may be used in your State plan if you demonstrate that the alternative language is at least as protective as the model rule contained in this subpart.

(b) In the “model rule” of §§ 60.3000 to 60.3078, “you” means the owner or operator of an OSWI unit.

§ 60.2997 How does the model rule relate to the required elements of my State plan?

Use the model rule to satisfy the State plan requirements specified in § 60.2983(a)(4) and (5).

§ 60.2998 What are the principal components of the model rule?

The model rule contains nine major components, as follows:

- (a) Compliance schedule.
- (b) Waste management plan.
- (c) Operator training and qualification.
- (d) Emission limitations and operating limits.
- (e) Performance testing.
- (f) Initial compliance requirements.

(g) Continuous compliance requirements.

(h) Monitoring.

(i) Recordkeeping and reporting.

Model Rule—Compliance Schedule

§ 60.3000 When must I comply?

Table 1 of this subpart specifies the final compliance date. You must submit a notification to the Administrator stating whether final compliance has been achieved, postmarked within 10 business days after the final compliance date in Table 1 of this subpart.

§ 60.3001 What must I do if I close my OSWI unit and then restart it?

(a) If you close your OSWI unit but will reopen it prior to the final compliance date in your State plan, you must meet the final compliance date specified in Table 1 of this subpart.

(b) If you close your OSWI unit but will restart it after your final compliance date, you must complete emission control retrofit and meet the emission limitations on the date your OSWI unit restarts operation.

§ 60.3002 What must I do if I plan to permanently close my OSWI unit and not restart it?

You must close the unit before the final compliance date specified in Table 1 of this subpart.

Model Rule—Waste Management Plan

§ 60.3010 What is a waste management plan?

A waste management plan is a written plan that identifies both the feasibility and the methods used to reduce or separate certain components of solid waste from the waste stream in order to reduce or eliminate toxic emissions from incinerated waste.

§ 60.3011 When must I submit my waste management plan?

You must submit a waste management plan no later than 60 days following the initial performance test as specified in Table 5 of this subpart. Section 60.3031 specifies the date by which you are required to conduct your performance test.

§ 60.3012 What should I include in my waste management plan?

A waste management plan must include consideration of the reduction or separation of waste-stream elements such as paper, cardboard, plastics, glass, batteries, or metals; or the use of recyclable materials. The plan must identify any additional waste management measures and implement those measures the source considers practical and feasible, considering the

effectiveness of waste management measures already in place, the costs of additional measures, the emissions reductions expected to be achieved, and any other environmental or energy impacts they might have.

Model Rule—Operator Training and Qualification

§ 60.3014 What are the operator training and qualification requirements?

(a) No OSWI unit can be operated unless a fully trained and qualified OSWI unit operator is accessible, either at the facility or can be at the facility within 1 hour. The trained and qualified OSWI unit operator may operate the OSWI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified OSWI unit operators are temporarily not accessible, you must follow the procedures in § 60.3020.

(b) Operator training and qualification must be obtained through a State-approved program or by completing the requirements included in paragraph (c) of this section.

(c) Training must be obtained by completing an incinerator operator training course that includes, at a minimum, the three elements described in paragraphs (c)(1) through (3) of this section.

(1) Training on the 13 subjects listed in paragraphs (c)(1)(i) through (xiii) of this section.

(i) Environmental concerns, including types of emissions.

(ii) Basic combustion principles, including products of combustion.

(iii) Operation of the specific type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures.

(iv) Combustion controls and monitoring.

(v) Operation of air pollution control equipment and factors affecting performance (if applicable).

(vi) Inspection and maintenance of the incinerator and air pollution control devices.

(vii) Methods to monitor pollutants (including monitoring of incinerator and control device operating parameters) and monitoring equipment calibration procedures, where applicable.

(viii) Actions to correct malfunctions or conditions that may lead to malfunction.

(ix) Bottom and fly ash characteristics and handling procedures.

(x) Applicable Federal, State, and local regulations, including Occupational Safety and Health Administration workplace standards.

(xi) Pollution prevention.

- (xii) Waste management practices.
- (xiii) Recordkeeping requirements.

(2) An examination designed and administered by the instructor.

(3) Written material covering the training course topics that may serve as reference material following completion of the course.

§ 60.3015 When must the operator training course be completed?

The operator training course must be completed by the latest of the three dates specified in paragraphs (a) through (c) of this section.

(a) The final compliance date specified in Table 1 of this subpart.

(b) Six months after your OSWI unit startup.

(c) Six months after an employee assumes responsibility for operating the OSWI unit or assumes responsibility for supervising the operation of the OSWI unit.

§ 60.3016 How do I obtain my operator qualification?

(a) You must obtain operator qualification by completing a training course that satisfies the criteria under § 60.3014(c).

(b) Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under § 60.3014(c)(2).

§ 60.3017 How do I maintain my operator qualification?

To maintain qualification, you must complete an annual review or refresher course covering, at a minimum, the five topics described in paragraphs (a) through (e) of this section.

(a) Update of regulations.

(b) Incinerator operation, including startup and shutdown procedures, waste charging, and ash handling.

(c) Inspection and maintenance.

(d) Responses to malfunctions or conditions that may lead to malfunction.

(e) Discussion of operating problems encountered by attendees.

§ 60.3018 How do I renew my lapsed operator qualification?

You must renew a lapsed operator qualification by one of the two methods specified in paragraphs (a) and (b) of this section.

(a) For a lapse of less than 3 years, you must complete a standard annual refresher course described in § 60.3017.

(b) For a lapse of 3 years or more, you must repeat the initial qualification requirements in § 60.3016(a).

§ 60.3019 What site-specific documentation is required?

(a) Documentation must be available at the facility and readily accessible for all OSWI unit operators that addresses the nine topics described in paragraphs (a)(1) through (9) of this section. You must maintain this information and the training records required by paragraph (c) of this section in a manner that they can be readily accessed and are suitable for inspection upon request.

(1) Summary of the applicable standards under this subpart.

(2) Procedures for receiving, handling, and charging waste.

(3) Incinerator startup, shutdown, and malfunction procedures.

(4) Procedures for maintaining proper combustion air supply levels.

(5) Procedures for operating the incinerator and associated air pollution control systems within the standards established under this subpart.

(6) Monitoring procedures for demonstrating compliance with the operating limits established under this subpart.

(7) Reporting and recordkeeping procedures.

(8) The waste management plan required under §§ 60.3010 through 60.3012.

(9) Procedures for handling ash.

(b) You must establish a program for reviewing the information listed in paragraph (a) of this section with each incinerator operator.

(1) The initial review of the information listed in paragraph (a) of this section must be conducted by the latest of three dates specified in paragraphs (b)(1)(i) through (iii) of this section.

(i) The final compliance date specified in Table 1 of this subpart.

(ii) Six months after your OSWI unit startup.

(iii) Six months after an employee assumes responsibility for operating the OSWI unit or assumes responsibility for supervising the operation of the OSWI unit.

(2) Subsequent annual reviews of the information listed in paragraph (a) of this section must be conducted not later than 12 months following the previous review.

(c) You must also maintain the information specified in paragraphs (c)(1) through (3) of this section.

(1) Records showing the names of OSWI unit operators who have completed review of the information in paragraph (a) of this section as required by paragraph (b) of this section, including the date of the initial review and all subsequent annual reviews.

(2) Records showing the names of the OSWI operators who have completed

the operator training requirements under § 60.3014, met the criteria for qualification under § 60.3016, and maintained or renewed their qualification under § 60.3017 or § 60.3018. Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.

(3) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

§ 60.3020 What if all the qualified operators are temporarily not accessible?

If all qualified operators are temporarily not accessible (*i.e.*, not at the facility and not able to be at the facility within 1 hour), you must meet one of the three criteria specified in paragraphs (a) through (c) of this section, depending on the length of time that a qualified operator is not accessible.

(a) When all qualified operators are not accessible for 12 hours or less, the OSWI unit may be operated by other plant personnel familiar with the operation of the OSWI unit who have completed review of the information specified in § 60.3019(a) within the past 12 months. You do not need to notify the Administrator or include this as a deviation in your annual report.

(b) When all qualified operators are not accessible for more than 12 hours, but less than 2 weeks, the OSWI unit may be operated by other plant personnel familiar with the operation of the OSWI unit who have completed a review of the information specified in § 60.3019(a) within the past 12 months. However, you must record the period when all qualified operators were not accessible and include this deviation in the annual report as specified under § 60.3051.

(c) When all qualified operators are not accessible for 2 weeks or more, you must take the two actions that are described in paragraphs (c)(1) and (2) of this section.

(1) Notify the Administrator of this deviation in writing within 10 days. In the notice, state what caused this deviation, what you are doing to ensure that a qualified operator is accessible, and when you anticipate that a qualified operator will be accessible.

(2) Submit a status report to the Administrator every 4 weeks outlining what you are doing to ensure that a qualified operator is accessible, stating when you anticipate that a qualified operator will be accessible and requesting approval from the

Administrator to continue operation of the OSWI unit. You must submit the first status report 4 weeks after you notify the Administrator of the deviation under paragraph (c)(1) of this section. If the Administrator notifies you that your request to continue operation of the OSWI unit is disapproved, the OSWI unit may continue operation for 90 days, then must cease operation. Operation of the unit may resume if you meet the two requirements in paragraphs (c)(2)(i) and (ii) of this section.

(i) A qualified operator is accessible as required under § 60.3014(a).

(ii) You notify the Administrator that a qualified operator is accessible and that you are resuming operation.

Model Rule—Emission Limitations and Operating Limits

§ 60.3022 What emission limitations must I meet and by when?

You must meet the emission limitations specified in Table 2 of this subpart on the date the initial performance test is required or completed (which is earlier). Section 60.3031 specifies the date by which you are required to conduct your performance test.

§ 60.3023 What operating limits must I meet and by when?

(a) If you use a wet scrubber to comply with the emission limitations, you must establish operating limits for four operating parameters (as specified in Table 3 of this subpart) as described in paragraphs (a)(1) through (4) of this section during the initial performance test.

(1) Maximum charge rate, calculated using one of the two different procedures in paragraphs (a)(1)(i) or (ii) of this section, as appropriate.

(i) For continuous and intermittent units, maximum charge rate is the average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(ii) For batch units, maximum charge rate is the charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(2) Minimum pressure drop across the wet scrubber, which is calculated as the average pressure drop across the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations; or minimum amperage to the wet scrubber, which is calculated as the average amperage to the wet scrubber measured during the most recent performance test

demonstrating compliance with the particulate matter emission limitations.

(3) Minimum scrubber liquor flow rate, which is calculated as the average liquor flow rate at the inlet to the wet scrubber measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(4) Minimum scrubber liquor pH, which is calculated as the average liquor pH at the inlet to the wet scrubber measured during the most recent performance test demonstrating compliance with the HCl and SO₂ emission limitation.

(b) You must meet the operating limits established during the initial performance test beginning on the date 180 days after your final compliance date in Table 1 of this subpart.

§ 60.3024 What if I do not use a wet scrubber to comply with the emission limitations?

If you use an air pollution control device other than a wet scrubber or limit emissions in some other manner to comply with the emission limitations under § 60.3022, you must petition the Administrator for specific operating limits, the values of which are to be established during the initial performance test and then continuously monitored thereafter. You must not conduct the initial performance test until after the petition has been approved by the Administrator. Your petition must include the five items listed in paragraphs (a) through (e) of this section.

(a) Identification of the specific parameters you propose to use as operating limits.

(b) A discussion of the relationship between these parameters and emissions of regulated pollutants, identifying how emissions of regulated pollutants change with changes in these parameters, and how limits on these parameters will serve to limit emissions of regulated pollutants.

(c) A discussion of how you will establish the upper and/or lower values for these parameters that will establish the operating limits on these parameters.

(d) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments.

(e) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

§ 60.3025 What happens during periods of startup, shutdown, and malfunction?

The emission limitations and operating limits apply at all times except during OSWI unit startups, shutdowns, or malfunctions.

Model Rule—Performance Testing

§ 60.3027 How do I conduct the initial and annual performance test?

(a) All performance tests must consist of a minimum of three test runs conducted under conditions representative of normal operations.

(b) All performance tests must be conducted using the methods in Table 2 of this subpart.

(c) All performance tests must be conducted using the minimum run duration specified in Table 2 of this subpart.

(d) Method 1 of appendix A of this part must be used to select the sampling location and number of traverse points.

(e) Method 3A or 3B of appendix A of this part must be used for gas composition analysis, including measurement of oxygen concentration. Method 3A or 3B of appendix A of this part must be used simultaneously with each method.

(f) Adjust all pollutant concentrations, except for opacity, to 7 percent oxygen using Equation 1 in § 60.3076.

§ 60.3028 How are the performance test data used?

You use results of performance tests to demonstrate compliance with the emission limitations in Table 2 of this subpart.

Model Rule—Initial Compliance Requirements

§ 60.3030 How do I demonstrate initial compliance with the emission limitations and establish the operating limits?

You must conduct an initial performance test, as required under § 60.8, to determine compliance with the emission limitations in Table 2 of this subpart and to establish operating limits using the procedure in § 60.3023 or § 60.3024. The initial performance test must be conducted using the test methods listed in Table 2 of this subpart and the procedures in § 60.3027.

§ 60.3031 By what date must I conduct the initial performance test?

The initial performance test must be conducted no later than 180 days after your final compliance date. Your final compliance date is specified in Table 1 of this subpart.

Model Rule—Continuous Compliance Requirements

§ 60.3033 How do I demonstrate continuous compliance with the emission limitations and the operating limits?

(a) You must conduct an annual performance test for all of the pollutants in Table 2 of this subpart for each OSWI unit to determine compliance with the emission limitations. The annual performance test must be conducted using the test methods listed in Table 2 of this subpart and the procedures in § 60.3027.

(b) You must continuously monitor carbon monoxide emissions to determine compliance with the carbon monoxide emissions limitation. Three-hour rolling average values are used to determine compliance. Operation above the carbon monoxide emission limit in Table 2 constitutes a deviation from the emission limitation.

(c) You must continuously monitor the operating parameters specified in § 60.3023 or established under § 60.3024. Operation above the established maximum or below the established minimum operating limits constitutes a deviation from the established operating limits. Three-hour rolling average values are used to determine compliance unless a different averaging period is established under § 60.3024. Operating limits do not apply during performance tests.

§ 60.3034 By what date must I conduct the annual performance test?

You must conduct annual performance tests within 12 months following the initial performance test. Conduct subsequent annual performance tests within 12 months following the previous one.

§ 60.3035 May I conduct performance testing less often?

(a) You can test less often for a given pollutant if you have test data for at least three consecutive annual tests, and all performance tests for the pollutant over that period show that you comply with the emission limitation. In this case, you do not have to conduct a performance test for that pollutant for the next 2 years. You must conduct a performance test during the third year and no more than 36 months following the previous performance test.

(b) If your OSWI unit continues to meet the emission limitation for the pollutant, you may choose to conduct performance tests for that pollutant every third year, but each test must be within 36 months of the previous performance test.

(c) If a performance test shows a deviation from an emission limitation

for any pollutant, you must conduct annual performance tests for that pollutant until three consecutive annual performance tests for that pollutant all show compliance.

§ 60.3036 May I conduct a repeat performance test to establish new operating limits?

Yes, you may conduct a repeat performance test at any time to establish new values for the operating limits. The Administrator may request a repeat performance test at any time.

Model Rule—Monitoring

§ 60.3038 What continuous emission monitoring systems must I install?

(a) You must install, calibrate, maintain, and operate continuous emission monitoring systems for carbon monoxide and for oxygen. You must monitor the oxygen concentration at each location where you monitor carbon monoxide.

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

§ 60.3039 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 carbon monoxide and oxygen.

(b) Complete your initial evaluation of the continuous emission monitoring systems within 180 days after your final compliance date in Table 1 of this subpart.

(c) For initial and annual evaluations, collect data concurrently (or within 30 to 60 minutes) using your carbon monoxide and oxygen continuous emission monitoring systems. To validate carbon monoxide concentration levels, use EPA Method 10, 10A, or 10B of appendix A of this part. Use EPA Method 3 or 3A to measure oxygen. Collect the data during each initial and annual evaluation of your continuous emission monitoring systems following the applicable performance specifications in appendix B of this part. Table 4 of this subpart shows the required span values and performance specifications that apply to each continuous emission monitoring system.

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

§ 60.3040 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.

§ 60.3041 What is the minimum amount of monitoring data I must collect with my continuous emission monitoring systems, and is the data collection requirement enforceable?

(a) Where continuous emission monitoring systems are required, obtain 1-hour arithmetic averages. Make sure the averages for carbon monoxide are in parts per million by dry volume at 7 percent oxygen. Use the 1-hour averages of oxygen data from your continuous emission monitoring system to determine the actual oxygen level and to calculate emissions at 7 percent oxygen.

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

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

(d) If you do not obtain the minimum data required in paragraphs (a) through (c) of this section, you have deviated from the data collection requirement regardless of the emission level monitored.

(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.

(f) If continuous emission monitoring systems are temporarily unavailable to meet the data collection requirements, refer to Table 4 of this subpart. It shows alternate methods for collecting data when systems malfunction or when repairs, calibration checks, or zero and span checks keep you from collecting the minimum amount of data.

§ 60.3042 How do I convert my 1-hour arithmetic averages into the appropriate averaging times and units?

(a) Use Equation 1 in § 60.3076 to calculate emissions at 7 percent oxygen.

(b) Use Equation 2 in § 60.3076 to calculate the 3-hour rolling averages for concentrations of carbon monoxide.

§ 60.3043 What operating parameter monitoring equipment must I install, and what operating parameters must I monitor?

(a) If you are using a wet scrubber to comply with the emission limitations under § 60.3022, you must install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the value of the operating parameters used to determine compliance with the operating limits listed in Table 3 of this subpart. These devices (or methods) must measure and record the values for these operating parameters at the frequencies indicated in Table 3 of this subpart at all times.

(b) You must install, calibrate (to manufacturers' specifications), maintain, and operate a device or method for measuring the use of any stack that could be used to bypass the control device. The measurement must include the date, time, and duration of the use of the bypass stack.

(c) If you are using a method or air pollution control device other than a wet scrubber to comply with the emission limitations under § 60.3022, you must install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor compliance with the site-specific operating limits established using the procedures in § 60.3024.

§ 60.3044 Is there a minimum amount of operating parameter monitoring data I must obtain?

(a) Except for monitor malfunctions, associated repairs, and required quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments of the monitoring system), you must conduct all monitoring at all times the OSWI unit is operating.

(b) You must obtain valid monitoring data for at least 75 percent of the operating hours per day for at least 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal or institutional solid waste.

(c) If you do not obtain the minimum data required in paragraphs (a) and (b) of this section, you have deviated from the data collection requirement regardless of the operating parameter level monitored.

(d) Do not use data recorded during monitor malfunctions, associated repairs, and required quality assurance or quality control activities for meeting

the requirements of this subpart, including data averages and calculations. You must use all the data collected during all other periods in assessing compliance with the operating limits.

Model Rule—Recordkeeping and Reporting

§ 60.3046 What records must I keep?

You must maintain the 14 items (as applicable) as specified in paragraphs (a) through (n) of this section for a period of at least 5 years:

(a) Calendar date of each record.

(b) Records of the data described in paragraphs (b)(1) through (8) of this section:

(1) The OSWI unit charge dates, times, weights, and hourly charge rates.

(2) Liquor flow rate to the wet scrubber inlet every 15 minutes of operation, as applicable.

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

(4) Liquor pH as introduced to the wet scrubber every 15 minutes of operation, as applicable.

(5) For affected OSWI units that establish operating limits for controls other than wet scrubbers under § 60.3024, you must maintain data collected for all operating parameters used to determine compliance with the operating limits.

(6) All 1-hour average concentrations of carbon monoxide emissions.

(7) All 3-hour rolling average values of carbon monoxide emissions and all 3-hour rolling average values of continuously monitored operating parameters.

(8) Records of the dates, times, and durations of any bypass of the control device.

(c) Identification of calendar dates and times for which continuous emission monitoring systems or monitoring systems used to monitor operating limits were inoperative, inactive, malfunctioning, or out of control (except for downtime associated with zero and span and other routine calibration checks). Identify the pollutant emissions or operating parameters not measured, the duration, reasons for not obtaining the data, and a description of corrective actions taken.

(d) Identification of calendar dates, times, and durations of malfunctions, and a description of the malfunction and the corrective action taken.

(e) Identification of calendar dates and times for which monitoring data show a deviation from the carbon

monoxide emissions limit in Table 2 of this subpart or a deviation from the operating limits in Table 3 of this subpart or a deviation from other operating limits established under § 60.3024 with a description of the deviations, reasons for such deviations, and a description of corrective actions taken.

(f) Calendar dates when continuous monitoring systems did not collect the minimum amount of data required under §§ 60.3041 and 60.3044.

(g) For carbon monoxide continuous emissions monitoring systems, document the results of your daily drift tests and quarterly accuracy determinations according to Procedure 1 of appendix F of this part.

(h) Records of the calibration of any monitoring devices required under § 60.3043.

(i) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating limits, as applicable. Retain a copy of the complete test report including calculations and a description of the types of waste burned during the test.

(j) Records showing the names of OSWI unit operators who have completed review of the information in § 60.3019(a) as required by § 60.3019(b), including the date of the initial review and all subsequent annual reviews.

(k) Records showing the names of the OSWI operators who have completed the operator training requirements under § 60.3014, met the criteria for qualification under § 60.3016, and maintained or renewed their qualification under § 60.3017 or § 60.3018. Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.

(l) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

(m) Equipment vendor specifications and related operation and maintenance requirements for the incinerator, emission controls, and monitoring equipment.

(n) The information listed in § 60.3019(a).

§ 60.3047 Where and in what format must I keep my records?

(a) You must keep each record on site for at least 2 years. You may keep the records off site for the remaining 3 years.

(b) All records must be available in either paper copy or computer-readable format that can be printed upon request, unless an alternative format is approved by the Administrator.

§ 60.3048 What reports must I submit?

See Table 5 of this subpart for a summary of the reporting requirements.

§ 60.3049 What information must I submit following my initial performance test?

You must submit the information specified in paragraphs (a), (b) and (c) of this section no later than 60 days following the initial performance test. All reports must be signed by the facilities manager.

(a) The complete test report for the initial performance test results obtained under § 60.3030, as applicable.

(b) The values for the site-specific operating limits established in § 60.3023 or § 60.3024.

(c) The waste management plan, as specified in §§ 60.3010 through 60.3012.

§ 60.3050 When must I submit my annual report?

You must submit an annual report no later than 12 months following the submission of the information in § 60.3049. You must submit subsequent reports no more than 12 months following the previous report.

§ 60.3051 What information must I include in my annual report?

The annual report required under § 60.3050 must include the ten items listed in paragraphs (a) through (j) of this section. If you have a deviation from the operating limits or the emission limitations, you must also submit deviation reports as specified in §§ 60.3052 through 60.3054.

(a) Company name and address.

(b) Statement by the owner or operator, with their name, title, and signature, certifying the truth, accuracy, and completeness of the report. Such certifications must also comply with the requirements of 40 CFR 70.5(d) or 71.5(d).

(c) Date of report and beginning and ending dates of the reporting period.

(d) The values for the operating limits established pursuant to § 60.3023 or § 60.3024.

(e) If no deviation from any emission limitation or operating limit that applies to you has been reported, a statement that there was no deviation from the emission limitations or operating limits during the reporting period, and that no monitoring system used to determine compliance with the emission limitations or operating limits was inoperative, inactive, malfunctioning or out of control.

(f) The highest recorded 3-hour average and the lowest recorded 3-hour average, as applicable, for carbon monoxide emissions and for each operating parameter recorded for the calendar year being reported.

(g) Information recorded under § 60.3046(b)(6) and (c) through (e) for the calendar year being reported.

(h) If a performance test was conducted during the reporting period, the results of that test.

(i) If you met the requirements of § 60.3035(a) or (b), and did not conduct a performance test during the reporting period, you must state that you met the requirements of § 60.3035(a) or (b), and, therefore, you were not required to conduct a performance test during the reporting period.

(j) Documentation of periods when all qualified OSWI unit operators were unavailable for more than 12 hours, but less than 2 weeks.

§ 60.3052 What else must I report if I have a deviation from the operating limits or the emission limitations?

(a) You must submit a deviation report if any recorded 3-hour average parameter level is above the maximum operating limit or below the minimum operating limit established under this subpart, if any recorded 3-hour average carbon monoxide emission rate is above the emission limitation, if the control device was bypassed, or if a performance test was conducted showed a deviation from any emission limitation.

(b) The deviation report must be submitted by August 1 of that year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data you collected during the second half of the calendar year (July 1 to December 31).

§ 60.3053 What must I include in the deviation report?

In each report required under § 60.3052, for any pollutant or operating parameter that deviated from the emission limitations or operating limits specified in this subpart, include the seven items described in paragraphs (a) through (g) of this section.

(a) The calendar dates and times your unit deviated from the emission limitations or operating limit requirements.

(b) The averaged and recorded data for those dates.

(c) Durations and causes of each deviation from the emission limitations or operating limits and your corrective actions.

(d) A copy of the operating limit monitoring data during each deviation

and any test report that documents the emission levels.

(e) The dates, times, number, duration, and causes for monitor downtime incidents (other than downtime associated with zero, span, and other routine calibration checks).

(f) Whether each deviation occurred during a period of startup, shutdown, or malfunction, or during another period.

(g) The dates, times, and durations of any bypass of the control device.

§ 60.3054 What else must I report if I have a deviation from the requirement to have a qualified operator accessible?

(a) If all qualified operators are not accessible for 2 weeks or more, you must take the two actions in paragraphs (a)(1) and (2) of this section.

(1) Submit a notification of the deviation within 10 days that includes the three items in paragraphs (a)(1)(i) through (iii) of this section.

(i) A statement of what caused the deviation.

(ii) A description of what you are doing to ensure that a qualified operator is accessible.

(iii) The date when you anticipate that a qualified operator will be available.

(2) Submit a status report to the Administrator every 4 weeks that includes the three items in paragraphs (a)(2)(i) through (iii) of this section.

(i) A description of what you are doing to ensure that a qualified operator is accessible.

(ii) The date when you anticipate that a qualified operator will be accessible.

(iii) Request approval from the Administrator to continue operation of the OSWI unit.

(b) If your unit was shut down by the Administrator, under the provisions of § 60.3020(c)(2), due to a failure to provide an accessible qualified operator, you must notify the Administrator that you are resuming operation once a qualified operator is accessible.

§ 60.3055 Are there any other notifications or reports that I must submit?

Yes, you must submit notifications as provided by § 60.7.

§ 60.3056 In what form can I submit my reports?

Submit initial, annual, and deviation reports electronically or in paper format, postmarked on or before the submittal due dates.

§ 60.3057 Can reporting dates be changed?

If the Administrator agrees, you may change the semiannual or annual reporting dates. See § 60.19(c) for procedures to seek approval to change your reporting date.

Model Rule—Title V Operating Permits**§ 60.3059 Am I required to apply for and obtain a title V operating permit for my unit?**

Yes, if you are subject to an applicable EPA-approved and effective Clean Air Act section 111(d)/129 State or Tribal plan or an applicable and effective Federal plan, you are required to apply for and obtain a title V operating permit unless you meet the relevant requirements for an exemption specified in § 60.2993.

§ 60.3060 When must I submit a title V permit application for my existing OSWI unit?

(a)(1) If your existing OSWI unit is not subject to an earlier permit application deadline, a complete title V permit application must be submitted by the earlier of the dates specified in paragraphs (a)(1)(i) through (iii) of this section. (See sections 129(e), 503(c), 503(d), and 502(a) of the Clean Air Act and 40 CFR 70.5(a)(1)(i) and 71.5(a)(1)(i).)

(i) 12 months after the effective date of any applicable EPA-approved Clean Air Act section 111(d)/129 State or Tribal plan.

(ii) 12 months after the effective date of any applicable Federal plan.

(iii) 36 months after [DATE THE FINAL RULE IS PUBLISHED IN THE Federal Register].

(2) For any existing OSWI unit not subject to an earlier permit application deadline, the application deadline of 36 months after the promulgation of 40 CFR part 60, subpart FFFF, applies regardless of whether or when any applicable Federal plan is effective, or whether or when any applicable Clean Air Act section 111(d)/129 State or Tribal plan is approved by the EPA and becomes effective.

(b) If your OSWI unit is subject to title V as a result of some triggering requirement(s) other than those specified in paragraph (a) of this section (for example, an OSWI unit may be a major source or part of a major source), then your unit may be required to apply for a title V permit prior to the deadlines specified in paragraph (a). If more than one requirement triggers a source's obligation to apply for a title V permit, the 12-month time frame for filing a title V permit application is triggered by the requirement that first causes the source to be subject to title V. (See section 503(c) of the Clean Air Act and 40 CFR 70.3(a) and (b), 70.5(a)(1)(i), 71.3(a) and (b), and 71.5(a)(1)(i).)

(c) A "complete" title V permit application is one that has been determined or deemed complete by the

relevant permitting authority under section 503(d) of the Clean Air Act and 40 CFR 70.5(a)(2) or 71.5(a)(2). You must submit a complete permit application by the relevant application deadline in order to operate after this date in compliance with Federal law. (See sections 503(d) and 502(a) of the Clean Air Act and 40 CFR 70.7(b) and 71.7(b).)

Model Rule—Temporary Use Incinerators Used in Disaster Recovery**§ 60.3061 What are the requirements for temporary use incinerators used in disaster recovery?**

Your incinerator is excluded from the requirements of this subpart if it is used on a temporary basis to combust debris from a disaster or emergency such as a tornado, hurricane, flood, or act of bioterrorism, and you follow the requirements in paragraphs (a) or (b) of this section, depending on the extent of response necessary for disaster recovery.

(a) If the incinerator is used to combust debris in an area declared a State of Emergency by a State government, or the President, under the authority of the Stafford Act, has declared that an emergency or a major disaster exists in the area, then the incinerator is excluded from the requirements of this subpart.

(b) If the incinerator is used to combust debris in an area that is not declared a State of Emergency or major disaster, then you must meet the requirements of paragraphs (b)(1) through (b)(3) of this section, depending on the length of time the incinerator will be used at the same location.

(1) If the incinerator is used for less than 8 weeks at the same location, then it is excluded from the requirements of this subpart. You do not need to notify the Administrator of its use or meet the emission limits or other requirements of this subpart.

(2) If the incinerator will be used for 8 weeks or more at the same location, you must notify the Administrator that the temporary use incinerator will be used for 8 weeks or more and request permission to continue to operate the incinerator.

(i) The notification must be submitted in writing by the date 8 weeks after you start operation of the temporary use incinerator at its current location.

(ii) The notification must contain the date the incinerator started operation at its current location, identification of the disaster or emergency for which the incinerator is being used, a description of the types of materials being burned in the incinerator, a brief description of the size and design of the incinerator (for example, an air curtain incinerator or a

modular starved-air incinerator), the reasons the incinerator must be operated for more than 8 weeks, and the amount of time for which you request permission to operate, including the date you expect to cease operation of the incinerator.

(3) If you submitted the notification containing the information in paragraph (b)(2)(ii) by the date specified in paragraph (b)(2)(i), you may continue to operate the incinerator for 8 additional weeks, which is a total of 16 weeks from the date the incinerator started operation in its current location. You do not have to meet the emission limits or other requirements of this subpart during this period.

(i) At the end of 16 weeks from the date the incinerator started operation in its current location, you must cease operation of the incinerator or comply with all requirements of this subpart, unless the Administrator has approved in writing your request to continue operation.

(ii) If the Administrator has approved in writing your request to continue operation, then you may continue to operate the incinerator until the date specified in the approval, and you do not need to comply with any other requirements of this subpart during the approved time period.

Model Rule—Air Curtain Incinerators That Burn Only Wood Waste, Clean Lumber, and Yard Waste**§ 60.3062 What is an air curtain incinerator?**

(a) An air curtain incinerator operates by forcefully projecting a curtain of air across an open, integrated combustion chamber (fire box) or open pit or trench (trench burner) in which combustion occurs. For the purpose of this subpart and subpart EEEE only, air curtain incinerators include both firebox and trench burner units.

(b) Air curtain incinerators that burn only the materials listed in paragraphs (b)(1) through (4) of this section are required to meet only the requirements in §§ 60.3062 through 60.3068 and are exempt from all other requirements of this subpart.

(1) 100 percent wood waste.

(2) 100 percent clean lumber.

(3) 100 percent yard waste.

(4) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

§ 60.3063 When must I comply if my air curtain incinerator burns only wood waste, clean lumber, and yard waste?

Table 1 of this subpart specifies the final compliance date. You must submit a notification to the Administrator postmarked within 10 business days

after the final compliance date in Table 1 of this subpart.

§ 60.3064 What must I do if I close my air curtain incinerator that burns only wood waste, clean lumber, and yard waste and then restart it?

(a) If you close your incinerator but will reopen it prior to the final compliance date in your State plan, you must meet the final compliance date specified in Table 1 of this subpart.

(b) If you close your incinerator but will restart it after your final compliance date, you must meet the emission limitations on the date your incinerator restarts operation.

§ 60.3065 What must I do if I plan to permanently close my air curtain incinerator that burns only wood waste, clean lumber, and yard waste and not restart it?

You must close the unit before the final compliance date specified in Table 1 of this subpart.

§ 60.3066 What are the emission limitations for air curtain incinerators that burn only wood waste, clean lumber, and yard waste?

(a) Within 180 days after your final compliance date in Table 1 of this subpart, you must meet the two limitations specified in paragraphs (a)(1) and (2) of this section.

(1) The opacity limitation is 10 percent (6-minute average), except as

described in paragraph (a)(2) of this section.

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

(b) The limitations in paragraph (a) of this section apply at all times except during malfunctions.

§ 60.3067 How must I monitor opacity for air curtain incinerators that burn only wood waste, clean lumber, and yard waste?

(a) Use Method 9 of appendix A of this part to determine compliance with the opacity limitation.

(b) Conduct an initial test for opacity as specified in § 60.8 within 180 days after the final compliance date in Table 1 of this subpart.

(c) After the initial test for opacity, conduct annual tests no more than 12 calendar months following the date of your previous test.

§ 60.3068 What are the recordkeeping and reporting requirements for air curtain incinerators that burn only wood waste, clean lumber, and yard waste?

(a) Keep records of results of all initial and annual opacity tests in either paper copy or computer-readable format that can be printed upon request, unless the Administrator approves another format, for at least 5 years. You must keep each record on site for at least 2 years. You

may keep the records off site for the remaining 3 years.

(b) Make all records available for submittal to the Administrator or for an inspector's review.

(c) You must submit the results (each 6-minute average) of the initial opacity tests no later than 60 days following the initial test. Submit annual opacity test results within 12 months following the previous report.

(d) Submit initial and annual opacity test reports as electronic or paper copy on or before the applicable submittal date.

(e) Keep a copy of the initial and annual reports for a period of 5 years. You must keep each report on site for at least 2 years. You may keep the reports off site for the remaining 3 years.

§ 60.3069 Am I required to apply for and obtain a title V operating permit for my air curtain incinerator that burns only wood waste, clean lumber, and yard waste?

Yes, if your air curtain is subject to this subpart, you are required to apply for and obtain a title V operating permit as specified in §§ 60.3059 and 60.3060.

Model Rule—Equations

§ 60.3076 What equations must I use?

(a) *Percent oxygen.* Adjust all pollutant concentrations to 7 percent oxygen using Equation 1 of this section.

$$C_{\text{adj}} = C_{\text{meas}} * (20.9 - 7) / (20.9 - \%O_2) \quad (\text{Eq. 1})$$

Where:

C_{adj} = pollutant concentration adjusted to 7 percent oxygen.

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

$(20.9 - 7)$ = 20.9 percent oxygen-7 percent oxygen (defined oxygen correction basis).

20.9 = oxygen concentration in air, percent.

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

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

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

(i) If your very small 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 very small 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 very small municipal waste combustion units with a design not based on heat input capacity, use the maximum design charging rate.

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

combust $24/16$, or 1.5 batches, in 24 hours.

(d) *Carbon monoxide pollutant rate.* When hourly average pollutant rates (E_h) are obtained (e.g., CEMS values), compute the rolling average carbon monoxide pollutant rate (E_a) for each 3-hour period using the following equation:

$$E_a = \frac{1}{3} \sum_{j=1}^3 E_{hj} \quad (\text{Eq. 2})$$

Where:

E_a = Average carbon monoxide pollutant rate for the 3-hour period, ppm corrected to 7 percent O_2 .

E_{hj} = Hourly arithmetic average pollutant rate for hour "j," ppm corrected to 7 percent O_2 .

Model Rule—Definitions

§ 60.3078 What definitions must I know?

Terms used but not defined in this subpart are defined in the Clean Air Act and subpart A (General Provisions) of this part.

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

Air curtain incinerator means an incineration unit operating by forcefully projecting a curtain of air across an open, integrated combustion chamber (fire box) or open pit or trench (trench burner) in which combustion occurs. For the purpose of this subpart and subpart EEEE only, air curtain incinerators include both firebox and trench burner units.

Auxiliary fuel means natural gas, liquified petroleum gas, fuel oil, or diesel fuel.

Batch OSWI unit means an OSWI unit that is designed such that neither waste charging nor ash removal can occur during combustion.

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

Calendar year means 365 consecutive days starting on January 1 and ending on December 31.

Chemotherapeutic waste means waste material resulting from the production or use of anti-neoplastic agents used for the purpose of stopping or reversing the growth of malignant cells.

Class II municipal solid waste landfill means a landfill that meets four criteria:

- (1) Accepts, for incineration or disposal, less than 20 tons per day of municipal solid waste or other solid wastes based on an annual average;
- (2) Is located on a site where there is no evidence of groundwater pollution caused or contributed to by the landfill;
- (3) Is not connected by road to a Class I municipal solid waste landfill, as defined by Alaska regulatory code 18 AAC 60.300(c) or, if connected by road, is located more than 50 miles from a Class I municipal solid waste landfill; and

- (4) Serves a community that meets one of two criteria:

- (i) Experiences for at least three months each year, an interruption in access to surface transportation, preventing access to a Class I municipal solid waste landfill; or

- (ii) Has no practicable waste management alternative, with a landfill located in an area that annually receives 25 inches or less of precipitation.

Class III municipal solid waste landfill is a landfill that is not connected by road to a Class I municipal solid waste landfill, as defined by Alaska regulatory code 18 AAC 60.300(c) or, if connected by road, is located more than 50 miles from a Class

I municipal solid waste landfill, and that accepts, for disposal, either of the following two criteria:

- (1) Ash from incinerated municipal waste in quantities less than one ton per day on an annual average, which ash must be free of food scraps that might attract animals; or

- (2) Less than five tons per day of municipal solid waste, based on an annual average, and is not located in a place that meets either of the following criteria:

- (i) Where public access is restricted, including restrictions on the right to move to the place and reside there; or

- (ii) That is provided by an employer and that is populated totally by persons who are required to reside there as a condition of employment and who do not consider the place to be their permanent residence.

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

Collected from means the transfer of material from the site at which the material is generated to a separate site where the material is burned.

Contained gaseous material means gases that are in a container when that container is combusted.

Continuous emission monitoring system or CEMS means a monitoring system for continuously measuring and recording the emissions of a pollutant from an affected OSWI unit.

Continuous OSWI unit means an OSWI unit that is designed to allow waste charging and ash removal during combustion.

Deviation means any instance in which an OSWI unit that meets the requirements in § 60.2991, or an owner or operator of such an OSWI unit:

- (1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation, operating limit, or operator qualification and accessibility requirements;

- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any OSWI unit that meets requirements in § 60.2991 and is required to obtain such a permit; or

- (3) Fails to meet any emission limitation, operating limit, or operator qualification and accessibility requirement in this subpart during startup, shutdown, or malfunction,

regardless of whether or not such failure is allowed by this subpart.

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

Energy recovery means the process of recovering thermal energy from combustion for useful purposes such as steam generation or process heating.

Institution means organizations having a governmental, educational, civic, or religious purpose such as schools, hospitals, prisons, government facilities, churches, and other similar establishments or facilities.

Institutional waste means solid waste combusted for reasons that do not include the recovery of heat for a useful purpose, or combusted without heat recovery or with only waste heat recovery (*i.e.*, no heat recovery in the combustion firebox), in an enclosed unit using controlled flame combustion that is a distinct operating unit of the institutional facility. Institutional waste also includes solid waste combusted on-site in an air curtain incinerator that is a distinct operating unit of the institutional facility that generated the waste.

Institutional waste incineration unit means any combustion unit that combusts institutional waste (as defined in this subpart), that is a distinct operating unit of the institutional facility that generated the waste. Institutional waste incineration units include field-erected, modular, and custom built incineration units operating with starved or excess air, and any air curtain incinerator that is a distinct operating unit of the institutional facility that generated the institutional waste (except those air curtain incinerators listed in § 60.2994(b)).

Intermittent OSWI unit means an OSWI unit that is designed to allow waste charging, but not ash removal, during combustion.

Low-level radioactive waste means waste material that contains radioactive nuclides emitting primarily beta or gamma radiation, or both, in concentrations or quantities that exceed applicable Federal or State standards for unrestricted release. Low-level radioactive waste is not high-level radioactive waste, spent nuclear fuel, or byproduct material as defined by the Atomic Energy Act of 1954 (42 U.S.C. 2014(e)(2)).

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused,

in part, by poor maintenance or careless operation are not malfunctions.

Modification or modified OSWI unit means an OSWI unit you have changed on or after the date 6 months after [DATE THE FINAL RULE IS PUBLISHED IN THE **Federal Register**] 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 OSWI unit (not including the cost of land) updated to current costs (current dollars). To determine what systems are within the boundary of the OSWI unit used to calculate these costs, see the definition of OSWI unit.

(2) Any physical change in the OSWI unit or change in the method of operating it that increases the amount of any air pollutant emitted for which section 129 or section 111 of the Clean Air Act has established standards.

Municipal solid waste means refuse (and refuse-derived fuel) collected from the general public and from residential, commercial, institutional, and industrial sources consisting of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials and non-combustible materials such as metal, glass and rock, provided that:

(1) The term does not include industrial process wastes or medical wastes that are segregated from such other wastes; and

(2) An incineration unit shall not be considered to be combusting municipal waste for purposes of this subpart if it combusts a fuel feed stream, 30 percent or less of the weight of which is comprised, in aggregate, of municipal waste, as determined by § 60.2993(c).

Municipal waste combustion unit means, for the purpose of this subpart and subpart EEEE, any setting or equipment that combusts municipal solid waste (as defined in this subpart) including, but not limited to, field-erected, modular, and custom built incineration units (with or without heat recovery) operating with starved or excess air, boilers, furnaces, pyrolysis/combustion units, and air curtain incinerators (except those air curtain incinerators listed in § 60.2994(b)).

Other solid waste incineration (OSWI) unit means either a very small municipal waste combustion unit or an institutional waste incineration unit, as defined in this subpart. While not all OSWI units will include all of the following components, an OSWI unit includes, but is not limited to, the municipal or institutional solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The

OSWI unit does not include air pollution control equipment or the stack. The OSWI unit boundary starts at the municipal or institutional waste hopper (if applicable) and extends through two areas:

(1) The combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and

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

Particulate matter means total particulate matter emitted from OSWI units as measured by Method 5 or Method 29 of appendix A of this part.

Pathological waste means waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable).

Reconstruction means rebuilding an OSWI unit and meeting two criteria:

(1) The reconstruction begins on or after 6 months after [DATE THE FINAL RULE IS PUBLISHED IN THE **Federal Register**].

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

Shutdown means the period of time after all waste has been combusted in the primary chamber. For continuous OSWI, shutdown shall commence no less than 2 hours after the last charge to the incinerator. For intermittent OSWI, shutdown shall commence no less than 4 hours after the last charge to the incinerator. For batch OSWI, shutdown shall commence no less than 5 hours after the high-air phase of combustion has been completed.

Solid waste means any garbage, refuse, sludge from a waste treatment

plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1342), or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C. 2014).

Standard conditions, when referring to units of measure, means a temperature of 68 °F (20 °C) and a pressure of 1 atmosphere (101.3 kilopascals).

Startup period means the period of time between the activation of the system and the first charge to the unit. For batch OSWI, startup means the period of time between activation of the system and ignition of the waste.

Very small municipal waste combustion unit means any municipal waste combustion unit that has the capacity to combust less than 35 tons per day of municipal solid waste or refuse-derived fuel, as determined by the calculations in § 60.3076.

Waste heat recovery means the process of recovering heat from the combustion flue gases by convective heat transfer only.

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

Wood waste means untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include:

(1) Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands.

(2) Construction, renovation, or demolition wastes.

(3) Clean lumber.

Yard waste means grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs. Yard waste comes 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.

(2) Clean lumber.

As stated in § 60.3000, you must comply with the following:

Tables to Subpart FFFF of Part 60

TABLE 1 TO SUBPART FFFF OF PART 60.—MODEL RULE—COMPLIANCE SCHEDULE

Complete this action	By this date ^a
Final compliance. ^b	Dates to be specified in State plan). ^c

^a Site-specific schedules can be used at the discretion of the State.

^b Final compliance means that you complete all process changes and retrofit of control devices so that, when the affected OSWI unit is brought on line, all process changes and air pollution control devices necessary to meet the emission limitations operate as designed.

^c The date can be no later than 3 years after the effective date of State plan approval or 5 years after [DATE THE FINAL RULE IS PUBLISHED IN THE **Federal Register**], whichever is earlier.

As stated in § 60.3022, you must comply with the following:

TABLE 2 TO SUBPART FFFF OF PART 60.—MODEL RULE—EMISSION LIMITATIONS

For the air pollutant	You must meet this emission limitation ^a	Using this averaging time	And determining compliance using this method
1. Cadmium	18 micrograms per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Method 29 of appendix A of this part.
2. Carbon monoxide	5.0 parts per million by dry volume.	3-run average (1 hour minimum sample time per run during performance test, and 3-hour rolling averages measured using continuous emissions monitoring system) ^b .	Method 10, 10A, or 10B of appendix A of this part.
3. Dioxins/furans (total basis)	33 nanograms per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Method 23 of appendix A of this part.
4. Hydrogen chloride	3.7 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Method 26A of appendix A of this part.
5. Lead	226 micrograms per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Method 29 of appendix A of this part.
6. Mercury	74 micrograms per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Method 29 of appendix A of this part.
7. Opacity	10 percent	6-run average (1 hour minimum sample time per run).	Method 9 of appendix A of this part.
8. Oxides of nitrogen	103 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Method 7, 7A, 7C, 7D, or 7E of appendix A of this part. ASME PTC 19–10–1981–Part 10 is an acceptable alternative to Method 7 and 7C only (IBR, see § 60.17(h)).
9. Particulate matter	0.013 grains per dry standard cubic foot.	3-run average (1 hour minimum sample time per run).	Method 5 or 29 of appendix A of this part.
10. Sulfur dioxide	3.1 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Method 6 or 6C of appendix A of this part, ASME PTC 19–10–1981–Part 10 is an acceptable alternative to Method 6 only (IBR, see § 60.17(h)).

^a All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions.

^b Calculated each hour as the average of the previous 3 operating hours.

As stated in § 60.3023, you must comply with the following:

TABLE 3 TO SUBPART FFFF OF PART 60.—MODEL RULE—OPERATING LIMITS FOR INCINERATORS AND WET SCRUBBERS

For these operating parameters	You must establish these operating limits	And monitoring using these minimum frequencies		
		Date measurement	Data recording	Averaging Time
1. Charge rate	Maximum charge rate	Continuous	Every hour	Daily for batch units. 3-hour rolling for continuous and intermittent units. ^a
2. Pressure drop across the wet scrubber or amperage to wet scrubber.	Minimum pressure drop or amperage.	Continuous	Every 15 minutes	3-hour rolling. ^a
3. Scrubber liquor flow rate.	Minimum flow rate	Continuous	Every 15 minutes	3-hour rolling. ^a

TABLE 3 TO SUBPART FFFF OF PART 60.—MODEL RULE—OPERATING LIMITS FOR INCINERATORS AND WET SCRUBBERS—Continued

For these operating parameters	You must establish these operating limits	And monitoring using these minimum frequencies		
		Date measurement	Data recording	Averaging Time
4. Scrubber liquor pH	Minimum pH	Continuous	Every 15 minutes	3-hour rolling ^a .

^a Calculated each hour as the average of the previous 3 operating hours.

As stated in § 60.3039, you must comply with the following:

TABLE 4 TO SUBPART FFFF OF PART 60.—MODEL RULE—REQUIREMENTS FOR CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS)

For the following pollutants	Use the following span values for your CEMS	Use the following performance specifications (P.S.) in appendix B of this part for your CEMS	If needed to meet minimum data requirements, use the following alternate methods in appendix A of this part to collect data
1. Carbon Monoxide	125 percent of the maximum hourly potential carbon monoxide emissions of the waste combustion unit.	P.S.4A	Method 10.
2. Oxygen	25 percent oxygen	P.S.3	Method 3A or 3B. ASME PTC 19–10–1981—Part 10 is an acceptable alternative to Method 3B only (IBR, see § 60.17(h)).

As stated in § 60.3048, you must comply with the following:

TABLE 5 TO SUBPART FFFF OF PART 60.—MODEL RULE—SUMMARY OF REPORTING REQUIREMENTS^a

Report	Due date	Contents	Reference
1. Initial test report	a. No later than 60 days following the the initial performance test.	i. Complete test report for initial performance test; and ii. The values for the site-specific operating limits.	§ 60.3049. § 60.3049.
2. Waste management plan	a. No later than 60 days following the initial performance test.	i. Reduction or separation of recyclable materials; and ii. Identification of additional waste management measures and how they will be implemented.	§§ 60.3010 through 60.3012. §§ 60.3010 through 60.3012.
3. Annual report	a. No later than 12 months following the submission of the initial test report. Subsequent reports are to be submitted no more than 12 months following the previous report.	i. Company Name and ii. Statement and signature by the owner or operator;. iii. Date of report; iv. Values for the operating limits; v. If no deviations or malfunctions were reported, a statement that no deviations occurred during the reporting period;. vi. Highest recorded 3-hour average and the lowest 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported;. vii. Information for deviations or malfunctions recorded under § 60.2949(b)(6) and (c) through (e);.	§§ 60.3050 and 60.3051. §§ 60.3050 and 60.3051. §§ 60.3050 and 60.3051. §§ 60.3050 and 60.3051. §§ 60.3050 and 60.3051. §§ 60.3050 and 60.3051.

TABLE 5 TO SUBPART FFFF OF PART 60.—MODEL RULE—SUMMARY OF REPORTING REQUIREMENTS ^a—Continued

Report	Due date	Contents	Reference
4. Emission limitation or operating limit deviation report.	b. By August 1 of that year for data collected during the first half of the calendar year. By February 1 of the following year for data collected during the second half of the calendar year.	viii. If a performance test was conducted during the reporting period, the results of the test;.	§§ 60.3050 and 60.3051.
		ix. If a performance test was not conducted during the reporting period, a statement that the requirements of § 60.2934(a) or (b) were met; and.	§§ 60.3050 and 60.3051.
		x. Documentation of periods when all qualified OSWI unit operators were unavailable for more than 12 hours but less than 2 weeks.	§§ 60.3050 and 60.3051.
		i. Dates and times of deviation;	§§ 60.3052 and 60.3053.
		ii. Averaged and recorded data for those dates;.	§§ 60.3052 and 60.3053.
		iii. Duration and causes of each deviation and the corrective actions taken.	§§ 60.3052 and 60.3053.
		iv. Copy of operating limit monitoring data and any test reports;.	§§ 60.3052 and 60.3053.
5. Qualified operator deviation notification.	a. Within 10 days of deviation.	v. Dates, times, and causes for monitor downtime incidents; and	§§ 60.3052 and 60.3053.
		vi. Whether each deviation occurred during a period of start-up, shutdown, or malfunction §§ 60.3052 and 60.3053.	§§ 60.3052 and 60.3053.
		i. Statement of cause of deviation;	§ 60.3054(a)(1)
6. Qualified operation deviation status report.	a. Every 4 weeks following deviation.	ii. Description of efforts to have an accessible qualified operator; and.	§ 60.3054(a)(1)
		iii. The date a qualified operator will be accessible.	§ 60.3054(a)(1)
		i. Description of efforts to have an accessible qualified operator;.	§ 60.3054(a)(2)
7. Qualified operator deviation notification of resumed operation.	a. Prior to resuming operation	ii. The date a qualified operator will be accessible; and.	§ 60.3054(a)(2)
		iii. Request to continue operation	§ 60.3054(a)(2)
		i. Notification that you are resuming operation.	§ 60.3054(b).

^a This table is only a summary, see the referenced sections of the rule for the complete requirements.