

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 60

[AD-FRL-6905-1]

RIN 2060-AF91

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

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final standards and guidelines.

SUMMARY: We are promulgating standards and guidelines for new and existing commercial and industrial solid waste incineration (CISWI) units. These standards and guidelines fulfill the requirements of sections 111 and 129 of the Clean Air Act (CAA), which require us to promulgate standards and

guidelines for CISWI units. The final standards and guidelines will protect public health by reducing exposure to air pollution, including several hazardous air pollutants (HAP) that can cause toxic effects such as eye, nose, throat, and skin irritation; reproductive effects; and cancer. These standards and guidelines apply only to CISWI units burning nonhazardous wastes.

EFFECTIVE DATE: January 30, 2001.

ADDRESSES: *Docket.* Docket No. A-94-63 contains the supporting information used in developing the final standards and guidelines and is available for public inspection and copying between 8 a.m. and 5:30 p.m., Monday through Friday, at the Air and Radiation Docket and Information Center, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460, telephone (202) 260-7548, fax (202) 260-4000. The docket is available at the above address in Room M-1500, Waterside Mall (ground floor, central

mall). A reasonable fee may be charged for copying.

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SUPPLEMENTARY INFORMATION:

Background Information. A list of combustion related rules is available on the Combustion Group website on the EPA Technology Transfer Network website (TTN Web) at <http://www.epa.gov/ttn/uatw/combust/list.html>. You may obtain **Federal Register** notices, supporting information, and docket indices for these combustion related rules.

Regulated Entities. These standards and guidelines affect the following North American Industrial Classification System (NAICS) and Standard Industrial Classification (SIC) codes:

Category	NAICS Code	SIC Code	Examples of potentially regulated entities
Any industry using a solid waste incinerator as defined in the regulations.	325	28	Manufacturers of chemicals and allied products.
	325	34	Manufacturers of electronic equipment.
	421	36	Manufacturers of wholesale trade, durable goods.
	321, 337	24, 25	Manufacturers of lumber and wood furniture.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists examples of the types of entities that could be affected by this action. Other types of entities not listed in this table could also be affected. To determine whether your facility, company, business organization, etc., is regulated by this action, you should carefully examine the applicability criteria in 40 CFR 60.2010 of subpart CCCC and 40 CFR 60.2505 of subpart DDDD.

Judicial Review. We proposed this rule for CISWI units in the **Federal Register** on November 30, 1999 (64 FR 67092). This action adopting a rule for CISWI units constitutes final administrative action on that proposal. Under section 307(b)(1) of the CAA, judicial review of this final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by January 30, 2001. Under section 307(d)(7)(B) of the CAA, only an objection to this rule that was raised with reasonable specificity during the period for public comment can be raised during judicial review. Moreover, under section 307(b)(2) of the CAA, the requirements established by today's

final action may not be challenged separately in any civil or criminal proceeding brought by the EPA to enforce these requirements.

Organization of this Document. The following outline is provided to aid in locating information in this preamble. With the exception of section V, which covers various administrative requirements, each section heading of the preamble is presented as a question, and the text in the section answers the question.

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- D. Which elements of the definition of solid waste have been retained and clarified?
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- B. Executive Order 13132: Federalism
- C. Executive Order 13084: Consultation and Coordination with Indian Tribal Governments
- D. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks
- E. Unfunded Mandates Reform Act
- F. Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory

Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 *et seq.*
 G. Paperwork Reduction Act
 H. National Technology Transfer and Advancement Act
 I. Congressional Review Act

Abbreviations and Acronyms Used in This Document

BDT Best demonstrated technology
 Btu British thermal units
 CAA Clean Air Act
 CFR Code of Federal Regulations
 CISWI Commercial and industrial solid waste incineration
 EG Emission guidelines
 EPA Environmental Protection Agency
 FACA Federal Advisory Committee Act
 FR **Federal Register**
 HMIWI Hospital/medical/infectious waste incineration
 HWI Hazardous waste incinerator
 ICCR Industrial Combustion Coordinated Rulemaking
 ICR Information Collection Request
 kg/hr Kilograms per hour
 lbs/hr Pounds per hour
 MACT Maximum achievable control technology
 mg/dscm Milligrams per dry standard cubic meter

Mg/yr Megagrams per year
 MWC Municipal waste combustion
 NAICS North American Industrial Classification System
 ng/dscm Nanograms per dry standard cubic meter
 NSPS New source performance standards
 NTTAA National Technology Transfer and Advancement Act
 OMB Office of Management and Budget
 ppm Parts per million
 RFA Regulatory Flexibility Act
 SBA Small Business Administration
 SBREFA Small Business Regulatory Enforcement Fairness Act
 SIC Standard Industrial Classification
 SWDA Solid Waste Disposal Act
 TEQ Toxic equivalency
 TTN Web Technology Transfer Network Website
 UMRA Unfunded Mandates Reform Act
 U.S.C. United States Code

I. Background Information

A. What Information is Covered in This Preamble?

We summarize the important features of the standards and guidelines that apply to CISWI units in this preamble. The preamble also outlines the

significant issues and changes in response to public comments, the environmental impacts of these standards and guidelines, and the administrative requirements relative to this action.

B. Where in the Code of Federal Regulations Will These Standards and Guidelines be Codified?

The Code of Federal Regulations (CFR) is a codification of the general and permanent rules published in the **Federal Register** by the Executive departments and agencies of the Federal Government. The code is divided into 50 titles that represent broad areas subject to Federal regulation. The final standards and guidelines for CISWI units will be published in Title 40, Protection of the Environment. Part 60 of title 40 includes standards of performance for new stationary sources and emission guidelines and compliance times for existing sources. The table below lists the subparts in which the standards and guidelines will be codified.

Title of the regulation	Subpart in title 40, part 60
Standards of Performance for New Stationary Sources: Commercial and Industrial Solid Waste Incineration Units	Subpart CCCC.
Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units	Subpart DDDD.

C. What is the Regulatory Development Background for These Standards and Guidelines?

Section 129 of the CAA requires us to develop new source performance standards (NSPS) and emission guidelines (EG) for "solid waste incineration units combusting commercial or industrial waste." We refer to these units as "commercial and industrial solid waste incineration" (CISWI) units. On December 28, 1994 (59 FR 66850), the EPA published an advance notice of proposed rulemaking in the **Federal Register**. That notice requested information and data concerning the operation, location, emissions, and emission controls for CISWI units.

In September 1996, we chartered the Industrial Combustion Coordinated Rulemaking (ICCR) advisory committee under the Federal Advisory Committee Act (FACA). The committee's objective was to develop recommendations for regulations for several combustion source categories under sections 112 and 129 of the CAA. The ICCR advisory committee, known as the Coordinating Committee, formed Source Work Groups for the various combustor types covered under the ICCR. One work group, the

Incinerator Work Group, was formed to research issues related to CISWI units. The Incinerator Work Group submitted recommendations, information, and data analysis results to the Coordinating Committee, which in turn considered them and submitted recommendations and information to us. We have reviewed and considered the Committee's recommendations in developing these regulations for CISWI units. The Committee's 2-year charter expired in September 1998.

Pursuant to a February 1995 consent decree (as modified in July 1997), the Administrator was required to sign a notice of proposed rulemaking for CISWI units by November 15, 1999 for publication in the **Federal Register**. The consent decree also requires the Administrator to sign a notice of final rulemaking for CISWI units by November 15, 2000 for publication in the **Federal Register**.

The proposed rule satisfies the first requirement in the consent decree, and this final rule satisfies the second requirement.

D. What is the Statutory Authority for These Standards and Guidelines?

Section 129 of the CAA requires us to develop and adopt NSPS and EG for

CISWI units pursuant to section 111 of the CAA. Section 111(b) requires us to establish NSPS for new sources, and section 111(d) requires us to establish EG for existing sources. Under section 129, the NSPS and EG adopted for CISWI units must reflect maximum achievable control technology (MACT). This term "MACT" is defined in section 129 of the CAA as the maximum degree of reduction in emissions of air pollutants that the Administrator determines is achievable, taking into consideration the cost of achieving the reductions and any nonair quality health and environmental impacts and energy requirements.

E. What are New Source Performance Standards?

The NSPS apply to new stationary sources, that is, sources whose construction begins after the NSPS is proposed or sources that are reconstructed or modified on or after a specified date. The following are the key elements in an NSPS.

1. *Source category* means the industry or type of process that is regulated. The source category in today's final standards is CISWI units.

2. *Affected facility* means the equipment subject to the NSPS. The

affected facility in today's final standards is each individual CISWI unit.

3. *Pollutants* means the particular air pollutants emitted by the affected facility that the standards regulate. Section 129 requires us to regulate nine pollutants: cadmium, carbon monoxide, dioxins/furans, fine and total particulate matter, hydrogen chloride, lead, mercury, oxides of nitrogen, and sulfur dioxide. Under section 129, opacity standards may also be required as appropriate.

4. *Maximum achievable control technology* means the technology on which the emission standards will be based. Section 129(a)(2) 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 nonair quality health and environmental impacts and energy requirements, determines is achievable * * *." (Note that the basis of these solid waste incineration standards is different from that of the typical NSPS under section 111. The basis of the typical NSPS is "best demonstrated technology." These solid waste incineration NSPS are based on MACT and, in this sense, therefore, are similar to national emission standards for hazardous air pollutants (NESHAP) for new sources under section 112.)

5. *Format* means the form in which the standards are expressed; for example, as pollutant concentration emission limitations, as a percent reduction in emissions, or as equipment or work practice requirements.

6. *Standards* generally means emission limitations based on the level of reduction that the MACT can achieve. Under certain circumstances, it may not be possible to develop emission limitations if the level of performance cannot be identified. 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 emission limitations.

7. *Other considerations.* In addition to emission limitations, NSPS usually include monitoring requirements, performance test methods and compliance procedures, and reporting

and recordkeeping requirements. Section 129 also directs EPA to establish siting requirements for new incineration units and operator certification and training requirements for all units.

F. What Are Emission Guidelines?

The EG are similar to the NSPS, except that they apply to existing sources, that is, sources whose construction begins on or before the date the NSPS is proposed, or sources that are reconstructed or modified before a specified date. Unlike NSPS, the EG 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. (Note that the basis of these solid waste incineration guidelines is different from that of the typical EG under section 111. The basis of the typical EG is "best demonstrated technology." These solid waste incineration EG are based on MACT and, in this sense, therefore, are similar to national emission standards for hazardous air pollutants (NESHAP) for existing sources under section 112.)

G. How Are the Emission Guidelines Implemented?

When EG are promulgated under sections 111(d) and 129(b), the CAA requires States to adopt and submit to EPA for approval a State plan implementing the EG within 1 year after the promulgation of the EG (section 129(b)(2)). Section 129 requires that the State plan must be at least as protective as the EG and must provide for compliance by affected facilities no later than 3 years after the Administrator approves the State plan, but no later than 5 years after EPA promulgates the EG. Sections 111(d) and 129(b) also require EPA to develop, implement, and enforce a Federal plan if a State fails to submit a satisfactory State plan.

II. Summary of the NSPS and EG

This preamble discusses the major requirements of the NSPS and EG as they apply to you, the owner or operator of a new or existing CISWI unit.

A. Do the Standards and Guidelines Apply to Me?

The standards and guidelines apply to you if you own or operate a combustion

device that combusts commercial and industrial waste (as defined in § 60.2265 of the NSPS and § 60.2875 of the EG). Commercial and industrial waste is solid waste combusted in an enclosed device using controlled flame combustion without energy recovery that is a distinct operating unit of any commercial or industrial facility (including field-erected, modular, and custom built incineration units operating with starved or excess air), or solid waste combusted in an air curtain incinerator without energy recovery that is a distinct operating unit of any commercial or industrial facility.

Fifteen types of combustion units, which are listed in § 60.2020 of the NSPS and § 60.2555 of the EG, are exempt from these standards and guidelines.

If you began the construction of your CISWI unit on or before November 30, 1999, it is considered an existing CISWI unit and is subject to the EG. If you began the construction of your CISWI unit after November 30, 1999, it is considered a new CISWI unit and is subject to the NSPS.

If you began reconstruction or modification of your CISWI unit prior to June 1, 2001, it is considered an existing CISWI unit and is subject to the EG. Likewise, if you began reconstruction or modification of your CISWI unit on or after June 1, 2001, it is considered a new CISWI unit and is subject to the NSPS.

B. What Emission Limitations Must I Meet?

As the owner or operator of a new or existing CISWI unit, you are required to meet the emission limitations specified in Table 1 of this preamble. You must conduct a performance test to show compliance within 60 days after a new CISWI 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 CISWI unit, you are required to meet the emission limitations specified in Table 1 within 3 years after the Administrator approves the State plan or promulgates a Federal plan. Each existing CISWI unit must be in compliance within 5 years of promulgation of the EG.

TABLE 1.—EMISSION LIMITATIONS FOR NEW AND EXISTING CISWI UNITS

For these pollutants	You must meet these emission limitations ^a	And determine compliance using these methods ^b
Cadmium	0.004 mg/dscm	EPA Method 29.
Carbon Monoxide	157 ppm by dry volume	EPA Methods 10, 10A, or 10B.
Dioxins/Furans (TEQ basis)	0.41 ng/dscm	EPA Method 23.
Hydrogen Chloride	62 ppm by dry volume	EPA Method 26A.

TABLE 1.—EMISSION LIMITATIONS FOR NEW AND EXISTING CISWI UNITS—Continued

For these pollutants	You must meet these emission limitations ^a	And determine compliance using these methods ^b
Lead	0.04 mg/dscm	EPA Method 29.
Mercury	0.47 mg/dscm	EPA Method 29.
Opacity	10 percent	EPA Method 9.
Oxides of Nitrogen	388 ppm by dry volume	EPA Methods 7, 7A, 7C, 7D, or 7E.
Particulate Matter	70 mg/dscm	EPA Method 5 or 29.
Sulfur Dioxide	20 ppm by dry volume	EPA Method 6 or 6c.

^a All emission limitations (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. What Operating Limits Must I Meet?

If you are using a wet scrubber to comply with the emission limitations, you must establish the maximum and minimum site-specific operating limits indicated in Table 2 of this preamble. You must then operate the CISWI unit and wet scrubber so that the operating parameters do not deviate from the established operating limits.

TABLE 2.—OPERATING LIMITS FOR NEW AND EXISTING CISWI 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	Do.
Scrubber liquor pH	Minimum pH	Do.

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

If you are using an air pollution control device other than a wet scrubber to comply with the emission limitations, you must petition the Administrator for other site-specific operating limits to be established during the initial performance test and continuously monitored thereafter. The required components of the petition are described in § 60.2115 of the NSPS and § 60.2680 of the EG.

If you are using a fabric filter to comply with the emission limitations, in addition to other operating limits as approved by the Administrator, you must operate the fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period.

D. What are the other requirements?

As the owner or operator of a new or existing CISWI unit, you are 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 cadmium, carbon monoxide, dioxins/furans, hydrogen chloride, lead, mercury, nitrogen oxides, opacity, particulate matter, and sulfur dioxide and establish operating limits (i.e., maximum or minimum values for operating parameters).

- Conduct annual performance tests for particulate matter and hydrogen chloride emissions and opacity. (An owner or operator may conduct less frequent testing if the facility demonstrates that it is in compliance with the emission limitations for 3 consecutive years.)

Monitoring Requirements:

- If using a wet scrubber to comply with the emission limitations, 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 limitations, monitor other operating parameters, as approved by the Administrator.

- If using a fabric filter to comply with the emission limitations, in addition to monitoring other operating parameters as approved by the Administrator, you must install and operate a bag leak detection system with an alarm.

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.

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

E. What Are the Requirements for Air Curtain Incinerators?

The NSPS and EG establish opacity limitations for air curtain CISWI units burning:

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

The opacity limitation is 10 percent, except 35 percent opacity is allowed during startup periods that are within the first 30 minutes of operation.

III. Significant Issues and Changes

A total of 95 comments letters were received during the public comment period for the proposed CISWI rule, which ended on January 31, 2000. Among the comments received, the most significant issues addressed applicability, the definition of solid waste, and the MACT floor approach and emission limitations. The issues are addressed below, and other issues raised in the comments are addressed in a comment and response document contained in the docket.

A. Are very small municipal waste combustion units covered?

Commenters questioned whether very small municipal waste combustion (MWC) units (*i.e.*, units that combust less than 35 tons (31.8 megagrams (Mg)) of municipal solid waste per day) are covered by the proposed NSPS and EG. We did not intend to cover very small MWC units, and the final NSPS and EG have been clarified to ensure they are not covered.

The intent of the NSPS and EG for CISWI units is to cover incinerators burning commercial and industrial solid waste, not combustors burning municipal solid waste.

B. Are cyclonic barrel burners covered?

Several commenters questioned whether cyclonic barrel burners are covered by the proposed NSPS and EG. We did not intend to cover cyclonic barrel burners, and the final NSPS and EG have been clarified to ensure they are not covered.

A cyclonic barrel burner is a portable device for burning materials that can be attached to a 55 gallon, open-head drum. The device consists of a lid that fits onto the drum and is connected to a blower that feeds combustion air to the drum in a cyclonic or swirling manner to enhance the combustion of the material. We were not aware of the small combustion devices when developing the proposed regulations, and, as a result, had no information on the devices. Information on cyclonic barrel burners is currently being

gathered, and the devices will be evaluated separately from the CISWI category.

C. Has the Definition of a CISWI Unit or Solid Waste Changed?

Section 129(g)(1) and (6) create a specialized definition of "solid waste incineration unit" that depends in part on the definition of "solid waste" contained in section 1004(27) of the Resource Conservation and Recovery Act (RCRA). The overall intent of the CAA provisions is that section 129 rules are to apply to devices conventionally regarded as incinerators, that is, devices burning wastes in order to destroy the wastes. For purposes of promulgating regulations applicable to commercial and industrial solid waste incinerators, it is particularly important to distinguish between units that will be regulated as boilers as well as other devices whose primary purpose is energy recovery (such as process heaters), and devices that will be regulated as incinerators under section 129 of the CAA. The distinction is necessary to avoid dual regulation of the many combustion units in use at commercial and industrial facilities that function as energy recovery devices and may be subject to regulation under other sections of the CAA.

Our proposed definitions of solid waste and CISWI unit reflected this broad principle of distinguishing boilers and other energy recovery devices from incinerators. However, as explained below, our proposed definitions proved inadequate to distinguish boilers from incinerators within the category of sources. Therefore, in the final NSPS and EG, we have modified our definitions of solid waste and CISWI unit.

For purposes of this rule, we are adopting a revised definition of solid waste that reflects the definition in the Solid Waste Disposal Act (SWDA) and which is reiterated in the regulation promulgated by the Administrator pursuant to the SWDA. We emphasize that the definition is adopted solely for purposes of section 129 in order to implement the principles of that section. We note that the RCRA regulatory definition of solid waste, which effectively determines the scope of the regulatory program for hazardous wastes (since hazardous wastes are a subset of solid wastes (see RCRA section 1004(5)), defines secondary materials burned for energy recovery as solid wastes (40 CFR 261.2(c)(2)). The classification implements both an explicit directive in RCRA to regulate wastes burned for energy recovery (RCRA sections 3004(q), (r) and (s)), as

well as the RCRA statutory definition of solid waste. See also *Horsehead Resource Development Corp. v. Browner*, 16 F. 3d 1246 (D.C. Cir. 1994) (upholding the rules implementing RCRA section 3004(q)). We reemphasize that the final CISWI NSPS and EG in no way affect those existing (and long-standing) RCRA provisions or reflect any type of Agency decision about the permissible scope of the RCRA statutory definition of solid waste. Our purpose here is only to adapt that definition to reflect the regulatory purpose of CAA section 129.

Many commenters stated that the definitions of solid waste and CISWI unit in the proposed NSPS and EG were too broad, and, therefore, would inappropriately cover some boilers, process heaters, and possibly other units that recover energy from the burning of fuels. The commenters stated their belief that commercial and industrial combustion units that recover energy were intended to be regulated under section 112 of the CAA, and that only incinerators that burn wastes for destruction alone were intended to be regulated as CISWI units.

The comments pointed to two primary reasons why the proposed NSPS and EG for CISWI units would inadvertently cover some units that recover energy, such as boilers and process heaters. First, many legitimate energy recovery units are physically separated from their associated energy recovery systems. The units would not meet the requirement that heat recovery must be part of a unit's "integral" design for it not to be considered a CISWI unit. Second, the universe of materials burned for energy recovery is much broader than those defined as "fuels." For example, several of today's combustion technologies and some new emerging technologies can burn materials for energy recovery having heat values less than the proposed 5,000 British thermal units per pound (Btu/lb) threshold for considering a material a fuel.

As a result, the commenters suggested that the NSPS and EG for CISWI units be changed so that units that recover energy not be considered incinerators. Without such a change, units could be regulated both as CISWI units under section 129 and as boilers, for example, under section 112. Such a potential overlap in regulations could create confusion as well as inconsistent and conflicting regulatory requirements, according to some commenters.

We agree that units physically separated from their associated energy recovery systems may be legitimate energy recovery devices. Therefore, we

have deleted from the final NSPS and EG the requirement for energy recovery to be part of the unit's "integral" design for it not to be considered a CISWI unit. Additionally, we have added a definition of energy recovery. Furthermore, we agree that several of today's combustion technologies, including some emerging technologies, may be capable of burning materials with a heat value of less than 5,000 Btu/lb to recover energy. Therefore, we have deleted the requirement from the definition of solid waste in the final NSPS and EG.

As we indicated in the preamble to the November 1999 proposal, the main purpose of the proposed definition of nonhazardous solid waste was to identify which materials when burned by CISWI units would be subject to regulations developed under section 129, and which materials when burned would be subject to regulations to be developed under section 112. Consideration of the above comments led us to conclude that the proposed definitions of "CISWI unit" and "solid waste" created the potential for overlap with rules we are developing under section 112, such as the boiler MACT.

The primary difference between incinerators and boilers is that incinerators burn materials for the purpose of disposal, whereas boilers burn materials for the purpose of recovering energy. Thus, we believe the concept of energy recovery is the key to distinguishing between CISWI units (which will be regulated under section 129) and boilers (which will be regulated under section 112). Specifically, commercial and industrial units burning materials without energy recovery are disposing of the materials, that is, they are treating such materials as commercial or industrial waste, and they should be regulated as CISWI units under section 129. In contrast, commercial and industrial units burning materials with energy recovery, that is, treating such materials as fuel, should be regulated under section 112.

In order to address the concerns raised by commenters, and to provide a clear distinction between CISWI units and combustion devices that will be covered by regulations promulgated under section 112 of the CAA, we have included in the final NSPS and EG a definition of "commercial and industrial waste." We define commercial and industrial waste as any solid waste combusted in an enclosed device using controlled flame combustion without energy recovery that is a distinct operating unit of any commercial or industrial facility (including field-erected, modular, and

custom built incineration units operating with starved or excess air), or solid waste combusted in an air curtain incinerator without energy recovery that is a distinct operating unit of any commercial or industrial facility.

With the changes, we believe the final NSPS and EG will avoid the possibility of double coverage under section 129 and section 112.

D. Which Elements of the Definition of Solid Waste Have Been Retained and Clarified?

For additional clarity, the exemptions from the CISWI rules for units burning municipal solid waste, hospital/medical/infectious waste, and hazardous wastes under the RCRA have been retained and are now included in the applicability sections (§ 60.2020 of the NSPS; § 60.2555 of the EG). The solid waste definition refers to the exemptions from the CISWI NSPS and EG. In addition, the exemption for units that burn materials for the purpose of recovering their chemical constituents is now included in the applicability sections of the CISWI NSPS and EG. The exemption has also been expanded by increasing the list of units that burn materials for the purpose of recovering their chemical constituents. Owners or operators who believe their unit is not a CISWI unit may petition the Administrator to add their unit to the list.

Finally, one commenter stated that the definition of solid waste in 40 CFR part 261 applies to nonhazardous solid waste. Therefore, the commenter believes that EPA must use that definition and is not free to redefine solid waste for the purpose of section 129.

Section 129 does not define nonhazardous solid waste, but directs EPA to use the meaning of solid waste established by the Administrator pursuant to the SWDA. To develop and implement the hazardous waste regulatory program authorized by the SWDA, the Administrator adopted a definition of hazardous waste pursuant to the SWDA. It is true that 40 CFR part 261 defines solid waste; however, 40 CFR 261.1(b)(1) states explicitly that the definition is only for the purpose of materials that are hazardous wastes.

The Administrator has included in the final NSPS and EG the definition of solid waste from the SWDA and is establishing the definition jointly under the authority of the CAA and the SWDA. The purpose of the definition is solely to identify nonhazardous solid waste for the purpose of the CISWI regulations.

E. Were Significant Issues Raised Regarding EPA's Approach to Setting the Proposed Standards and Guidelines, and Has EPA Made Any Changes?

The significant comments received on EPA's approach to setting the standards and guidelines, and the changes that have been made in response to these comments, are discussed below.

1. What Is EPA's General Approach to Setting the MACT Floors?

One commenter stated that EPA's technology-based approach to determining the MACT floors is unlawful and that the resulting MACT floors do not reasonably reflect the actual performance of the best performing 12 percent of existing units or the expected performance of the best controlled similar unit. Moreover, the commenter stated that the "worst emission test result for any unit using a particular technology does not reasonably reflect the actual performance of the best performing unit." As a result, the commenter concluded that the MACT emission limitations are not as stringent as the CAA requires. Generally, we disagree with the commenter for the following reasons.

Section 129(a)(2) of the CAA specifies that the emission limitations for existing units shall not be less stringent than the average emission limitation achieved by the best performing 12 percent of units in the category, and for new units shall not be less stringent than the emission control that is achieved in practice by the best controlled similar unit. The emission limitation associated with the above criteria for a pollutant is referred to as the "MACT floor" for that pollutant. With respect to new units, EPA interprets "achieved in practice" to mean achieved under the worst foreseeable circumstances, consistent with *National Lime Ass'n v. EPA*, 627 F.2d 416, 431 n.46 (DC Cir. 1980). Moreover, EPA views the phrase "best controlled similar source" as encompassing all units using the same control technology as the unit with the best observed performance, rather than just that unit itself. Consequently, the MACT floor for new units is based on the highest data point from a unit using the "best" technology, since such a value is a reasonable estimate of the performance of the "best controlled similar unit" under the worst foreseeable circumstances. The approach is reasonable because the most informative way to predict the worst reasonably foreseeable performance of the best controlled unit, with the available data, is to examine the

performance of other units that use the same control technology. In other words, EPA considers all units with the same control technology to be equally well controlled, and each unit with the best control technology is a "best controlled similar unit" even if the emissions test results from such units vary considerably.

As discussed at proposal, to determine the MACT floors for the pollutants listed in section 129 of the CAA, we examined our CISWI unit database to identify the various emission control technologies (including the absence of emission control technology) that were in use on CISWI units. We then ranked the technologies on a pollutant-by-pollutant basis in terms of their emission control performance capabilities. For example, wet scrubbers (and fabric filters in the case of particulate emissions) were ranked higher than other technologies because they are capable of greater emissions reductions.

Using the ranking of emission control technologies, we were able to identify for each pollutant the best performing CISWI units. Because comprehensive emission test data are not available for each of the best performing CISWI units, we were unable to identify the specific emission control performance achieved by each unit. As a result, we considered the best performing CISWI units which used the same emission control technology as equally well controlled.

We then examined the best performing 12 percent of CISWI units, as well as the best performing CISWI unit, to identify the emission control technology which represents the MACT floor for each pollutant for existing and new CISWI units. For existing units, this was accomplished by identifying the emission control technology used by the median of the best performing 12 percent of units (*i.e.*, the CISWI unit representing the 94th percentile). (Because technologies cannot be "averaged" in the same way that numbers are averaged, the average performance of the emission control technology used by the best performing 12 percent of units is best represented by the technology in the middle of the range of the best performing 12 percent of units, *i.e.*, the median.) Similarly, for new units, this was accomplished by identifying the emission control technology used by the best performing CISWI unit for each pollutant.

Using this approach, the emission control technology identified as representing the MACT floor for each pollutant was determined to be the same for both new and existing CISWI units. As discussed at proposal, the use of a

wet scrubbing system, or other equivalent emission control technology (such as use of a fabric filter system for particulate matter control), is the emission control technology which represents the MACT floor for both existing and new CISWI units. The MACT floor can be identified, therefore, by determining the emission limitations which are achieved by wet scrubbing systems on CISWI units.

As a result, having identified the emission control technology which represents the MACT floor, it was then necessary to determine the emission limitations "achieved" by this emission control technology for each pollutant. This determination is not, as this one commenter appears to suggest, simply a matter of looking at the test results from a single CISWI unit or generating a numerical average of the test data from all CISWI units employing the MACT technology. Such an approach fails to consider the inherent and unavoidable variability associated with the incinerators in the CISWI category. Consequently, such an approach does not accurately identify the actual emissions performance of existing units that use the MACT technology, or the level of performance which is achievable by a CISWI unit operating with this emission control technology under the worst reasonably foreseeable circumstances.

Examining emission data from a number of CISWI units using the same emission control technology gives us the best picture of the actual performance and the performance capability of this technology. It enables us to take into consideration the inherent variability associated with the incinerators in the CISWI category, and it allows us to identify the emission limitations achieved in practice under the worst reasonably foreseeable circumstances.

There are between 4 and 14 emission tests available for CISWI units controlled by wet scrubbing systems for each pollutant (with the exception of dioxins/furans, mercury, and hydrogen chloride, where fewer tests are available). As expected, there is considerable variation among the emission values from the emission tests for each pollutant as a result of the unavoidable process and operational variability within CISWI units (*e.g.*, variations in waste combusted, incinerator design and operation, etc.). Because this variability occurs among all CISWI units and because there is no clear explanation for this variability, it is reasonable to expect that there will always be a variation in emissions among CISWI units controlled by wet scrubbing systems.

Another way to view this emission variability among CISWI units is to consider each emission test as a "snapshot" of actual performance taken at one moment in time. Taken together, the snapshots provide a picture of the unavoidable variation in emissions expected to occur and recur over time at every similarly controlled CISWI unit. Absent additional information, there is no reason to believe that any observed emission value (*i.e.*, the emission level measured during a test) from a CISWI unit controlled with wet scrubbing could be prevented from occurring at any other CISWI unit also controlled by wet scrubbing.

As a result, the most reasonable methodology for determining the performance of wet scrubbing systems on CISWI units (*i.e.*, the MACT floor) is to examine the emission values for all similarly controlled CISWI units (excluding any emission values from tests that did not represent a proper functioning CISWI unit or wet scrubbing system). Thus, for a given pollutant, the most reasonable estimate of the MACT floor emission limitation "achieved" by the best performing 12 percent of CISWI units (or the best performing CISWI unit) is represented by the highest emission value observed from a CISWI unit using wet scrubbing.

We adopted this approach to ensure that the MACT floor emission limitations represent, as accurately as possible, what the best performing 12 percent of existing units is actually achieving, and what the best performing CISWI unit can be reasonably expected to achieve. Despite the commenters objections, we continue to believe that this is the most appropriate methodology for evaluating the performance of units in the CISWI category, given the inherent and unavoidable variability in emissions among these units and the limited emissions data available. Therefore, we continue using this approach to determine the MACT floors.

2. Will EPA Allow Compliance on a Percent Reduction Basis?

Several commenters recommended that we include percent reduction requirements for some pollutants, as alternatives to the emission limitations, to accommodate the variability in emissions among CISWI units.

As outlined above, we believe the emission limitations in the final standards and guidelines reasonably incorporate the variability associated with CISWI units using wet scrubbing systems (which is the basis for MACT as well as the MACT floor). Thus, we do not believe that alternative percentage

reduction requirements are necessary or would serve to provide emission limitation alternatives more representative of the actual performance of CISWI units. For these reasons, EPA is not including percent reduction requirements in the final rule.

3. How did EPA Establish Emission Limitations for Dioxins/Furans, Mercury, and Hydrogen Chloride?

Some commenters stated that the emission test data upon which several of the MACT emission limitations were based at proposal were extremely limited and, as a result, the limitations are not necessarily achievable in practice because they may not be representative of actual CISWI unit performance. Several of the commenters suggested that we consider the use of emission data from rulemakings which establish standards for sources that utilize similar emission control equipment under conditions comparable to units in the CISWI category.

As discussed above, a number of emission tests from CISWI units were available to determine the MACT emission limitations for most pollutants. However, for three pollutants, dioxins/furans, mercury, and hydrogen chloride, there were only one or two emission tests from CISWI units. As we noted at proposal, such limited data may not provide a sufficient basis to establish MACT emission limitations for the pollutants in this category (particularly given the degree of variability among CISWI units). Consequently, we decided not to rely only on the emission tests to determine the MACT emission limitations for the three pollutants.

While the provisions of section 129 identify a general minimum stringency for MACT emission limitations, there is nothing about how MACT emission limitations are to be calculated, that is, the provisions do not identify a specific procedure or type of information that EPA must use. Thus, we generally have wide latitude in determining the extent of data gathering necessary to establish emission limitations. We believe it is appropriate to use any data available (such as emission test results, operating permit limitations, engineering calculations, control equipment specifications, or other reliable information) that provide information useful for generating a reasonable estimate of the performance of units within a category.

Accordingly, where the emission data from units within a category are incomplete, we may augment our analysis with supplementary information to determine MACT

emission limitations. Provided that the augmented emission data we use to generate the MACT emission limitations provide a good proxy for the best performing units in the category, it is irrelevant that the actual test data available from units in the category are incomplete. Similarly, if our analysis provides a reasonable representation of the actual performance of units in the category, we may consider relevant supplemental information from any available source. Courts have ruled that EPA need not invest resources to conduct the perfect study, provided that our approach bears a rational relationship to the reality it purports to represent (See *Sierra Club v. EPA*, 167 F. 3d 658, 663 (D.C. Cir. 1999)).

Thus, because emission data for dioxins/furans, mercury, and hydrogen chloride emissions from CISWI units controlled by wet scrubbing systems are extremely limited, we have augmented the data with emission data from similarly controlled units outside of the CISWI category. This approach allows us to better characterize the actual dioxins/furans, mercury, and hydrogen chloride emission limitations achieved by units in the CISWI category by providing additional information regarding the performance of wet scrubbers under conditions similar to those experienced by CISWI units.

Hazardous waste incinerator (HWI) units without waste heat recovery that are controlled with wet scrubbing systems serve as a valuable source of supplementary data for emissions of dioxins/furans. (Units in the CISWI category that were used to establish the emission limitations did not incorporate waste heat recovery, and it is not the intent of this rulemaking to cover such units.) These types of HWI units are generally similar to CISWI units that are controlled by wet scrubbing systems. Thus, it is reasonable to conclude that the emissions performance of HWI units without waste heat boilers and controlled with wet scrubbing systems is comparable to that of CISWI units controlled with wet scrubbing systems.

As a result, we combined dioxins/furans emission data from HWI units without waste heat recovery boilers and controlled with wet scrubbing systems with the dioxins/furans emission data for CISWI units controlled with wet scrubbing systems. We then determined the MACT emission limitation for dioxins/furans as discussed above. The resulting emission limitation included in the final NSPS and EG is 0.41 nanograms per dry standard cubic meter (ng/dscm) toxic equivalency (TEQ) (Standards of Performance for New Stationary Sources and Emission

Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Notice of Data Availability, August 28, 2000, 65 FR 52058).

Unfortunately, with respect to the other two pollutants for which CISWI test data are extremely limited (mercury and hydrogen chloride), it is inappropriate to use emission data from HWI units to supplement the CISWI unit data. The mercury and hydrogen chloride emission data available from HWI units are based on the use of a different emission control technology than wet scrubbing systems, and this prevents us from combining mercury and hydrogen chloride emission data from HWI units with that from CISWI units. Since appropriate HWI data were not available, we identified another source of data to augment mercury and hydrogen chloride emission data from CISWI units controlled by wet scrubbing systems.

Hospital, medical, and infectious waste incinerator (HMIWI) units controlled with wet scrubbing systems serve as a valuable source of supplementary data for mercury and hydrogen chloride. Those HMIWI units are also generally similar to CISWI units that are controlled by wet scrubbing systems. Thus, it is reasonable to conclude that the mercury and hydrogen chloride emission performance achieved by HMIWI units controlled with wet scrubbing systems is comparable to that of CISWI units controlled with wet scrubbing systems.

As a result, we combined mercury and hydrogen chloride emission data from HMIWI units controlled with wet scrubbing systems with the mercury and hydrogen chloride emission data from CISWI units controlled with wet scrubbing systems. We then determined the emission limitations for mercury and hydrogen chloride as discussed above. The resulting emission limitations included in the final NSPS and EG are 0.47 mg/dscm for mercury and 62 parts per million by volume, dry basis (ppmdv) for hydrogen chloride (Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Notice of Data Availability, August 28, 2000, 65 FR 52058).

This process for augmenting the CISWI data with appropriate HWI or HMIWI data results in dioxins/furans, mercury, and hydrogen chloride emission limitations which more accurately represent the levels of such emissions actually achieved by CISWI units employing the MACT technology

(wet scrubbing systems). This approach to developing the emission limitations provides a reasonable proxy for the actual performance of the best performing CISWI units and is the most appropriate method, under the circumstances, for EPA to identify the emission limitations that are achieved by such units.

(Note: While we believe that emission data for dioxins/furans, mercury, and hydrogen chloride from the HWI and HMIWI categories are useful for augmenting the CISWI data where insufficient CISWI emission data are available, we do not believe that HWI, HMIWI, and CISWI units should generally be characterized as similar units for the purpose of determining MACT emission limitations for all CISWI pollutants.)

4. How did EPA Establish Emission Limitations for Lead and Cadmium?

In reviewing the CISWI database to address comments following proposal,

we found that, despite our earlier efforts to rigorously screen the database, the unit responsible for the highest recorded emissions of lead and cadmium (which drove the MACT emission limitations for the pollutants) was not a CISWI unit. As a result, this unit was removed from the CISWI database, resulting in a change in the lead and cadmium MACT emission limitations. Following the methodology outlined above, the final MACT emission limitations included in the final NSPS and EG are 0.04 mg/dscm for lead and 0.004 mg/dscm for cadmium.

IV. Impacts of the Final NSPS and EG

The air impacts of the NSPS and EG were reestimated as a result of revising the emission limitations for new and existing CISWI units. Because the estimates of water, solid waste, energy, cost, and economic impacts depend

solely on the technology upon which the MACT limits are based, and because the technology remains the same as proposed, there were no changes in other impacts.

A. What Are the Air Impacts for New Units?

To illustrate the potential emissions reductions achieved by the NSPS with respect to new CISWI units, we modeled hypothetical CISWI units with capacities of 100 and 1,500 pounds per hour (lb/hr) (45 and 680 kilograms per hour (kg/hr)) and estimated the impacts associated with application of wet scrubbers. The resulting impact estimates (i.e., the difference in emissions between a CISWI unit with a wet scrubber and an uncontrolled CISWI unit) are presented in Table 3 of this preamble.

TABLE 3.—EMISSIONS REDUCTIONS ON A MODEL UNIT BASIS

Pollutant	Emissions Reduction, tons/yr (Mg/yr)			
	100 lb/hr		1500 lb/hr	
	(45 kg/hr)	Capacity	(680 kg/hr)	Capacity
Cadmium	1.5×10 ⁻⁵	(1.4×10 ⁻⁵)	3.1×10 ⁻⁴	(2.8×10 ⁻⁴)
Dioxins/furans (TEQ)	2.0×10 ⁻⁹	(1.8×10 ⁻⁹)	4.2×10 ⁻⁸	(3.9×10 ⁻⁸)
Hydrogen chloride	1.5	(1.4)	32.3	(29.3)
Lead	1.9×10 ⁻⁴	(1.7×10 ⁻⁴)	4.0×10 ⁻³	(3.6×10 ⁻³)
Mercury	6.5×10 ⁻⁴	(5.9×10 ⁻⁴)	0.01	(0.01)
Particulate matter	0.50	(0.45)	10.8	(9.8)
Sulfur dioxide	0.38	(0.35)	7.9	(7.2)

B. What are the air impacts for existing units?

Table 4 of this preamble summarizes the national air emission impacts of the EG. The impacts are expressed in two ways. First, the impacts are expressed as annual nationwide mass emissions reductions; and second, as percent reductions compared to current estimated national emissions for existing CISWI units.

TABLE 4.—EMISSIONS REDUCTIONS FOR EXISTING CISWI UNITS

Pollutant	National Emissions Reduction		Percent ¹
	Tons/yr	(Mg/yr)	
Cadmium	0.01	(0.01)	56
Dioxins/furans (TEQ)	1.8×10 ⁻⁶	(1.6×10 ⁻⁶)	65
Hydrogen chloride	1315	(1193)	89
Lead	0.15	(0.14)	62
Mercury	0.56	(0.51)	34
Particulate matter	409	(371)	71
Sulfur dioxide	324	(294)	72

¹ Percent reduction from current (baseline) emissions.

V. Administrative Requirements

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), we must determine whether a regulatory action is "significant" and, therefore, subject to Office of Management and Budget (OMB) review and the requirements of

the Executive Order. The Executive Order defines "significant regulatory action" as one that is likely to result in a rule that may:

- (1) Have an annual effect on the economy of \$100 million or more, or adversely affects 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, OMB has notified us that it considers this a "significant regulatory action" within the meaning of the Executive Order. As a result, we submitted this action to OMB for review. Changes made in response to OMB suggestions or recommendations are documented in the public record.

Section 129 of the CAA requires EPA to adopt NSPS and EG for CISWI units. These NSPS and EG must be based on MACT, which is defined as the maximum degree of reduction in emissions of air pollutants, taking into consideration the cost of achieving the reductions and any nonair quality health and environmental impacts and energy requirements, that the Administrator determines is achievable. The MACT for the NSPS must be no less stringent than the emission reduction achieved by the best controlled source, and MACT for the EG must be no less stringent than the emission reduction achieved by the average of the best controlled 12 percent of sources. These minimum requirements are referred to as the floor, and more stringent requirements are referred to as beyond-the-floor.

To determine MACT, we examined two alternatives. The first reflected the floor (i.e., wet scrubbing); the second reflected a beyond-the-floor option (i.e., wet scrubbing followed by carbon injection and a fabric filter). Taking into consideration the cost of achieving the emission reductions and any nonair quality health and environmental impacts and energy requirements, the Administrator determined that the first alternative is MACT.

The total national annualized cost impact of this regulatory action is estimated as \$11.6 million per year, assuming those CISWI units currently operating without wet scrubbers would install wet scrubbers in order to comply with the emission limits in the NSPS and EG. As a result, emissions (consisting primarily of hydrogen chloride, particulate matter, and sulfur dioxide) would be reduced by 2048 tons per year.

B. Executive Order 13132: Federalism

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires us to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have

federalism implications" are defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

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

If we comply by consulting, Executive Order 13132 requires us to provide to the OMB, in a separately identified section of the preamble to the rule, a federalism summary impact statement. The federalism summary impact statement must include a description of the extent of our prior consultation with State and local officials, a summary of the nature of their concerns and our position supporting the need to issue the regulation, and a statement of the extent to which the concerns of State and local officials have been met. Also, when we transmit a draft final rule with federalism implications to OMB for review pursuant to Executive Order 12866, we must include a certification from the agency's federalism official stating that we have met the requirements of Executive Order 13132 in a meaningful and timely manner.

This rule 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. This rule establishes national performance standards and other requirements for certain solid waste incineration units. We are required by section 129 of the CAA, 42 U.S.C. 7429, to establish the standards and guidelines embodied in this rule. This regulation primarily affects private industry and does not impose significant economic costs on State or local governments. The standards established by this rule apply to new facilities that operate commercial or industrial incineration units (and the owners or operators of

such facilities) and require States to submit State plans that include standards applicable to existing incineration units that are at least as protective as the standards specified in the rule. If a State does not submit an approvable plan, any covered incineration units in that State will become subject to a Federal plan to implement this rule. The regulation does not include an express provision preempting State or local regulations. However, once a State or Federal plan is in effect, covered facilities would be subject to the standards established by this rule, regardless of any less protective State or local regulations that contain emission limitations for the pollutants addressed by this rule. To the extent that this might preempt State or local regulations, it does not significantly affect the relationship between the national government and the States, or the distribution of power and responsibilities among the various levels of government. Thus, the requirements of section 6 of the Executive Order do not apply to this rule; and we have complied with the requirements of section 4(e), to the extent that they may be applicable to the regulations, by providing notice to potentially affected State and local officials through publication of this rule.

Although section 6 of Executive Order 13132 does not apply to this rule, we consulted with representatives of State and local governments to enable them to provide meaningful and timely input into the development of this rule. This consultation took place during the ICCR FACA committee meetings, where members representing State and local governments participated in developing recommendations for our combustion-related rulemakings, including this rule. Additionally, we sponsored the Small Communities Outreach Project, which involved meetings with elected officials and other government representative to provide them with information about this rule and to solicit their comments. The concerns raised by representatives of State and local governments were considered during the development of this rule.

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

Under Executive Order 13084, we may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance

costs incurred by the tribal governments, or we consult with those governments. If we comply with consulting, Executive Order 13084 requires us to provide to OMB, in a separately identified section of the preamble to the rule, a description of the extent of our prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires us to develop an effective process permitting elected officials and other representatives of Indian tribal governments to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities.

Today's final rule does not significantly or uniquely affect the communities of Indian tribal governments. We know of no CISWI units owned by Indian tribal governments. However, if there are any, the effect of these rules on communities of tribal governments would not be unique or disproportionate to the effect on other communities. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply.

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

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that we determine: (1) Is "economically significant" as defined under Executive Order 12866, (2) is based on health or safety risks, and (3) for which we have reason to believe may disproportionately affect children. If the regulatory action meets these criteria, we 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 we considered.

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

E. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Pub. L.

104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, we generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any 1 year.

Before promulgating a rule for which a written statement is needed, section 205 of the UMRA generally requires us to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows us to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation of why that alternative was not adopted.

Before we establish any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, we must develop under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, thereby enabling officials of affected small governments to have meaningful and timely input in the development of the regulatory proposal with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

We have determined that this rule does 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, this rule is not subject to the requirements of sections 202 and 205 of the UMRA. Additionally, we have determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments.

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

The RFA generally requires Federal agencies to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements, unless the agency certifies

that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include businesses, small not-for-profit enterprises, and small governmental jurisdictions. For purposes of assessing the impacts of today's rule on small entities, a small entity is defined as: (1) a small business who has less than 500 employees, (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, and (3) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field. The SBA guidelines define a small business based on number of employees or annual revenues, and the size standards vary from industry to industry. Generally, businesses covered by the Standard Industry Codes (SIC) affected by this final rule are considered small if they have less than 500 employees or less than \$5 million in annual sales.

The regulation will affect 112 existing facilities owned by 90 parent companies. Based on Small Business Administration guidelines, 26 of the companies are small businesses. The lumber and wood products industry includes the largest number (seven) of the small businesses, followed by fabricated metals, veterinary hospitals (burning less than 90 percent pathological waste), and wholesale trade sectors with three companies each. The remaining small businesses are distributed across six different industries. If add-on controls are employed to meet the standards, a total of 15 small businesses have cost-to-sales ratios greater than 1 percent; and of the 15 small businesses, 9 have cost-to-sales ratios that exceed 3 percent (ranging from 3.4 to 27.7 percent with a median of 4 percent). The nine entities with cost-to-sales ratios greater than three percent incinerate relatively small amounts of material. Therefore, it is reasonable to assume the businesses will seek an alternative method of disposal rather than bearing the cost of installing add-on equipment. Since the median amount of material incinerated by the nine companies is only about 50 tons per year, the alternative net cost for sending waste to a landfill for many of the facilities is expected to be less than the control costs, based on an estimated total alternative disposal cost (*i.e.*, transportation and storage costs plus tipping fee) of about \$58 per ton. The cost of using an off-site landfill for the median amount of material is estimated to be about \$2,900 per year. Thus, it

may be economically feasible for some of these small entities to switch to an alternative disposal method, such as off-site landfills, and lower their net compliance costs.

Based on the low number of affected small entities in each individual market, the alternative method of waste disposal available, and the relatively low control cost, this analysis suggests that the regulation should not generate a significant small business impact on a substantial number of small entities in the commercial and industrial sectors. EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with this final rule. EPA has also determined that this rule will not have a significant economic impact on a substantial number of small entities.

G. Paperwork Reduction Act

The information collection requirements in this final rule 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 (ICR No. 1926.02 for subpart CCCC and 1927.02 for subpart DDDD), and copies may be obtained from Sandy Farmer by mail at U.S. Environmental Protection Agency, Office of Environmental Information, Collection Strategies Division (2822), 1200 Pennsylvania Avenue, NW., Washington, DC 20460, by e-mail at farmer.sandy@epa.gov, or by calling (202) 260-2740. Copies may also be downloaded from the internet at <http://www.epa.gov/icr>.

The NSPS and EG contain monitoring, reporting, and recordkeeping requirements. The information will be used to identify new, modified, or reconstructed incineration units subject to the NSPS and to ensure that new incineration units undergo a siting

analysis and that the analysis is reviewed by the public. Records and reports are necessary to enable us to identify waste incineration units that may not be in compliance with the requirements. Based on reported information, we would decide which units and what records or processes should be inspected.

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

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

Affected entity	Total hours	Labor costs	Capital costs	O&M costs	Total costs
Industry	11,209	\$685,269	\$13,440	\$1,266	\$699,975
Implementing agency	794	\$32,608	0	0	\$32,608

We expect the NSPS to affect 18 CISWI units over the first 3 years, based on the assumption that six existing units will be replaced by six new units each year. We estimate the total annualized capital and startup costs for these new units to be \$13,440. Continuous parameter monitoring equipment would be required for new units. When a wet

scrubber is used to meet the emission limitation, monitoring equipment must be installed to monitor maximum charge rate, minimum pressure drop across the wet scrubber (or minimum amperage), minimum scrubber liquor flow rate, and minimum scrubber liquor pH. The estimated total operation, maintenance, and purchase costs for the monitoring

equipment averaged over the first 3 years are expected to be \$1,266. The implementing agency would not incur any capital or startup costs.

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	Total hours	Labor costs	Capital costs	O&M costs	Total costs
Industry	9,145	\$407,067	\$0	\$0	\$407,067
Implementing agency	1,817	\$48,386	0	0	\$48,386

We expect the EG to affect a maximum of 116 units over the first 3 years. We assume that six existing units will be replaced by six new units each year. There are no capital, startup, or operation and maintenance costs for existing units during the first 3 years. The implementing agency would not incur any capital or startup costs.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, disclose, or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the

existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for our regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

H. National Technology Transfer and Advancement Act

As noted in the proposed rule, section 12(d) of the National Technology Transfer and Advancement Act of 1995

(NTTAA), Public Law No. 104-113, section 12(d) (15 U.S.C. 272 note), directs us to use voluntary consensus standards in our regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs us to provide Congress, through OMB, explanations when we decide not to use available and applicable voluntary consensus standards.

Consistent with the NTTAA, we conducted searches to identify voluntary consensus standards for use in process and emissions monitoring.

The search for emissions monitoring procedures identified six voluntary consensus standards that appeared to have possible use in lieu of our standard reference methods. However, after reviewing available standards, we determined that these candidate consensus standards would not be practical due to the potential lack of equivalency, documentation, validation data and other important technical and policy considerations. These six candidate consensus standards are under development and we plan to follow, review and consider adopting them at a later date.

I. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. We will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective January 30, 2001.

List of Subjects in 40 CFR Part 60

Environmental protection, Air pollution control, Carbon monoxide, Metals, Nitrogen dioxide, Particulate matter, Sulfur oxides, Waste treatment and disposal.

Dated: November 15, 2000.

Carol M. Browner,
Administrator.

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

PART 60—[AMENDED]

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

Authority: 42 U.S.C. 7401, 7411, 7414, 7416, 7429, and 7601.

2. Part 60 is amended by adding subpart CCCC to read as follows:

Subpart CCCC—Standards of Performance for Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001.

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Introduction

§ 60.2000 What does this subpart do?

This subpart establishes new source performance standards for commercial and industrial solid waste incineration (CISWI) units.

§ 60.2005 When does this subpart become effective?

This subpart takes effect on June 1, 2001. Some of the requirements in this subpart apply to planning the CISWI unit and must be completed even before construction is initiated on the CISWI unit (i.e., the preconstruction requirements in §§ 60.2045 and 60.2050). Other requirements such as the emission limitations and operating limits apply after the CISWI unit begins operation.

Applicability

§ 60.2010 Does this subpart apply to my incineration unit?

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

(a) Your incineration unit is a new incineration unit as defined in § 60.2015.

(b) Your incineration unit is a CISWI unit as defined in § 60.2265.

(c) Your incineration unit is not exempt under § 60.2020.

§ 60.2015 What is a new incineration unit?

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

(1) Commenced construction after November 30, 1999.

(2) Commenced reconstruction or modification on or after June 1, 2001.

(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 DDDD of this part (Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units). Such changes do not qualify as reconstruction or modification under this subpart.

§ 60.2020 What combustion units are exempt from this subpart?

This subpart exempts fifteen types of units described in paragraphs (a) through (o) of this section.

(a) *Pathological waste incineration units.* Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste as defined in § 60.2265 are not subject to this subpart if you meet the two requirements specified in paragraphs (a)(1) and (2) of this section.

(1) Notify the Administrator that the unit meets these criteria.

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

(b) *Agricultural waste incineration units.* Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of agricultural wastes as defined in § 60.2265 are not subject to this subpart if you meet the two requirements specified in paragraphs (b)(1) and (2) of this section.

(1) Notify the Administrator that the unit meets these criteria.

(2) Keep records on a calendar quarter basis of the weight of agricultural waste burned, and the weight of all other fuels and wastes burned in the unit.

(c) *Municipal waste combustion units.* Incineration units that meet either of the two criteria specified in paragraph (c)(1) or (2) of this section.

(1) Are regulated under subpart Ea of this part (Standards of Performance for Municipal Waste Combustors); subpart Eb of this part (Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994); subpart Cb of this part (Emission Guidelines and Compliance Time for Large Municipal Combustors that are Constructed on or Before September 20, 1994); AAAA of this part (Standards of Performance for New Stationary Sources: Small Municipal Waste Combustion Units); or subpart BBBB of this part (Emission Guidelines for Existing Stationary Sources: Small Municipal Waste Combustion Units).

(2) Burn greater than 30 percent municipal solid waste or refuse-derived fuel, as defined in subpart Ea, subpart Eb, subpart AAAA, and subpart BBBB of this part, and that have the capacity to burn less than 35 tons (32 megagrams) per day of municipal solid waste or refuse-derived fuel, if you meet the two requirements in paragraphs (c)(2)(i) and (ii) of this section.

(i) Notify the Administrator that the unit meets these criteria.

(ii) Keep records on a calendar quarter basis of the weight of municipal solid waste burned, and the weight of all other fuels and wastes burned in the unit.

(d) *Medical waste incineration units.* Incineration units regulated under subpart Ec of this part (Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996) or subpart Ce of this part (Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators).

(e) *Small power production facilities.* Units that meet the three requirements specified in paragraphs (e)(1) through (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.

(f) *Cogeneration facilities.* Units that meet the three requirements specified in paragraphs (f)(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.

(g) *Hazardous waste combustion units.* Units that meet either of the two criteria specified in paragraph (g)(1) or (2) of this section.

(1) Units for which you are required to get a permit under section 3005 of the Solid Waste Disposal Act.

(2) Units regulated under subpart EEE of 40 CFR part 63 (National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors).

(h) *Materials recovery units.* Units that combust waste for the primary purpose of recovering metals, such as primary and secondary smelters.

(i) *Air curtain incinerators.* Air curtain incinerators that burn only the materials listed in paragraphs (i)(1) through (3) of this section are only required to meet the requirements under "Air Curtain Incinerators" (§§ 60.2245 through 60.2260).

(1) 100 percent wood waste.

(2) 100 percent clean lumber.
 (3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.
 (j) *Cyclonic barrel burners*. (See § 60.2265)

(k) *Rack, part, and drum reclamation units*. (See § 60.2265)

(l) *Cement kilns*. Kilns regulated under subpart LLL of part 63 of this chapter (National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry).

(m) *Sewage sludge incinerators*. Incineration units regulated under subpart O of this part (Standards of Performance for Sewage Treatment Plants).

(n) *Chemical recovery units*. Combustion units burning materials to recover chemical constituents or to produce chemical compounds where there is an existing commercial market for such recovered chemical constituents or compounds. The seven types of units described in paragraphs (n)(1) through (7) of this section are considered chemical recovery units.

(1) Units burning only pulping liquors (*i.e.*, black liquor) that are reclaimed in a pulping liquor recovery process and reused in the pulping process.

(2) Units burning only spent sulfuric acid used to produce virgin sulfuric acid.

(3) Units burning only wood or coal feedstock for the production of charcoal.

(4) Units burning only manufacturing byproduct streams/residues containing catalyst metals which are reclaimed and reused as catalysts or used to produce commercial grade catalysts.

(5) Units burning only coke to produce purified carbon monoxide that is used as an intermediate in the production of other chemical compounds.

(6) Units burning only hydrocarbon liquids or solids to produce hydrogen, carbon monoxide, synthesis gas, or other gases for use in other manufacturing processes.

(7) Units burning only photographic film to recover silver.

(o) *Laboratory Analysis Units*. Units that burn samples of materials for the purpose of chemical or physical analysis.

§ 60.2025 What if my chemical recovery unit is not listed in § 60.2020(n)?

(a) If your chemical recovery unit is not listed in § 60.2020(n), you can petition the Administrator to add your unit to the list. The petition must contain the six items in paragraphs (a)(1) through (6) of this section.

(1) A description of the source of the materials being burned.

(2) A description of the composition of the materials being burned, highlighting the chemical constituents in these materials that are recovered.

(3) A description (including a process flow diagram) of the process in which the materials are burned, highlighting the type, design, and operation of the equipment used in this process.

(4) A description (including a process flow diagram) of the chemical constituent recovery process, highlighting the type, design, and operation of the equipment used in this process.

(5) A description of the commercial markets for the recovered chemical constituents and their use.

(6) The composition of the recovered chemical constituents and the composition of these chemical constituents as they are bought and sold in commercial markets.

(b) Until the Administrator approves your petition, the incineration unit is covered by this subpart.

(c) If a petition is approved, the Administrator will amend § 60.2020(n) to add the unit to the list of chemical recovery units.

§ 60.2030 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

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

(c) The authorities that will not be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (7) of this section.

(1) Approval of alternatives to the emission limitations in Table 1 of this subpart and operating limits established under § 60.2110.

(2) Approval of major alternatives to test methods.

(3) Approval of major alternatives to monitoring.

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

(5) The requirements in § 60.2025.

(6) The requirements in § 60.2115.

(7) The requirements in § 60.2100(b)(2).

§ 60.2035 How are these new source performance standards structured?

These new source performance standards contain the eleven major components listed in paragraphs (a) through (k) of this section.

(a) Preconstruction siting analysis.

(b) Waste management plan.

(c) Operator training and qualification.

(d) Emission limitations and operating limits.

(e) Performance testing.

(f) Initial compliance requirements.

(g) Continuous compliance requirements.

(h) Monitoring.

(i) Recordkeeping and reporting.

(j) Definitions.

(k) Tables.

§ 60.2040 Do all eleven components of these new source performance standards apply at the same time?

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

Preconstruction Siting Analysis

§ 60.2045 Who must prepare a siting analysis?

(a) You must prepare a siting analysis if you plan to commence construction of a CISWI unit after December 1, 2000.

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

§ 60.2050 What is a siting analysis?

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

(b) Analyses of your CISWI unit's impacts that are prepared to comply with State, local, or other Federal regulatory requirements may be used to

satisfy the requirements of this section, provided they include the consideration of air pollution control alternatives specified in paragraph (a) of this section.

(c) You must complete and submit the siting requirements of this section as required under § 60.2190(c) prior to commencing construction.

Waste Management Plan

§ 60.2055 What is a waste management plan?

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

§ 60.2060 When must I submit my waste management plan?

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

§ 60.2065 What should I include in my waste management plan?

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

Operator Training and Qualification

§ 60.2070 What are the operator training and qualification requirements?

(a) No CISWI unit can be operated unless a fully trained and qualified CISWI unit operator is accessible, either at the facility or can be at the facility within 1 hour. The trained and qualified CISWI unit operator may operate the CISWI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified CISWI unit operators are temporarily not accessible, you must follow the procedures in § 60.2100.

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

(c) Training must be obtained by completing an incinerator operator training course that includes, at a minimum, the three elements described

in paragraphs (c)(1) through (3) of this section.

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

(i) Environmental concerns, including types of emissions.

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

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

(iv) Combustion controls and monitoring.

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

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

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

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

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

(x) Pollution prevention.

(xi) Waste management practices.

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

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

§ 60.2075 When must the operator training course be completed?

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

(a) Six months after your CISWI unit startup.

(b) December 3, 2001.

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

§ 60.2080 How do I obtain my operator qualification?

(a) You must obtain operator qualification by completing a training course that satisfies the criteria under § 60.2070(b).

(b) Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under § 60.2070(c)(2).

§ 60.2085 How do I maintain my operator qualification?

To maintain qualification, you must complete an annual review or refresher

course covering, at a minimum, the five topics described in paragraphs (a) through (e) of this section.

(a) Update of regulations.

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

(c) Inspection and maintenance.

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

(e) Discussion of operating problems encountered by attendees.

§ 60.2090 How do I renew my lapsed operator qualification?

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

(a) For a lapse of less than 3 years, you must complete a standard annual refresher course described in § 60.2085.

(b) For a lapse of 3 years or more, you must repeat the initial qualification requirements in § 60.2080(a).

§ 60.2095 What site-specific documentation is required?

(a) Documentation must be available at the facility and readily accessible for all CISWI unit operators that addresses the ten topics described in paragraphs (a)(1) through (10) of this section. You must maintain this information and the training records required by paragraph (c) of this section in a manner that they can be readily accessed and are suitable for inspection upon request.

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

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

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

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

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

(6) Monitoring procedures for demonstrating compliance with the incinerator operating limits.

(7) Reporting and recordkeeping procedures.

(8) The waste management plan required under §§ 60.2055 through 60.2065.

(9) Procedures for handling ash.

(10) A list of the wastes burned during the performance test.

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

(1) The initial review of the information listed in paragraph (a) of this section must be conducted within

6 months after the effective date of this subpart or prior to an employee's assumption of responsibilities for operation of the CISWI unit, whichever date is later.

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

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

(1) Records showing the names of CISWI unit operators who have completed review of the information in § 60.2095(a) as required by § 60.2095(b), including the date of the initial review and all subsequent annual reviews.

(2) Records showing the names of the CISWI operators who have completed the operator training requirements under § 60.2070, met the criteria for qualification under § 60.2080, and maintained or renewed their qualification under § 60.2085 or § 60.2090. Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.

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

§ 60.2100 What if all the qualified operators are temporarily not accessible?

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

(a) When all qualified operators are not accessible for more than 8 hours, but less than 2 weeks, the CISWI unit may be operated by other plant personnel familiar with the operation of the CISWI unit who have completed a review of the information specified in § 60.2095(a) within the past 12 months. However, you must record the period when all qualified operators were not accessible and include this deviation in the annual report as specified under § 60.2210.

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

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

and when you anticipate that a qualified operator will be accessible.

(2) Submit a status report to the Administrator every 4 weeks outlining what you are doing to ensure that a qualified operator is accessible, stating when you anticipate that a qualified operator will be accessible and requesting approval from the Administrator to continue operation of the CISWI unit. You must submit the first status report 4 weeks after you notify the Administrator of the deviation under paragraph (b)(1) of this section. If the Administrator notifies you that your request to continue operation of the CISWI unit is disapproved, the CISWI unit may continue operation for 90 days, then must cease operation. Operation of the unit may resume if you meet the two requirements in paragraphs (b)(2)(i) and (ii) of this section.

(i) A qualified operator is accessible as required under § 60.2070(a).

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

Emission Limitations and Operating Limits

§ 60.2105 What emission limitations must I meet and by when?

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

§ 60.2110 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 paragraph (a)(1)(i) or (ii), as appropriate.

(i) For continuous and intermittent units, maximum charge rate is 110 percent of the average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(ii) For batch units, maximum charge rate is 110 percent of the daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(2) Minimum pressure drop across the wet scrubber, which is calculated as 90

percent of 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 90 percent of 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 90 percent of 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 90 percent of the average liquor pH at the inlet to the wet scrubber measured during the most recent performance test demonstrating compliance with the HCl emission limitation.

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

(c) If you use a fabric filter to comply with the emission limitations, you must operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by you to initiate corrective action.

§ 60.2115 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 § 60.2105, you must petition the Administrator for specific operating limits to be established during the initial performance test and 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 additional operating limits.

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

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

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

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

§ 60.2120 What happens during periods of startup, shutdown, and malfunction?

(a) The emission limitations and operating limits apply at all times except during CISWI unit startups, shutdowns, or malfunctions.

(b) Each malfunction must last no longer than 3 hours.

Performance Testing

§ 60.2125 How do I conduct the initial and annual performance test?

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

(b) You must document that the waste burned during the performance test is representative of the waste burned under normal operating conditions by maintaining a log of the quantity of waste burned (as required in § 60.2175(b)(1)) and the types of waste burned during the performance test.

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

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

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

(f) All pollutant concentrations, except for opacity, must be adjusted to 7 percent oxygen using Equation 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; and

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

(g) You must determine dioxins/furans toxic equivalency by following the procedures in paragraphs (g)(1) through (3) of this section.

(1) Measure the concentration of each dioxin/furan tetra-through octachlorinated-congener emitted using EPA Method 23.

(2) For each dioxin/furan (tetra-through octachlorinated) congener measured in accordance with paragraph (g)(1) of this section, multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 3 of this subpart.

(3) Sum the products calculated in accordance with paragraph (g)(2) of this section to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

§ 60.2130 How are the performance test data used?

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

Initial Compliance Requirements

§ 60.2135 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 § 60.2110 or § 60.2115. The initial performance test must be conducted using the test methods listed in Table 1 of this subpart and the procedures in § 60.2125.

§ 60.2140 By what date must I conduct the initial performance test?

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

Continuous Compliance Requirements

§ 60.2145 How do I demonstrate continuous compliance with the emission limitations and the operating limits?

(a) You must conduct an annual performance test for particulate matter, hydrogen chloride, and opacity for each CISWI unit as required under § 60.8 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 § 60.2125.

(b) You must continuously monitor the operating parameters specified in § 60.2110 or established under § 60.2115. 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 (except for baghouse leak detection system alarms) unless a different averaging period is established under § 60.2115. Operating limits do not apply during performance tests.

(c) You must only burn the same types of waste used to establish operating limits during the performance test.

§ 60.2150 By what date must I conduct the annual performance test?

You must conduct annual performance tests for particulate matter, hydrogen chloride, and opacity within 12 months following the initial performance test. Conduct subsequent annual performance tests within 12 months following the previous one.

§ 60.2155 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 3 years, and all performance tests for the pollutant (particulate matter, hydrogen chloride, or opacity) over 3 consecutive years 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 3rd year and no more than 36 months following the previous performance test.

(b) If your CISWI unit continues to meet the emission limitation for particulate matter, hydrogen chloride, or opacity, you may choose to conduct performance tests for these pollutants every 3rd 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 particulate matter, hydrogen chloride, or opacity, you must conduct annual performance tests for that pollutant until all performance tests over a 3-year period show compliance.

§ 60.2160 May I conduct a repeat performance test to establish new operating limits?

(a) Yes. You may conduct a repeat performance test at any time to establish new values for the operating limits. The Administrator may request a repeat performance test at any time.

(b) You must repeat the performance test if your feed stream is different than the feed streams used during any performance test used to demonstrate compliance.

Monitoring

§ 60.2165 What monitoring equipment must I install and what parameters must I monitor?

(a) If you are using a wet scrubber to comply with the emission limitation under § 60.2105, you must install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the value of the operating parameters used to determine compliance with the operating limits listed in Table 2 of this subpart. These devices (or methods) must measure and record the values for these operating parameters at the frequencies indicated in Table 2 of this subpart at all times except as specified in § 60.2170(a).

(b) If you use a fabric filter to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraphs (b)(1) through (8) of this section.

(1) You must install and operate a bag leak detection system for each exhaust stack of the fabric filter.

(2) Each bag leak detection system must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

(3) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) The bag leak detection system sensor must provide output of relative or absolute particulate matter loadings.

(5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.

(6) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel.

(7) For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter.

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

(c) If you are using something other than a wet scrubber to comply with the emission limitations under § 60.2105, you must install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor compliance with the site-specific operating limits established using the procedures in § 60.2115.

§ 60.2170 Is there a minimum amount of 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 CISWI unit is operating.

(b) 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

§ 60.2175 What records must I keep?

You must maintain the fourteen 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 (6) of this section:

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

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

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

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

(5) For affected CISWI units that establish operating limits for controls other than wet scrubbers under

§ 60.2115, you must maintain data collected for all operating parameters used to determine compliance with the operating limits.

(6) If a fabric filter is used to comply with the emission limitations, you must record the date, time, and duration of each alarm and the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. You must also record the percent of operating time during each 6-month period that the alarm sounds, calculated as specified in § 60.2110(c).

(c) Identification of calendar dates and times for which 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 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 data show a deviation from the operating limits in Table 2 of this subpart or a deviation from other operating limits established under § 60.2115 with a description of the deviations, reasons for such deviations, and a description of corrective actions taken.

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

(g) All documentation produced as a result of the siting requirements of §§ 60.2045 and 60.2050.

(h) Records showing the names of CISWI unit operators who have completed review of the information in § 60.2095(a) as required by § 60.2095(b), including the date of the initial review and all subsequent annual reviews.

(i) Records showing the names of the CISWI operators who have completed the operator training requirements under § 60.2070, met the criteria for qualification under § 60.2080, and maintained or renewed their qualification under § 60.2085 or § 60.2090. Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.

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

(k) Records of calibration of any monitoring devices as required under § 60.2165.

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

(m) The information listed in § 60.2095(a).

(n) On a daily basis, keep a log of the quantity of waste burned and the types of waste burned (always required).

§ 60.2180 Where and in what format must I keep my records?

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

§ 60.2185 What reports must I submit?

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

§ 60.2190 What must I submit prior to commencing construction?

You must submit a notification prior to commencing construction that includes the five items listed in paragraphs (a) through (e) of this section.

(a) A statement of intent to construct.

(b) The anticipated date of commencement of construction.

(c) All documentation produced as a result of the siting requirements of § 60.2050.

(d) The waste management plan as specified in §§ 60.2055 through 60.2065.

(e) Anticipated date of initial startup.

§ 60.2195 What information must I submit prior to initial startup?

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

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

(b) The maximum design waste burning capacity.

(c) The anticipated maximum charge rate.

(d) If applicable, the petition for site-specific operating limits under § 60.2115.

(e) The anticipated date of initial startup.

§ 60.2200 What information must I submit following my initial performance test?

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

(a) The complete test report for the initial performance test results obtained under § 60.2135, as applicable.

(b) The values for the site-specific operating limits established in § 60.2110 or § 60.2115.

(c) If you are using a fabric filter to comply with the emission limitations, documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by § 60.2165(b).

§ 60.2205 When must I submit my annual report?

You must submit an annual report no later than 12 months following the submission of the information in § 60.2200. You must submit subsequent reports no more than 12 months following the previous report. (If the unit is subject to permitting requirements under title V of the Clean Air Act, you may be required by the permit to submit these reports more frequently.)

§ 60.2210 What information must I include in my annual report?

The annual report required under § 60.2205 must include the ten items listed in paragraphs (a) through (j) of this section. If you have a deviation from the operating limits or the emission limitations, you must also submit deviation reports as specified in §§ 60.2215, 60.2220, and 60.2225.

(a) Company name and address.

(b) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(c) Date of report and beginning and ending dates of the reporting period.

(d) The values for the operating limits established pursuant to § 60.2110 or § 60.2115.

(e) If no deviation from any emission limitation or operating limit that applies to you has been reported, a statement that there was no deviation from the emission limitations or operating limits during the reporting period, and that no monitoring system used to determine compliance with the 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 each operating parameter recorded for the calendar year being reported.

(g) Information recorded under § 60.2175(b)(6) and (c) through (e) for the calendar year being reported.

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

(i) If you met the requirements of § 60.2155(a) or (b), and did not conduct

a performance test during the reporting period, you must state that you met the requirements of § 60.2155(a) or (b), and, therefore, you were not required to conduct a performance test during the reporting period.

(j) Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours, but less than 2 weeks.

§ 60.2215 What else must I report if I have a deviation from the operating limits or the emission limitations?

(a) You must submit a deviation report if any recorded 3-hour average parameter level is above the maximum operating limit or below the minimum operating limit established under this subpart, if the bag leak detection system alarm sounds for more than 5 percent of the operating time for the 6-month reporting period, or if a performance test was conducted that deviated from any emission limitation.

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

§ 60.2220 What must I include in the deviation report?

In each report required under § 60.2215, for any pollutant or parameter that deviated from the emission limitations or operating limits specified in this subpart, include the six items described in paragraphs (a) through (f) of this section.

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

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

(c) Durations and causes of 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.

§ 60.2225 What else must I report if I have a deviation from the requirement to have a qualified operator accessible?

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

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

(i) A statement of what caused the deviation.

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

(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 CISWI unit.

(b) If your unit was shut down by the Administrator, under the provisions of § 60.2100(b)(2), due to a failure to provide an accessible qualified operator, you must notify the Administrator that you are resuming operation once a qualified operator is accessible.

§ 60.2230 Are there any other notifications or reports that I must submit?

Yes. You must submit notifications as provided by § 60.7.

§ 60.2235 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.

§ 60.2240 Can reporting dates be changed?

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

Title V Operating Permits**§ 60.2242 Am I required to apply for and obtain a title V operating permit for my unit?**

Yes. Each CISWI unit must operate pursuant to a permit issued under section 129(e) and title V of the Clean Air Act by the later of the two dates in paragraphs (a) and (b) of this section.

(a) Thirty-six months after December 1, 2000.

(b) The effective date of the title V permit program to which your unit is subject. If your unit is subject to title V as a result of some triggering requirement(s) other than this subpart (for example, being a major source), then your unit may be required to apply for and obtain a title V permit prior to the deadlines noted above. If more than one requirement triggers the requirement to apply for a title V permit, the 12-month timeframe for filing a title V application is triggered by the requirement which first causes the source to be subject to title V.

Air Curtain Incinerators**§ 60.2245 What is an air curtain incinerator?**

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

(b) Air curtain incinerators that burn only the materials listed in paragraphs (b)(1) through (3) of this section are only required to meet the requirements under "Air Curtain Incinerators" (§§ 60.2245 through 60.2260).

(1) 100 percent wood waste.

(2) 100 percent clean lumber.

(3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

§ 60.2250 What are the emission limitations for air curtain incinerators?

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

§ 60.2255 How must I monitor opacity for air curtain incinerators?

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

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

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

§ 60.2260 What are the recordkeeping and reporting requirements for air curtain incinerators?

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

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

(2) Your planned initial startup date.

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

(b) Keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format, unless the Administrator approves another format, for at least 5 years.

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

(d) You must submit the results (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 onsite for a period of 5 years.

Definitions**§ 60.2265 What definitions must I know?**

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

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

Agricultural waste means vegetative agricultural materials such as nut and grain hulls and chaff (e.g., almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds, and other vegetative waste materials generated as a result of agricultural operations.

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

floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)

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

Bag leak detection system means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (i.e., baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

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 antineoplastic agents used for the purpose of stopping or reversing the growth of malignant cells.

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

Commercial and industrial solid waste incineration (CISWI) unit means any combustion device that combusts commercial and industrial waste, as defined in this subpart. The boundaries of a CISWI unit are defined as, but not limited to, the commercial or industrial solid waste fuel feed system, grate system, flue gas system, and bottom ash. The CISWI unit does not include air pollution control equipment or the stack. The CISWI unit boundary starts at the commercial and industrial solid waste hopper (if applicable) and extends through two areas:

(1) The combustion unit flue gas system, which ends immediately after the last combustion chamber.

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

Commercial and industrial waste means solid waste combusted in an enclosed device using controlled flame

combustion without energy recovery that is a distinct operating unit of any commercial or industrial facility (including field-erected, modular, and custom built incineration units operating with starved or excess air), or solid waste combusted in an air curtain incinerator without energy recovery that is a distinct operating unit of any commercial or industrial facility.

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

Cyclonic barrel burner means a combustion device for waste materials that is attached to a 55 gallon, open-head drum. The device consists of a lid, which fits onto and encloses the drum, and a blower that forces combustion air into the drum in a cyclonic manner to enhance the mixing of waste material and air.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

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

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; 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 permitted by this subpart.

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

Discard means, for purposes of this subpart and 40 CFR part 60, subpart DDDD, only, burned in an incineration unit without energy recovery.

Drum reclamation unit means a unit that burns residues out of drums (e.g., 55 gallon drums) so that the drums can be reused.

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

Fabric filter means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse.

Low-level radioactive waste means waste material which contains radioactive nuclides emitting primarily beta or gamma radiation, or both, in

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

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

Modification or *modified CISWI unit* means a CISWI unit you have changed later than June 1, 2001 and that meets one of two criteria:

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

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

Part reclamation unit means a unit that burns coatings off parts (e.g., tools, equipment) so that the parts can be reconditioned and reused.

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

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

Rack reclamation unit means a unit that burns the coatings off racks used to hold small items for application of a coating. The unit burns the coating overspray off the rack so the rack can be reused.

Reconstruction means rebuilding a CISWI unit and meeting two criteria:

(1) The reconstruction begins on or after June 1, 2001.

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

used to calculate these costs, see the definition of CISWI unit.

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

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

(2) Pelletized refuse-derived fuel.

Shutdown means the period of time after all waste has been combusted in the primary chamber.

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 which 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). For purposes of this subpart and 40 CFR part 60, subpart DDDD, only, solid waste does not include the waste burned in the fifteen types of units described in § 60.2020.

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.

Wet scrubber means an add-on air pollution control device that utilizes an aqueous or alkaline scrubbing liquor to collect particulate matter (including nonvolatile 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.

TABLE 1 TO SUBPART CCCC—EMISSION LIMITATIONS

For the air pollutant	You must meet this emission limitation ^a	Using this averaging time	And determining compliance using this method
Dioxins/furans (toxic equivalency basis).	0.41 nanograms per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 23 of Appendix A of this part).
Hydrogen chloride	62 parts per million by dry volume	3-run average (1 hour volume minimum sample time per run).	Performance test (Method 26A of appendix A of this part).
Lead	0.04 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of this part).
Mercury	0.47 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of this part).
Opacity	10 percent	6-minute averages	Performance test (Method 9 of appendix A of this part).
Oxides of nitrogen	388 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 7, 7A, 7C, 7D, or 7E of appendix A of this part)
Particulate matter	70 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 5 or 29 of appendix A of this part).
Sulfur dioxide	20 parts per million by dry volume	3-run average (1 hour volume minimum sample time per run).	Performance test (Method 6 or 6c of appendix A of this part).

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

TABLE 2 TO SUBPART CCCC—OPERATING LIMITS FOR WET SCRUBBERS

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

TABLE 3 TO SUBPART CCCC—TOXIC EQUIVALENCY FACTORS

Dioxin/furan congener	Toxic equivalence factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin	0.5
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
octachlorinated dibenzo-p-dioxin	0.001
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.5
1,2,3,7,8-pentachlorinated dibenzofuran	0.05
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
octachlorinated dibenzofuran	0.001

TABLE 4 TO SUBPART CCCC—SUMMARY OF REPORTING REQUIREMENTS ^a

Report	Due date	Contents	Reference
Preconstruction report ..	Prior to commencing construction	<ul style="list-style-type: none"> • Statement of intent to construct • Anticipated date of commencement of construction • Documentation for siting requirements • Waste management plan 	§ 60.2190
Startup notification	Prior to initial startup	<ul style="list-style-type: none"> • Anticipated date of initial startup • Type of waste to be burned • Maximum design waste burning capacity • Anticipated maximum charge rate • If applicable, the petition for site-specific operating limits 	§ 60.2195
Initial test report	No later than 60 days following the initial performance test	<ul style="list-style-type: none"> • Complete test report for the initial performance test • The values for the site-specific operating limits • Installation of bag leak detection system for fabric filter 	§ 60.2200
Annual report	No later than 12 months following the submission of the initial test report. Subsequent reports are to be submitted no more than 12 months following the previous report.	<ul style="list-style-type: none"> • Name and address • Statement and signature by responsible official • Date of report • Values for the operating limits • If no deviations or malfunctions were reported, a statement that no deviations occurred during the reporting period • Highest recorded 3-hour average and the lowest 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported • Information for deviations or malfunctions recorded under § 60.2175(b)(6) and (c) through (e) • If a performance test was conducted during the reporting period, the results of the test • If a performance test was not conducted during the reporting period, a statement that the requirements of § 60.2155(a) or (b) were met • Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours but less than 2 weeks 	§§ 60.2205 and 60.2210

TABLE 4 TO SUBPART CCCC—SUMMARY OF REPORTING REQUIREMENTS ^a—Continued

Report	Due date	Contents	Reference
Emission limitation or operating limit deviation report.	By August 1 of that year for data collected during the first half of the calendar year. By February 1 of the following year for data collected during the second half of the calendar year.	<ul style="list-style-type: none"> • Dates and times of deviation • Averaged and recorded data for those dates • Duration and causes of each deviation and the corrective actions taken • Copy of operating limit monitoring data and any test reports • Dates, times, and causes for monitor down-time incidents • Whether each deviation occurred during a period of startup, shutdown, or malfunction 	§ 60.2215 and 60.2220
Qualified operator deviation notification.	Within 10 days of deviation	<ul style="list-style-type: none"> • Statement of cause of deviation • Description of efforts to have an accessible qualified operator • The date a qualified operator will be accessible 	§ 60.2225(a)(1)
Qualified operator deviation status report.	Every 4 weeks following deviation	<ul style="list-style-type: none"> • Description of efforts to have an accessible qualified operator • The date a qualified operator will be accessible 	§ 60.2225(a)(2)
Qualified operator deviation notification of resumed operation.	Prior to resuming operation	<ul style="list-style-type: none"> • Request for approval to continue operation • Notification that you are resuming operation 	§ 60.2225(b)

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

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

Subpart DDDD—Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units that Commenced Construction On or Before November 30, 1999

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Introduction

§ 60.2500 What is the purpose of this subpart?

This subpart establishes emission guidelines and compliance schedules for the control of emissions from commercial and industrial solid waste incineration (CISWI) units. The pollutants addressed by these emission guidelines are listed in Table 2 of this subpart. These emission guidelines are developed in accordance with sections 111(d) and 129 of the Clean Air Act and subpart B of this part.

§ 60.2505 Am I affected by this subpart?

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

(b) You must submit the State plan to EPA by December 3, 2001.

§ 60.2510 Is a State plan required for all States?

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

§ 60.2515 What must I include in my State plan?

(a) You must include the nine items described in paragraphs (a)(1) through (9) of this section in your State plan.

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

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

(3) Compliance schedules for each affected CISWI unit.

(4) Emission limitations, operator training and qualification requirements, a waste management plan, and

operating limits for affected CISWI units that are at least as protective as the emission guidelines contained in this subpart.

(5) Performance testing, recordkeeping, and reporting requirements.

(6) Certification that the hearing on the State plan was held, a list of witnesses and their organizational affiliations, if any, appearing at the hearing, and a brief written summary of each presentation or written submission.

(7) Provision for State progress reports to EPA.

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

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

(b) Your State plan may deviate from the format and content of the emission guidelines contained in this subpart.

However, if your State plan does deviate in content, you must demonstrate that your State plan is at least as protective as the emission guidelines contained in this subpart. Your State plan must address regulatory applicability, increments of progress for retrofit, operator training and qualification, a waste management plan, emission limitations, performance testing, operating limits, monitoring, recordkeeping and reporting, and air curtain incinerator requirements.

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

§ 60.2520 Is there an approval process for my State plan?

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

§ 60.2525 What if my State plan is not approvable?

If you do not submit an approvable State plan (or a negative declaration letter) by December 2, 2002, EPA will develop a Federal plan according to § 60.27 to implement the emission guidelines contained in this subpart. Owners and operators of CISWI units not covered by an approved State plan must comply with the Federal plan. The Federal plan is an interim action and will be automatically withdrawn when your State plan is approved.

§ 60.2530 Is there an approval process for a negative declaration letter?

No. The EPA has no formal review process for negative declaration letters. Once your negative declaration letter has been received, EPA will place a

copy in the public docket and publish a notice in the **Federal Register**. If, at a later date, an existing CISWI unit is found in your State, the Federal plan implementing the emission guidelines contained in this subpart would automatically apply to that CISWI unit until your State plan is approved.

§ 60.2535 What compliance schedule must I include in my State plan?

(a) Your State plan must include compliance schedules that require CISWI units to achieve final compliance as expeditiously as practicable after approval of the State plan but not later than the earlier of the two dates specified in paragraphs (a)(1) and (2) of this section.

(1) December 1, 2005.

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

(b) For compliance schedules more than 1 year following the effective date of State plan approval, State plans must include dates for enforceable increments of progress as specified in § 60.2580.

§ 60.2540 Are there any State plan requirements for this subpart that apply instead of the requirements specified in subpart B?

Yes. Subpart B establishes general requirements for developing and processing section 111(d) plans. This subpart applies instead of the requirements in subpart B of this part for paragraphs (a) and (b) of this section:

(a) State plans developed to implement this subpart must be as protective as the emission guidelines contained in this subpart. State plans must require all CISWI units to comply by December 1, 2005 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 two increments of progress for the affected CISWI units. These two minimum increments are the final control plan submittal date and final compliance date in § 60.21(h)(1) and (5). This applies instead of the requirement of § 60.24(e)(1) that would require a State plan to include all five increments of progress for all CISWI units.

§ 60.2545 Does this subpart directly affect CISWI unit owners and operators in my State?

(a) No. This subpart does not directly affect CISWI unit owners and operators in your State. However, CISWI unit owners and operators must comply with the State plan you develop to

implement the emission guidelines contained in this subpart. States may choose to incorporate the model rule text directly in their State plan.

(b) If you do not submit an approvable plan to implement and enforce the guidelines contained in this subpart by December 2, 2002, the EPA will implement and enforce a Federal plan, as provided in § 60.2525, to ensure that each unit within your State reaches compliance with all the provisions of this subpart by December 1, 2005.

Applicability of State Plans

§ 60.2550 What CISWI units must I address in my State plan?

(a) Your State plan must address incineration units that meet all three criteria described in paragraphs (a)(1) through (3) of this section.

(1) Incineration units in your State that commenced construction on or before November 30, 1999.

(2) Incineration units that meet the definition of a CISWI unit as defined in § 60.2875.

(3) Incineration units not exempt under § 60.2555.

(b) If the owner or operator of a CISWI unit makes changes that meet the definition of modification or reconstruction on or after June 1, 2001, the CISWI unit becomes subject to subpart CCCC of this part and the State plan no longer applies to that unit.

(c) If the owner or operator of a CISWI unit makes physical or operational changes to an existing CISWI unit primarily to comply with your State plan, subpart CCCC of this part does not apply to that unit. Such changes do not qualify as modifications or reconstructions under subpart CCCC of this part.

§ 60.2555 What combustion units are exempt from my State plan?

This subpart exempts fifteen types of units described in paragraphs (a) through (o) of this section.

(a) *Pathological waste incineration units.* Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste as defined in § 60.2875 are not subject to this subpart if you meet the two requirements specified in paragraphs (a)(1) and (2) of this section.

(1) Notify the Administrator that the unit meets these criteria.

(2) Keep records on a calendar quarter basis of the weight of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste burned, and

the weight of all other fuels and wastes burned in the unit.

(b) *Agricultural waste incineration units.* Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of agricultural wastes as defined in § 60.2875 are not subject to this subpart if you meet the two requirements specified in paragraphs (b)(1) and (2) of this section.

(1) Notify the Administrator that the unit meets these criteria.

(2) Keep records on a calendar quarter basis of the weight of agricultural waste burned, and the weight of all other fuels and wastes burned in the unit.

(c) *Municipal waste combustion units.* Incineration units that meet either of the two criteria specified in paragraphs (c)(1) or (2) of this section.

(1) Are regulated under subpart Ea of this part (Standards of Performance for Municipal Waste Combustors); subpart Eb of this part (Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994); subpart Cb of this part (Emission Guidelines and Compliance Time for Large Municipal Combustors that are Constructed on or Before September 20, 1994); subpart AAAA of this part (Standards of Performance for New Stationary Sources: Small Municipal Waste Combustion Units); or subpart BBBB of this part (Emission Guidelines for Existing Stationary Sources: Small Municipal Waste Combustion Units).

(2) Burn greater than 30 percent municipal solid waste or refuse-derived fuel, as defined in subpart Ea, subpart Eb, subpart AAAA, and subpart BBBB, and that have the capacity to burn less than 35 tons (32 megagrams) per day of municipal solid waste or refuse-derived fuel, if you meet the two requirements in paragraphs (c)(2)(i) and (ii) of this section.

(i) Notify the Administrator that the unit meets these criteria.

(ii) Keep records on a calendar quarter basis of the weight of municipal solid waste burned, and the weight of all other fuels and wastes burned in the unit.

(d) *Medical waste incineration units.* Incineration units regulated under subpart Ec of this part (Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996) or subpart Ca of this part (Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators).

(e) *Small power production facilities.* Units that meet the three requirements

specified in paragraphs (e)(1) through (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.

(f) *Cogeneration facilities.* Units that meet the three requirements specified in paragraphs (f)(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.

(g) *Hazardous waste combustion units.* Units that meet either of the two criteria specified in paragraph (g)(1) or (2) of this section.

(1) Units for which you are required to get a permit under section 3005 of the Solid Waste Disposal Act.

(2) Units regulated under subpart EEE of 40 CFR part 63 (National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors).

(h) *Materials recovery units.* Units that combust waste for the primary purpose of recovering metals, such as primary and secondary smelters.

(i) *Air curtain incinerators.* Air curtain incinerators that burn only the materials listed in paragraphs (i)(1) through (3) of this section are only required to meet the requirements under "Air Curtain Incinerators" (§§ 60.2810 through 60.2870).

(1) 100 percent wood waste.

(2) 100 percent clean lumber.

(3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

(j) *Cyclonic barrel burners.* (See § 60.2875)

(k) *Rack, part, and drum reclamation units.* (See § 60.2875)

(l) *Cement kilns.* Kilns regulated under subpart LLL of part 63 of this chapter (National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry).

(m) *Sewage sludge incinerators.* Incineration units regulated under subpart O of this part (Standards of Performance for Sewage Treatment Plants).

(n) *Chemical recovery units.* Combustion units burning materials to

recover chemical constituents or to produce chemical compounds where there is an existing commercial market for such recovered chemical constituents or compounds. The seven types of units described in paragraphs (n)(1) through (7) of this section are considered chemical recovery units.

(1) Units burning only pulping liquors (*i.e.*, black liquor) that are reclaimed in a pulping liquor recovery process and reused in the pulping process.

(2) Units burning only spent sulfuric acid used to produce virgin sulfuric acid.

(3) Units burning only wood or coal feedstock for the production of charcoal.

(4) Units burning only manufacturing byproduct streams/residues containing catalyst metals which are reclaimed and reused as catalysts or used to produce commercial grade catalysts.

(5) Units burning only coke to produce purified carbon monoxide that is used as an intermediate in the production of other chemical compounds.

(6) Units burning only hydrocarbon liquids or solids to produce hydrogen, carbon monoxide, synthesis gas, or other gases for use in other manufacturing processes.

(7) Units burning only photographic film to recover silver.

(o) *Laboratory analysis units.* Units that burn samples of materials for the purpose of chemical or physical analysis.

§ 60.2558 What if a chemical recovery unit is not listed in § 60.2555(n)?

(a) If a chemical recovery unit is not listed in § 60.2555(n), the owner or operator of the unit can petition the Administrator to add the unit to the list. The petition must contain the six items in paragraphs (a)(1) through (6) of this section.

(1) A description of the source of the materials being burned.

(2) A description of the composition of the materials being burned, highlighting the chemical constituents in these materials that are recovered.

(3) A description (including a process flow diagram) of the process in which the materials are burned, highlighting the type, design, and operation of the equipment used in this process.

(4) A description (including a process flow diagram) of the chemical constituent recovery process, highlighting the type, design, and operation of the equipment used in this process.

(5) A description of the commercial markets for the recovered chemical constituents and their use.

(6) The composition of the recovered chemical constituents and the

composition of these chemical constituents as they are bought and sold in commercial markets.

(b) Until the Administrator approves the petition, the incineration unit is covered by this subpart.

(c) If a petition is approved, the Administrator will amend § 60.2555(n) to add the unit to the list of chemical recovery units.

Use of Model Rule

§ 60.2560 What is the "model rule" in this subpart?

(a) The model rule is the portion of these emission guidelines (§§ 60.2575 through 60.2875) that addresses the regulatory requirements applicable to CISWI units. The model rule provides these requirements in regulation format. You must develop a State plan that is at least as protective as the model rule. You may use the model rule language as part of your State plan. Alternative language may be used in your State plan if you demonstrate that the alternative language is at least as protective as the model rule contained in this subpart.

(b) In the model rule of §§ 60.2575 to 60.2875, "you" means the owner or operator of a CISWI unit.

§ 60.2565 How does the model rule relate to the required elements of my State plan?

Use the model rule to satisfy the State plan requirements specified in § 60.2515(a)(4) and (5).

§ 60.2570 What are the principal components of the model rule?

The model rule contains the eleven major components listed in paragraphs (a) through (k) of this section.

(a) Increments of progress toward compliance.

(b) Waste management plan.

(c) Operator training and qualification.

(d) Emission limitations and operating limits.

(e) Performance testing.

(f) Initial compliance requirements.

(g) Continuous compliance requirements.

(h) Monitoring.

(i) Recordkeeping and reporting.

(j) Definitions.

(k) Tables.

Model Rule—Increments of Progress

§ 60.2575 What are my requirements for meeting increments of progress and achieving final compliance?

If you plan to achieve compliance more than 1 year following the effective date of State plan approval, you must meet the two increments of progress specified in paragraphs (a) and (b) of this section.

- (a) Submit a final control plan.
- (b) Achieve final compliance.

§ 60.2580 When must I complete each increment of progress?

Table 1 of this subpart specifies compliance dates for each of the increments of progress.

§ 60.2585 What must I include in the notifications of achievement of increments of progress?

Your notification of achievement of increments of progress must include the three items specified in paragraphs (a) through (c) of this section.

- (a) Notification that the increment of progress has been achieved.
- (b) Any items required to be submitted with each increment of progress.
- (c) Signature of the owner or operator of the CISWI unit.

§ 60.2590 When must I submit the notifications of achievement of increments of progress?

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

§ 60.2595 What if I do not meet an increment of progress?

If you fail to meet an increment of progress, you must submit a notification to the Administrator postmarked within 10 business days after the date for that increment of progress in Table 1 of this subpart. You must inform the Administrator that you did not meet the increment, and you must continue to submit reports each subsequent calendar month until the increment of progress is met.

§ 60.2600 How do I comply with the increment of progress for submittal of a control plan?

For your control plan increment of progress, you must satisfy the two requirements specified in paragraphs (a) and (b) of this section.

(a) Submit the final control plan that includes the five items described in paragraphs (a)(1) through (5) of this section.

(1) A description of the devices for air pollution control and process changes that you will use to comply with the emission limitations and other requirements of this subpart.

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

(3) The maximum design waste burning capacity.

(4) The anticipated maximum charge rate.

(5) If applicable, the petition for site-specific operating limits under § 60.2680.

(b) Maintain an onsite copy of the final control plan.

§ 60.2605 How do I comply with the increment of progress for achieving final compliance?

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

§ 60.2610 What must I do if I close my CISWI unit and then restart it?

(a) If you close your CISWI unit but will restart it prior to the final compliance date in your State plan, you must meet the increments of progress specified in § 60.2575.

(b) If you close your CISWI unit but will restart it after your final compliance date, you must complete emission control retrofits and meet the emission limitations and operating limits on the date your unit restarts operation.

§ 60.2615 What must I do if I plan to permanently close my CISWI unit and not restart it?

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

Model Rule—Waste Management Plan

§ 60.2620 What is a waste management plan?

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

§ 60.2625 When must I submit my waste management plan?

You must submit a waste management plan no later than the date specified in Table 1 of this subpart for submittal of the final control plan.

§ 60.2630 What should I include in my waste management plan?

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

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

Model Rule—Operator Training and Qualification

§ 60.2635 What are the operator training and qualification requirements?

(a) No CISWI unit can be operated unless a fully trained and qualified CISWI unit operator is accessible, either at the facility or can be at the facility within 1 hour. The trained and qualified CISWI unit operator may operate the CISWI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified CISWI unit operators are temporarily not accessible, you must follow the procedures in § 60.2665.

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

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

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

(i) Environmental concerns, including types of emissions.

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

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

(iv) Combustion controls and monitoring.

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

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

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

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

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

(x) Pollution prevention.

(xi) Waste management practices.

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

(3) Written material covering the training course topics that can serve as

reference material following completion of the course.

§ 60.2640 When must the operator training course be completed?

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

- (a) The final compliance date (Increment 2).
- (b) Six months after CISWI unit startup.

- (c) Six months after an employee assumes responsibility for operating the CISWI unit or assumes responsibility for supervising the operation of the CISWI unit.

§ 60.2645 How do I obtain my operator qualification?

- (a) You must obtain operator qualification by completing a training course that satisfies the criteria under § 60.2635(b).

- (b) Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under § 60.2635(c)(2).

§ 60.2650 How do I maintain my operator qualification?

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

- (a) Update of regulations.
- (b) Incinerator operation, including startup and shutdown procedures, waste charging, and ash handling.
- (c) Inspection and maintenance.
- (d) Responses to malfunctions or conditions that may lead to malfunction.
- (e) Discussion of operating problems encountered by attendees.

§ 60.2655 How do I renew my lapsed operator qualification?

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

- (a) For a lapse of less than 3 years, you must complete a standard annual refresher course described in § 60.2650.
- (b) For a lapse of 3 years or more, you must repeat the initial qualification requirements in § 60.2645(a).

§ 60.2660 What site-specific documentation is required?

- (a) Documentation must be available at the facility and readily accessible for all CISWI unit operators that addresses the ten topics described in paragraphs (a)(1) through (10) of this section. You must maintain this information and the

training records required by paragraph (c) of this section in a manner that they can be readily accessed and are suitable for inspection upon request.

- (1) Summary of the applicable standards under this subpart.
- (2) Procedures for receiving, handling, and charging waste.
- (3) Incinerator startup, shutdown, and malfunction procedures.
- (4) Procedures for maintaining proper combustion air supply levels.
- (5) Procedures for operating the incinerator and associated air pollution control systems within the standards established under this subpart.
- (6) Monitoring procedures for demonstrating compliance with the incinerator operating limits.
- (7) Reporting and recordkeeping procedures.
- (8) The waste management plan required under §§ 60.2620 through 60.2630.

- (9) Procedures for handling ash.
- (10) A list of the wastes burned during the performance test.

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

- (1) The initial review of the information listed in paragraph (a) of this section must be conducted by the later of the three dates specified in paragraphs (b)(1)(i) through (iii) of this section.

- (i) The final compliance date (Increment 2).
- (ii) Six months after CISWI unit startup.
- (iii) Six months after being assigned to operate the CISWI unit.

- (2) Subsequent annual reviews of the information listed in paragraph (a) of this section must be conducted no later than 12 months following the previous review.

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

- (1) Records showing the names of CISWI unit operators who have completed review of the information in § 60.2660(a) as required by § 60.2660(b), including the date of the initial review and all subsequent annual reviews.

- (2) Records showing the names of the CISWI operators who have completed the operator training requirements under § 60.2635, met the criteria for qualification under § 60.2645, and maintained or renewed their qualification under § 60.2650 or § 60.2655. Records must include documentation of training, the dates of the initial refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.

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

§ 60.2665 What if all the qualified operators are temporarily not accessible?

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

- (a) When all qualified operators are not accessible for more than 8 hours, but less than 2 weeks, the CISWI unit may be operated by other plant personnel familiar with the operation of the CISWI unit who have completed a review of the information specified in § 60.2660(a) within the past 12 months. However, you must record the period when all qualified operators were not accessible and include this deviation in the annual report as specified under § 60.2770.

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

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

- (2) Submit a status report to the Administrator every 4 weeks outlining what you are doing to ensure that a qualified operator is accessible, stating when you anticipate that a qualified operator will be accessible and requesting approval from the Administrator to continue operation of the CISWI unit. You must submit the first status report 4 weeks after you notify the Administrator of the deviation under paragraph (b)(1) of this section. If the Administrator notifies you that your request to continue operation of the CISWI unit is disapproved, the CISWI unit may continue operation for 90 days, then must cease operation. Operation of the unit may resume if you meet the two requirements in paragraphs (b)(2)(i) and (ii) of this section.

- (i) A qualified operator is accessible as required under § 60.2635(a).

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

Model Rule—Emission Limitations and Operating Limits

§ 60.2670 What emission limitations must I meet and by when?

You must meet the emission limitations specified in Table 2 of this subpart on the date the initial performance test is required or completed (whichever is earlier).

§ 60.2675 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 paragraph (a)(1)(i) or (ii), as appropriate.

(i) For continuous and intermittent units, maximum charge rate is 110 percent of the average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(ii) For batch units, maximum charge rate is 110 percent of the daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(2) Minimum pressure drop across the wet scrubber, which is calculated as 90 percent of 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 90 percent of 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 90 percent of 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 90 percent of the average liquor pH at the inlet to the wet scrubber measured during the most recent performance test demonstrating compliance with the HCl emission limitation.

(b) You must meet the operating limits established during the initial performance test on the date the initial

performance test is required or completed (whichever is earlier).

(c) If you use a fabric filter to comply with the emission limitations, you must operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by you to initiate corrective action.

§ 60.2680 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 § 60.2670, you must petition the Administrator for specific operating limits to be established during the initial performance test and 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 additional operating limits.

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

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

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

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

§ 60.2685 What happens during periods of startup, shutdown, and malfunction?

(a) The emission limitations and operating limits apply at all times

except during CISWI unit startups, shutdowns, or malfunctions.

(b) Each malfunction must last no longer than 3 hours.

Model Rule—Performance Testing

§ 60.2690 How do I conduct the initial and annual performance test?

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

(b) You must document that the waste burned during the performance test is representative of the waste burned under normal operating conditions by maintaining a log of the quantity of waste burned (as required in § 60.2740(b)(1)) and the types of waste burned during the performance test.

(c) All performance tests must be conducted using the minimum run duration specified in 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) All pollutant concentrations, except for opacity, must be adjusted 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; and

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

(g) You must determine dioxins/furans toxic equivalency by following the procedures in paragraphs (g)(1) through (3) of this section.

(1) Measure the concentration of each dioxin/furan tetra- through octa-congener emitted using EPA Method 23.

(2) For each dioxin/furan congener measured in accordance with paragraph (g)(1) of this section, multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 4 of this subpart.

(3) Sum the products calculated in accordance with paragraph (g)(2) of this section to obtain the total concentration

of dioxins/furans emitted in terms of toxic equivalency.

§ 60.2695 How are the performance test data used?

You use results of performance tests to demonstrate compliance with the emission limitations in Table 2 of this subpart.

Model Rule—Initial Compliance Requirements

§ 60.2700 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 § 60.2675 or § 60.2680. The initial performance test must be conducted using the test methods listed in Table 2 of this subpart and the procedures in § 60.2690.

§ 60.2705 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

§ 60.2710 How do I demonstrate continuous compliance with the emission limitations and the operating limits?

(a) You must conduct an annual performance test for particulate matter, hydrogen chloride, and opacity for each CISWI unit as required under § 60.8 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 § 60.2690.

(b) You must continuously monitor the operating parameters specified in § 60.2675 or established under § 60.2680. 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 (except for baghouse leak detection system alarms) unless a different averaging period is established under § 60.2680. Operating limits do not apply during performance tests.

(c) You must only burn the same types of waste used to establish operating limits during the performance test.

§ 60.2715 By what date must I conduct the annual performance test?

You must conduct annual performance tests for particulate matter, hydrogen chloride, and opacity within 12 months following the initial performance test. Conduct subsequent annual performance tests within 12 months following the previous one.

§ 60.2720 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 3 years, and all performance tests for the pollutant (particulate matter, hydrogen chloride, or opacity) over 3 consecutive years 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 CISWI unit continues to meet the emission limitation for particulate matter, hydrogen chloride, or opacity, you may choose to conduct performance tests for these pollutants 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 particulate matter, hydrogen chloride, or opacity, you must conduct annual performance tests for that pollutant until all performance tests over a 3-year period show compliance.

§ 60.2725 May I conduct a repeat performance test to establish new operating limits?

(a) Yes. You may conduct a repeat performance test at any time to establish new values for the operating limits. The Administrator may request a repeat performance test at any time.

(b) You must repeat the performance test if your feed stream is different than the feed streams used during any performance test used to demonstrate compliance.

Model Rule—Monitoring

§ 60.2730 What monitoring equipment must I install and what parameters must I monitor?

(a) If you are using a wet scrubber to comply with the emission limitation under § 60.2670, you must install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the value of the operating parameters used to determine compliance with the operating limits listed in Table 3 of this subpart. These

devices (or methods) must measure and record the values for these operating parameters at the frequencies indicated in Table 3 of this subpart at all times except as specified in § 60.2735(a).

(b) If you use a fabric filter to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraphs (b)(1) through (8) of this section.

(1) You must install and operate a bag leak detection system for each exhaust stack of the fabric filter.

(2) Each bag leak detection system must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

(3) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) The bag leak detection system sensor must provide output of relative or absolute particulate matter loadings.

(5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.

(6) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel.

(7) For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter.

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

(c) If you are using something other than a wet scrubber to comply with the emission limitations under § 60.2670, you must install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor compliance with the site-specific operating limits established using the procedures in § 60.2680.

§ 60.2735 Is there a minimum amount of monitoring data I must obtain?

(a) Except for monitoring 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 CISWI unit is operating.

(b) Do not use data recorded during monitoring 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

§ 60.2740 What records must I keep?

You must maintain the 13 items (as applicable) as specified in paragraphs (a) through (m) of this section for a period of at least 5 years:

- (a) Calendar date of each record.
- (b) Records of the data described in paragraphs (b)(1) through (6) of this section:
 - (1) The CISWI unit charge dates, times, weights, and hourly charge rates.
 - (2) Liquor flow rate to the wet scrubber inlet every 15 minutes of operation, as applicable.
 - (3) Pressure drop across the wet scrubber system every 15 minutes of operation or amperage to the wet scrubber every 15 minutes of operation, as applicable.
 - (4) Liquor pH as introduced to the wet scrubber every 15 minutes of operation, as applicable.
 - (5) For affected CISWI units that establish operating limits for controls other than wet scrubbers under § 60.2680, you must maintain data collected for all operating parameters used to determine compliance with the operating limits.
 - (6) If a fabric filter is used to comply with the emission limitations, you must record the date, time, and duration of each alarm and the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. You must also record the percent of operating time during each 6-month period that the alarm sounds, calculated as specified in § 60.2675(c).
- (c) Identification of calendar dates and times for which 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 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 data show a deviation from the operating limits in Table 3 of this subpart or a deviation from other operating limits established under § 60.2680 with a description of the deviations, reasons for such deviations, and a description of corrective actions taken.

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

(g) Records showing the names of CISWI unit operators who have completed review of the information in § 60.2660(a) as required by § 60.2660(b), including the date of the initial review and all subsequent annual reviews.

(h) Records showing the names of the CISWI operators who have completed the operator training requirements under § 60.2635, met the criteria for qualification under § 60.2645, and maintained or renewed their qualification under § 60.2650 or § 60.2655. Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.

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

(j) Records of calibration of any monitoring devices as required under § 60.2730.

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

(l) The information listed in § 60.2660(a).

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

§ 60.2745 Where and in what format must I keep my records?

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

§ 60.2750 What reports must I submit?

See Table 5 of this subpart for a summary of the reporting requirements.

§ 60.2755 When must I submit my waste management plan?

You must submit the waste management plan no later than the date specified in Table 1 of this subpart for submittal of the final control plan.

§ 60.2760 What information must I submit following my initial performance test?

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

(a) The complete test report for the initial performance test results obtained under § 60.2700, as applicable.

(b) The values for the site-specific operating limits established in § 60.2675 or § 60.2680.

(c) If you are using a fabric filter to comply with the emission limitations, documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by § 60.2730(b).

§ 60.2765 When must I submit my annual report?

You must submit an annual report no later than 12 months following the submission of the information in § 60.2760. You must submit subsequent reports no more than 12 months following the previous report. (If the unit is subject to permitting requirements under title V of the Clean Air Act, you may be required by the permit to submit these reports more frequently.)

§ 60.2770 What information must I include in my annual report?

The annual report required under § 60.2765 must include the ten items listed in paragraphs (a) through (j) of this section. If you have a deviation from the operating limits or the emission limitations, you must also submit deviation reports as specified in §§ 60.2775, 60.2780, and 60.2785.

(a) Company name and address.
 (b) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(c) Date of report and beginning and ending dates of the reporting period.
 (d) The values for the operating limits established pursuant to § 60.2675 or § 60.2680.

(e) If no deviation from any emission limitation or operating limit that applies to you has been reported, a statement that there was no deviation from the emission limitations or operating limits during the reporting period, and that no monitoring system used to determine compliance with the 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 each operating parameter recorded for the calendar year being reported.

(g) Information recorded under § 60.2740(b)(6) and (c) through (e) for the calendar year being reported.

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

(i) If you met the requirements of § 60.2720(a) or (b), and did not conduct a performance test during the reporting period, you must state that you met the requirements of § 60.2720(a) or (b), and, therefore, you were not required to conduct a performance test during the reporting period.

(j) Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours, but less than 2 weeks.

§ 60.2775 What else must I report if I have a deviation from the operating limits or the emission limitations?

(a) You must submit a deviation report if any recorded 3-hour average parameter level is above the maximum operating limit or below the minimum operating limit established under this subpart, if the bag leak detection system alarm sounds for more than 5 percent of the operating time for the 6-month reporting period, or if a performance test was conducted that deviated from any emission limitation.

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

§ 60.2780 What must I include in the deviation report?

In each report required under § 60.2775, for any pollutant or parameter that deviated from the emission limitations or operating limits specified in this subpart, include the six items described in paragraphs (a) through (f) of this section.

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

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

(c) Duration 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 monitoring 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.

§ 60.2785 What else must I report if I have a deviation from the requirement to have a qualified operator accessible?

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

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

(i) A statement of what caused the deviation.

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

(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 CISWI unit.

(b) If your unit was shut down by the Administrator, under the provisions of § 60.2665(b)(2), due to a failure to provide an accessible qualified operator, you must notify the Administrator that you are resuming operation once a qualified operator is accessible.

§ 60.2790 Are there any other notifications or reports that I must submit?

Yes. You must submit notifications as provided by § 60.7.

§ 60.2795 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.

§ 60.2800 Can reporting dates be changed?

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

Model Rule—Title V Operating Permits

§ 60.2805 Am I required to apply for and obtain a title V operating permit for my unit?

Yes. Each CISWI unit must operate pursuant to a permit issued under section 129(e) and title V of the Clean Air Act by the later of the two dates in paragraphs (a) and (b) of this section.

(a) Thirty-six months after December 1, 2000.

(b) The effective date of the title V permit program to which your unit is subject. If your unit is subject to title V as a result of some triggering requirement(s) other than this subpart (for example, being a major source), then your unit may be required to apply for and obtain a title V permit prior to the deadlines noted above. If more than one requirement triggers the requirement to apply for a title V permit, the 12-month timeframe for filing a title V application is triggered by the requirement which first causes the source to be subject to title V.

Model Rule—Air Curtain Incinerators

§ 60.2810 What is an air curtain incinerator?

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

(b) Air curtain incinerators that burn only the materials listed in paragraphs (b)(1) through (3) of this section are only required to meet the requirements under "Air Curtain Incinerators" (§§ 60.2810 through 60.2870).

(1) 100 percent wood waste.

(2) 100 percent clean lumber.

(3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

§ 60.2815 What are my requirements for meeting increments of progress and achieving final compliance?

If you plan to achieve compliance more than 1 year following the effective date of State plan approval, you must meet the two increments of progress specified in paragraphs (a) and (b) of this section.

(a) Submit a final control plan.

(b) Achieve final compliance.

§ 60.2820 When must I complete each increment of progress?

Table 1 of this subpart specifies compliance dates for each of the increments of progress.

§ 60.2825 What must I include in the notifications of achievement of increments of progress?

Your notification of achievement of increments of progress must include the three items described in paragraphs (a) through (c) of this section.

(a) Notification that the increment of progress has been achieved.

(b) Any items required to be submitted with each increment of progress (see § 60.2840).

(c) Signature of the owner or operator of the incinerator.

§ 60.2830 When must I submit the notifications of achievement of increments of progress?

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

§ 60.2835 What if I do not meet an increment of progress?

If you fail to meet an increment of progress, you must submit a notification to the Administrator postmarked within 10 business days after the date for that increment of progress in Table 1 of this subpart. You must inform the Administrator that you did not meet the increment, and you must continue to submit reports each subsequent calendar month until the increment of progress is met.

§ 60.2840 How do I comply with the increment of progress for submittal of a control plan?

For your control plan increment of progress, you must satisfy the two requirements specified in paragraphs (a) and (b) of this section.

(a) Submit the final control plan, including a description of any devices for air pollution control and any process changes that you will use to comply with the emission limitations and other requirements of this subpart.

(b) Maintain an onsite copy of the final control plan.

§ 60.2845 How do I comply with the increment of progress for achieving final compliance?

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

§ 60.2850 What must I do if I close my air curtain incinerator and then restart it?

(a) If you close your incinerator but will reopen it prior to the final compliance date in your State plan, you must meet the increments of progress specified in § 60.2815.

(b) If you close your incinerator but will restart it after your final compliance date, you must complete emission control retrofits and meet the emission limitations on the date your incinerator restarts operation.

§ 60.2855 What must I do if I plan to permanently close my air curtain incinerator and not restart it?

If you plan to close your incinerator rather than comply with the State plan, submit a closure notification, including the date of closure, to the Administrator by the date your final control plan is due.

§ 60.2860 What are the emission limitations for air curtain incinerators?

(a) After the date the initial stack test is required or completed (whichever is earlier), you must meet the limitations 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) Except during malfunctions, the requirements of this subpart apply at all times, and each malfunction must not exceed 3 hours.

§ 60.2865 How must I monitor opacity for air curtain incinerators?

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

(b) Conduct an initial test for opacity as specified in § 60.8 no later than 180 days after your final compliance date.

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

§ 60.2870 What are the recordkeeping and reporting requirements for air curtain incinerators?

(a) Keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format, unless the Administrator approves another format, for at least 5 years.

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

(c) Submit an initial report no later than 60 days following the initial

opacity test that includes the information specified in paragraphs (c) (1) and (2) of this section.

(1) The types of materials you plan to combust in your air curtain incinerator.

(2) The results (each 6-minute average) of the initial opacity tests.

(d) Submit annual opacity test results within 12 months following the previous report.

(e) Submit initial and annual opacity test reports as electronic or paper copy on or before the applicable submittal date and keep a copy onsite for a period of 5 years.

Model Rule—Definitions**§ 60.2875 What definitions must I know?**

Terms used but not defined in this subpart are defined in the Clean Air Act and subparts A and B of this part.

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

Agricultural waste means vegetative agricultural materials such as nut and grain hulls and chaff (e.g., almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds, and other vegetative waste materials generated as a result of agricultural operations.

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

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

Bag leak detection system means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (i.e., baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

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 antineoplastic agents used for the purpose of stopping or reversing the growth of malignant cells.

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

Commercial and industrial solid waste incineration (CISWI) unit means any combustion device that combusts commercial and industrial waste, as defined in this subpart. The boundaries of a CISWI unit are defined as, but not limited to, the commercial or industrial solid waste fuel feed system, grate system, flue gas system, and bottom ash. The CISWI unit does not include air pollution control equipment or the stack. The CISWI unit boundary starts at the commercial and industrial solid waste hopper (if applicable) and extends through two areas:

(1) The combustion unit flue gas system, which ends immediately after the last combustion chamber.

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

Commercial and industrial waste means solid waste combusted in an enclosed device using controlled flame combustion without energy recovery that is a distinct operating unit of any commercial or industrial facility (including field-erected, modular, and custom built incineration units operating with starved or excess air), or solid waste combusted in an air curtain incinerator without energy recovery that is a distinct operating unit of any commercial or industrial facility.

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

Cyclonic barrel burner means a combustion device for waste materials that is attached to a 55 gallon, open-head drum. The device consists of a lid, which fits onto and encloses the drum, and a blower that forces combustion air into the drum in a cyclonic manner to enhance the mixing of waste material and air.

Deviation means any instance in which an affected source subject to this

subpart, or an owner or operator of such a source:

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

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; 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 permitted by this subpart.

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

Discard means, for purposes of this subpart and 40 CFR part 60, subpart DDDD, only, burned in an incineration unit without energy recovery.

Drum reclamation unit means a unit that burns residues out of drums (e.g., 55 gallon drums) so that the drums can be reused.

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

Fabric filter means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse.

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

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

Modification or modified CISWI unit means a CISWI unit you have changed later than June 1, 2001 and that meets one of two criteria:

(1) The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not

including the cost of land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI unit used to calculate these costs, see the definition of CISWI unit.

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

Part reclamation unit means a unit that burns coatings off parts (e.g., tools, equipment) so that the parts can be reconditioned and reused.

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

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

Rack reclamation unit means a unit that burns the coatings off racks used to hold small items for application of a coating. The unit burns the coating overspray off the rack so the rack can be reused.

Reconstruction means rebuilding a CISWI unit and meeting two criteria:

(1) The reconstruction begins on or after June 1, 2001.

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

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

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

(2) Pelletized refuse-derived fuel.

Shutdown means the period of time after all waste has been combusted in the primary chamber.

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 which 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). For purposes of this subpart and subpart CCCC, only, solid waste does not include the waste burned in the fifteen types of units described in § 60.2555.

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.

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.

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

Comply with these increments of progress	By these dates ^a
Increment 1—Submit final control plan	(Dates to be specified in State plan)
Increment 2—Final compliance	(Dates to be specified in State plan) ^b

^a Site-specific schedules can be used at the discretion of the State.

^b The date can be no later than 3 years after the effective date of State plan approval or December 1, 2005.

TABLE 2 TO SUBPART DDDD—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
Cadmium	0.004 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of this part)
Carbon monoxide	157 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 10, 10A, or 10B, of appendix A of this part)
Dioxins/furans (toxic equivalency basis).	0.41 nanograms per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 23 of appendix A of this part)
Hydrogen chloride	62 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 26A of appendix A of this part)
Lead	0.04 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of this part)
Mercury	0.47 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of this part)
Opacity	10 percent	6-minute averages	Performance test (Method 9 of appendix A of this part)
Oxides of nitrogen ...	388 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Methods 7, 7A, 7C, 7D, or 7E of appendix A of this part)
Particulate matter	70 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 5 or 29 of appendix A of this part)
Sulfur dioxide	20 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 6 or 6c of appendix A of this part)

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

TABLE 3 TO SUBPART DDDD—MODEL RULE—OPERATING LIMITS FOR WET SCRUBBERS

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

TABLE 4 TO SUBPART DDDD—MODEL RULE—TOXIC EQUIVALENCY FACTORS

Dioxin/furan congener	Toxic equivalence factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin	0.5
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
octachlorinated dibenzo-p-dioxin	0.001
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.5
1,2,3,7,8-pentachlorinated dibenzofuran	0.05
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
octachlorinated dibenzofuran	0.001

TABLE 5 TO SUBPART DDDD—MODEL RULE—SUMMARY OF REPORTING REQUIREMENTS ^a

Report	Due date	Contents	Reference
Waste Management Plan.	No later than the date specified in table 1 for submittal of the final control plan.	<ul style="list-style-type: none"> Waste management plan 	§ 60.2755.
Initial Test Report	No later than 60 days following the initial performance test.	<ul style="list-style-type: none"> Complete test report for the initial performance test The values for the site-specific operating limits Installation of bag leak detection systems for fabric filters 	§ 60.2760.
Annual Report	No later than 12 months following the submission of the initial test report. Subsequent reports are to be submitted no more than 12 months following the previous report.	<ul style="list-style-type: none"> Name and address Statement and signature by responsible official Date of report Values for the operating limits If no deviations or malfunctions were reported, a statement that no deviations occurred during the reporting period Highest recorded 3-hour average and the lowest 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported Information for deviations or malfunctions recorded under § 60.2740(b)(6) and (c) through (e) If a performance test was conducted during the reporting period, the results of the test If a performance test was not conducted during the reporting period, a statement that the requirements of § 60.2155(a) or (b) were met Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours but less than 2 weeks 	§§ 60.2765 and 60.2770.
Emission Limitation or Operating Limit Deviation Report.	By August 1 of that year for data collected during the first half of the calendar year. By February 1 of the following year for data collected during the second half of the calendar year.	<ul style="list-style-type: none"> Dates and times of deviations Averaged and recorded data for these dates Duration and causes for each deviation and the corrective actions taken Copy of operating limit monitoring data and any test reports Dates, times, and causes for monitor downtime incidents Whether each deviation occurred during a period of startup, shutdown, or malfunction 	§§ 60.2775 and 60.2780.

TABLE 5 TO SUBPART DDDD—MODEL RULE—SUMMARY OF REPORTING REQUIREMENTS ^a—Continued

Report	Due date	Contents	Reference
Qualified Operator Deviation Notification.	Within 10 days of deviation	<ul style="list-style-type: none"> • Statement of cause of deviation • Description of efforts to have an accessible qualified operator • The date a qualified operator will be accessible 	§ 60.2785(a)(1).
Qualified Operator Deviation Status Report.	Every 4 weeks following deviation	<ul style="list-style-type: none"> • Description of efforts to have an accessible qualified operator • The date a qualified operator will be accessible • Request for approval to continue operation 	§ 60.2785(a)(2).
Qualified Operator Deviation Notification of Resumed Operation.	Prior to resuming operation	<ul style="list-style-type: none"> • Notification that you are resuming operation 	§ 60.2785(b)

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

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