

The EPA Administrator, Lisa P. Jackson, signed the following notice on 12/2/2011, and EPA is submitting it for publication in the *Federal Register* (FR). While we have taken steps to ensure the accuracy of this Internet version of the rule, it is not the official version of the rule for purposes of compliance. Please refer to the official version in a forthcoming FR publication, which will appear on the Government Printing Office's FDSys website (<http://fdsys.gpo.gov/fdsys/search/home.action>) and on Regulations.gov (<http://www.regulations.gov>) in Docket No. EPA-HQ-OAR-2003-0119 and EPA-HQ-RCRA 2008-0329. Once the official version of this document is published in the FR, this version will be removed from the Internet and replaced with a link to the official version.

6560-50-P

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Parts 60 and 241**

**[EPA-HQ-OAR-2003-0119 and EPA-HQ-RCRA 2008-0329; FRL- ]**

**RIN 2060-AR15 and 2050-AG44**

**[EPA-HQ-RCRA-2008-0329; FRL- ]**

**Commercial and Industrial Solid Waste Incineration Units:  
Reconsideration and Proposed Amendments; Non-Hazardous Secondary  
Materials That Are Solid Waste: Proposed Rule**

**AGENCY:** Environmental Protection Agency.

**ACTION:** Proposed rules; Reconsideration of final rule.

**SUMMARY:** On March 21, 2011, the EPA promulgated its final response to the 2001 voluntary remand of the December 1, 2000, new source performance standards and emission guidelines for commercial and industrial solid waste incineration units and the vacatur and remand of several definitions by the District of Columbia Circuit Court of Appeals in 2007. Following that action, the Administrator received petition[s] for reconsideration as well as identified some issues that warrant further opportunity for public comment. In response to the petition[s], the EPA is reconsidering and requesting comment on

several provisions of the final new source performance standards and emission guidelines for commercial and industrial solid waste incineration units.

In addition, the EPA is proposing amendments to the regulations which were codified by the Non-Hazardous Secondary Materials rule. Originally promulgated on March 21, 2011, the Non-Hazardous Secondary Materials rule provides the standards and procedures for identifying whether Non-Hazardous Secondary Materials are solid waste under the Resource Conservation and Recovery Act when used as fuels or ingredients in combustion units. The purpose of these proposed amendments is to clarify several provisions in order to implement the Non-Hazardous Secondary Materials rule as the Agency originally intended.

**DATES:** Comments must be received on or before [INSERT THE DATE 60 DAYS AFTER THE DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER].

Public Hearing. If anyone contacts the EPA requesting to speak at a public hearing by [INSERT THE DATE 10 DAYS AFTER THE DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER], a public hearing will be held on [INSERT THE DATE 15 DAYS AFTER THE DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER]. For further information on the public hearing and requests to speak, contact Ms. Janet Eck at (919) 541-7946 to verify that a hearing will be held.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

**ADDRESSES:** Submit your comments on the commercial and industrial solid waste incineration reconsideration and proposed rule, identified by Docket ID No. EPA-HQ-OAR-2003-0119, by one of the following methods:

- <http://www.regulations.gov>: Follow the on-line instructions for submitting comments.
- Email: [a-and-r-Docket@epa.gov](mailto:a-and-r-Docket@epa.gov), Attention Docket ID No. EPA-HQ-OAR-2003-0119.
- Fax: (202) 566-9744, Attention Docket ID No. EPA-HQ-OAR-2003-0119.
- Mail: EPA Docket Center (EPA/DC), Environmental Protection Agency, Mailcode 6102T, 1200 Pennsylvania Ave., NW., Washington, DC 20460, Attention Docket ID No. EPA-HQ-OAR-2003-0119. Please include a total of two copies. We request that a separate copy also be sent to the contact person identified below (see FOR FURTHER INFORMATION CONTACT).
- Hand Delivery: In person or by Courier, deliver comments to: EPA Docket Center (EPA/DC), Room 3334, 1301 Constitution Ave., NW, Washington, DC 20004. Such deliveries are accepted only during the docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Submit your comments on the Non-Hazardous Secondary Materials proposed rule, identified by Docket ID No. EPA-HQ-RCRA-2008-0329, by one of the following methods:

- [www.regulations.gov](http://www.regulations.gov): Follow the on-line instructions for submitting comments.
- Email: Comments may be sent by electronic mail (email) to: [rcra-docket@epa.gov](mailto:rcra-docket@epa.gov), Attention Docket ID No. EPA-HQ-RCRA-2008-0329.
- Fax: Comments may be faxed to 202-566-9744, Attention Docket ID No. EPA-HQ-RCRA-2008-0329.
- Mail: Send comments to: RCRA Docket, EPA Docket Center, Environmental Protection Agency, Mailcode: 28221T, 1200 Pennsylvania Ave., NW, Washington, DC 20460, Attention Docket ID No. EPA-HQ-RCRA-2008-0329. Please include a total

of two copies of your comments. We request that a separate copy also be sent to the contact person identified below (see FOR FURTHER INFORMATION CONTACT).

- Hand Delivery: Deliver two copies of your comments to: Environmental Protection Agency, EPA Docket Center, Room 3334, 1301 Constitution Avenue, N.W, Washington DC, Attention Docket ID No. EPA-HQ-RCRA-2008-0329. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments on the commercial and industrial solid waste incineration reconsideration and proposal to Docket ID No. EPA-HQ-OAR-2003-0119. Direct your comments on the Non-Hazardous Secondary Materials proposed rule to Docket ID No. EPA-HQ-RCRA-2008-0329. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at <http://www.regulations.gov>, including any personal information provided, unless the comment includes information claimed to be confidential business information or other information whose disclosure is restricted by statute. Do not submit information that you consider to be confidential business information or otherwise protected through <http://www.regulations.gov> or email. The <http://www.regulations.gov> website is an "anonymous access" system, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through <http://www.regulations.gov>, your email

address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about the EPA's public docket, visit the EPA Docket Center homepage at <http://www.epa.gov/epahome/dockets.htm>.

Docket: All documents in the docket are listed in the <http://www.regulations.gov> index. Although listed in the index, some information is not publicly available, e.g., confidential business information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in <http://www.regulations.gov> or in hard copy at the EPA Docket Center, EPA West Building, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday,

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Docket Center is (202) 566-1742.

**FOR FURTHER INFORMATION CONTACT:** For further information regarding the commercial and industrial solid waste incineration reconsideration and proposed rule, contact Ms. Toni Jones, Fuels and Incineration Group, Sector Policies and Programs Division (E143-05), Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-0316; fax number: (919) 541-3470; email address: [jones.toni@epa.gov](mailto:jones.toni@epa.gov).

For further information regarding the Non-Hazardous Secondary Materials proposed rule, contact Mr. George Faison, Program Implementation and Information Division, Office of Resource Conservation and Recovery, 5303P, Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, N.W, Washington, D.C. 20460-0002; telephone number: 703-305-7652; fax number: 703-308-0509; email address: [faison.george@epa.gov](mailto:faison.george@epa.gov).

**SUPPLEMENTARY INFORMATION:**

Acronyms and Abbreviations. The following acronyms and abbreviations are used in this document.

7-PAH	7 Polyaromatic Hydrocarbons
16-PAH	16 Polyaromatic Hydrocarbons
ACI	Activated Carbon Injection
ANPRM	Advanced Notice of Proposed Rulemaking
ANSI	American National Standards Institute

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

APA	Administrative Procedure Act
ARIPPA	Anthracite Region Independent Power Producers Association
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
ATCM	Air Toxic Control Measure
BAT	Best Available Technology
Btu	British Thermal Unit
CAA	Clean Air Act
CARB	California Air Resources Board
CBI	Confidential Business Information
CBO	Carbon burn-out
Cd	Cadmium
CDX	Central Data Exchange
CEMS	Continuous Emissions Monitoring Systems
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CISWI	Commercial and Industrial Solid Waste Incineration
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
Catalyst	Carbon Monoxide Oxidation Catalyst
Cl <sub>2</sub>	Chlorine Gas
The Court	U.S. Court of Appeals for the District of Columbia Circuit
CSA	Canadian Standards Association
CWA	Clean Water Act
D/F	Dioxin/Furan
DIFF	Dry Sorbent Injection Fabric Filter
dscf	Dry Standard Cubic Foot
dscm	Dry Standard Cubic Meter
DSW	Definition of Solid Waste
EG	Emission Guidelines
EJ	Environmental Justice
EMPC	Estimated Maximum Possible Concentration
EOM	Extractable Organic Matter
EPA	U.S. Environmental Protection Agency
ERT	Electronic Reporting Tool
ERU	Energy Recovery Unit
ESP	Electrostatic Precipitator
FF	Fabric Filters
HAP	Hazardous Air Pollutants
HCl	Hydrogen Chloride

HF	Hydrogen Fluoride (HF)
Hg	Mercury
HMI	Hospital, Medical and Infectious
HMIWI	Hospital, Medical and Infectious Waste Incineration
HWC	Hazardous Waste Combustor
ICR	Information Collection Request
ISO	International Standards Organization
LBMS	Linkageless Burner Management System
LML	Lowest Measured Level
MACT	Maximum Achievable Control Technology
MDL	Method Detection Level
mg/dscm	Milligrams per Dry Standard Cubic Meter
mmBtu/hr	Million British Thermal Units per Hour
MSW	Municipal Solid Waste
MW	Megawatts
MWC	Municipal Waste Combustor
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industrial Classification System
ND	Nondetect
NESHAP	National Emission Standards for Hazardous Air Pollutants
ng/dscm	Nanograms per Dry Standard Cubic Meter
NHSM	Non-Hazardous Secondary Material(s)
NO <sub>x</sub>	Nitrogen Oxides
NSPS	New Source Performance Standards
NTTAA	National Technology Transfer and Advancement Act
OAQPS	Office of Air Quality Planning and Standards
O&M	Operations and Maintenance
OMB	Office of Management and Budget
OP	Office of Policy
OSWI	Other Solid Waste Incineration
PAH	Polycyclic Aromatic Hydrocarbons
Pb	Lead
PCBs	Polychlorinated Biphenyls
PCDD	Polychlorinated Dibenzodioxins
PCDF	Polychlorinated Dibenzofurans
PIC	Product of Incomplete Combustion
PM	Particulate Matter
POM	Polycyclic Organic Matter
ppm	Parts Per Million
ppmv	Parts Per Million by Volume
ppmvd	Parts Per Million by Dry Volume
PRA	Paper Reduction Act
PS	Performance Specification



QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RDL	Reported Detection Level
RFA	Regulatory Flexibility Act
RIA	Regulatory Impact Analysis
RIN	Regulatory Information Number
RTO	Regenerative Thermal Oxidizer
RTR	Residual Risk and Technology Review
SBA	Small Business Administration)
SCR	Selective Catalytic Reduction
SARU	Sulfuric Acid Regeneration Unit
SNCR	Selective Noncatalytic Reduction
SO <sub>2</sub>	Sulfur Dioxide
SSI	Sewage Sludge Incineration
SSM	Startup, Shutdown, and Malfunction
SVOC	Semi-Volatile Organic Compound
SWDA	Solid Waste Disposal Act
TBtu	Tera British Thermal Unit
TEF	Total Equivalency Factor
TEQ	Toxic Equivalency
TMB	Total Mass Basis
TOX	Total Organic Halogens
tpy	Tons Per Year
TRI	Toxics Release Inventory
TSR	Thermal Sand Reclamation
TTN	Technology Transfer Network
ug/dscm	Micrograms per Dry Standard Cubic Meter
UMRA	Unfunded Mandates Reform Act
UL	Upper Limit
UPL	Upper Prediction Limit
U.S.C.	United States Code
UTL	Upper Tolerance Limit
VCS	Voluntary Consensus Standards
VOC	Volatile Organic Compound
WWW	Worldwide Web

A. Does this document of reconsideration and proposal apply to me?

Categories and entities potentially affected by the proposed action are those that operate CISWI units, and those

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

that generate potentially affected NHSM. The NSPS and (EG), hereinafter referred to as "standards," for CISWI affect the following categories of sources:

<b>Category</b>	<b>NAICS<sup>1</sup> Code</b>	<b>Examples of potentially regulated entities</b>
Any industrial or commercial facility using a solid waste incinerator	211, 212, 486	Mining, oil and gas exploration operations; pipeline operators
	221	Utility providers
	321, 322, 337	Manufacturers of wood products; manufacturers of pulp, paper and paperboard; manufacturers of furniture and related products
	325, 326	Manufacturers of chemicals and allied products; manufacturers of plastics and rubber products
	327	Manufacturers of cement; nonmetallic mineral product manufacturing
	333, 336	Manufacturers of machinery; manufacturers of transportation equipment
	423, 44,	Merchant wholesalers, durable goods; retail trade
Any facility or entity generating a non hazardous secondary material that may be burned for fuel or destruction <sup>2</sup>	111	Crop Production
	112	Animal Production
	113	Forestry and Logging
	115	Support Activities for Agriculture and Forestry
	211	Oil and Gas Extraction
	212	Mining (except oil and gas)
	221	Utilities
	236	Construction of Buildings

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

<b>Category</b>	<b>NAICS<sup>1</sup> Code</b>	<b>Examples of potentially regulated entities</b>
	311	Food Manufacturing
	312	Beverage and Tobacco Product Manufacturing
	313	Textile Mills
	316	Leather and Allied Product Manufacturing
	321	Wood Product Manufacturing
	322	Pulp, Paper, and Paper Products
	324	Petroleum and Coal Products Manufacturing
	325	Chemical Manufacturing
	326	Plastics and Rubber Products Manufacturing
	327	Non-Metallic Mineral Product Manufacturing
	331	Primary Metal Manufacturing
	332	Fabricated and Metal Product Manufacturing
	333	Machinery Manufacturing
	334	Computer and Electronic Product Manufacturing
	336	Transportation Equipment Manufacturing
	337	Furniture and Related Product Manufacturing
	339	Miscellaneous Manufacturing
	423	Durable Goods Merchant Wholesalers
	424	Nondurable Goods Merchant Wholesalers
	44-45	Retail Trade
	486	Pipeline Transportation
	493	Warehousing and Storage
	511	Publishing Industry (except internet)
	531	Real Estate
	541	Professional, Scientific, and Technical Services
	611	Educational Services
	622	Hospitals
	623	Nursing and Residential Care Facilities
	624	Social Assistance
	713930	Marinas
	721	Lodging, Restaurant
	722	Food Services and Drinking Places

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.  
We have taken steps to ensure the accuracy of this version, but it is not the official version.

Category	NAICS <sup>1</sup> Code	Examples of potentially regulated entities
	813	Religious, Grantmaking, Civic, Professional, and Similar Organizations
	92	Public Administration

<sup>1</sup> North American Industry Classification System.

<sup>2</sup> May be some overlap with the incinerators.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by the proposed action. To determine whether your facility would be affected by the proposed action, you should examine the applicability criteria in 40 CFR 60.2010 of subpart CCCC, 40 CFR 60.2505 of subpart DDDD, and 40 CFR 241. If you have any questions regarding the applicability of the proposed action to a particular entity, contact the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

B. What should I consider as I prepare my comments to the EPA?

Submitting CBI. Do not submit information that you consider to be CBI electronically through <http://www.regulations.gov>, or email. For comments on the CISWI reconsideration and proposal, send or deliver information identified as CBI to only the following address: Ms. Toni Jones, c/o OAQPS Document Control Officer (Room C404-02), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, Attn: Docket ID No. EPA-HQ-OAR-2003-119.

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

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

C. How do I obtain a copy of this document and other related information?

The docket number for the proposed action regarding the CISWI NSPS (40 CFR part 60, subpart CCCC) and EG (40 CFR part 60, subpart DDDD) is Docket ID No. EPA-HQ-OAR-2003-0119.

Worldwide Web

In addition to being available in the docket, an electronic copy of the proposed action is available on the WWW through the

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

TTN Web. Following signature, the EPA posted a copy of the proposed action on the TTN's policy and guidance page for newly proposed or promulgated rules at <http://www.epa.gov/ttn/oarpg>. The TTN provides information and technology exchange in various areas of air pollution control.

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

## **I. CISWI Reconsideration and Proposal**

### **A. Background Information**

1. What is the history of the CISWI standards?
2. How is the definition of solid waste addressed in the final CISWI rule?
3. What is the relationship between this rule and other combustion rules?

### **B. Actions We Are Taking**

### **C. Discussion of Issues for Reconsideration**

1. Revision of the Subcategories
2. Establishment of Limitations on Fuel Switching Provisions
3. Definitions of Cyclonic Burn Barrels, Burn-off Ovens, Soil Treatment Units, Laboratory Analysis Units, and Space Heaters from CISWI Subcategories
4. Providing an affirmative defense for malfunction events
5. Revisions to the CO Monitoring Requirements
6. Establishing a Full-load Stack Test Requirement for CO Coupled with Continuous Oxygen Monitoring
7. Establishing a Definition of "Homogeneous Waste"
8. Incorporating Fuel Variability into Emission Limit Calculations
9. Review of D/F Data and Non-detect Methodology Using Three Times the Detection Level
10. Providing an Option for Sources to Use Emissions Averaging to Demonstrate Compliance
11. Definitions
12. Allowances for Using Feed Stream Analysis or Other Supplemental Information to Demonstrate Compliance
13. Providing Percent Reduction Alternative Standards

14. Providing Parametric Monitoring Provisions for Additional Control Device Types
15. Revisions to the Continuous Monitoring Provisions for Large ERUs
16. Extending Compliance Dates
- D. Technical Corrections and Clarifications
  1. Providing a Definition of Municipal Solid Waste
  2. Energy Recovery Units Designed to Burn Non-coal Solid Materials
  3. Typographical Errors and Corrections
- E. Environmental, Energy and Economic Impacts
  1. What are the Primary Air Impacts?
  2. What are the Water and Solid Waste Impacts?
  3. What are the Energy Impacts?
  4. What are the Secondary Air Impacts?
  5. What are the Cost and Economic Impacts?
  6. What are the Benefits?

## II. NHSM Proposed Revisions

### A. Statutory Authority

### B. What is the intent of this proposal?

### C. What is the scope of this proposal?

1. Revised Definitions
2. Contaminant Legitimacy Criterion for NHSM Used as Fuels
3. Categorical Non-Waste Determinations for Specific NHSM Used as Fuels
4. Additional Request for Comment
5. Clarification Letters Issued After Promulgation of the NHSM Final Rule
6. Clarification of the Process for Submittal of Non-Waste Petitions

### D. Rationale for the Proposed Revisions to the Part 241 Requirements

1. Revised Definitions
2. Revisions to the Contaminant Legitimacy Criterion for NHSM Used as Fuels
3. Categorical Determinations That Specific NHSM Are Not Solid Waste When Used as a Fuel
4. Rulemaking Petition Process for Other Non-Waste Determinations

### E. Additional Request for Comment

1. Pulp and Paper Sludges
2. Coal Refuse

- F. Effect of This Proposed Rule on Other Programs
  - 1. Clean Air Act
    - 2. Subtitle C Hazardous Waste Program/Definition of Solid Waste Rule
- G. State Authority
  - 1. Relationship to State Programs
  - 2. State Adoption of the Rulemaking
- H. Cost and Benefits of the Proposed Rule

### **III. Statutory and Executive Order Reviews**

- A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review
- B. Paperwork Reduction Act
- C. Regulatory Flexibility Act
- D. Unfunded Mandates Reform Act
- E. Executive Order 13132: Federalism
- F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments
- G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks
- H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
- I. National Technology Transfer and Advancement Act
- J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

### **I. CISWI Reconsideration and Proposal**

#### A. Background Information

##### 1. What is the history of the CISWI standards?

On December 1, 2000, the EPA promulgated NSPS and EG for CISWI units (60 FR 75338), hereinafter referred to as the 2000 CISWI rule. On January 30, 2001, the Sierra Club filed a petition for review in the Court challenging the EPA's final CISWI rule. On August 17, 2001, the EPA granted a Request for Reconsideration, pursuant to CAA section 307(d)(7)(B), submitted on behalf of the National Wildlife Federation and the Louisiana



Environmental Action Network, related to the definition of commercial and industrial solid waste incineration unit and commercial or industrial waste in the EPA's CISWI rulemaking. In granting the petition for reconsideration, the EPA agreed to undertake further notice and comment proceedings related to these definitions. On September 6, 2001, the Court entered an order granting the EPA's motion for a voluntary remand of the CISWI rule, without vacatur. The EPA requested a voluntary remand of the final CISWI rule to address concerns related to the EPA's procedures for establishing MACT floors for CISWI units in light of the Court's decision in Cement Kiln Recycling Coalition v. EPA, 255 F.3d 855 (DC Cir. 2001) (Cement Kiln). Neither the EPA's granting of the petition for reconsideration, nor the Court's order granting a voluntary remand, stayed, vacated or otherwise influenced the effectiveness of the 2000 CISWI rule. Therefore, the remand order had no impact on the implementation of the 2000 CISWI rule.

On February 17, 2004, the EPA published a proposed rule (CISWI Definitions Rule) soliciting comments on the definitions of "solid waste," "commercial and industrial waste," and "commercial and industrial solid waste incineration unit". On September 22, 2005, the EPA published in the Federal Register the final rule reflecting our decisions with respect to the CISWI Definitions Rule. The rule was challenged and, on June 8,

2007, the Court vacated and remanded the CISWI Definitions Rule. In vacating the rule, the Court found that CAA section 129 unambiguously includes among the incineration units subject to its standards, any facility that combusts any solid waste material, subject to four statutory exceptions. While the Court vacated the CISWI Definitions Rule, the 2000 CISWI rule remains in effect.

On March 21, 2011, the EPA promulgated revised NSPS and EG for CISWI units (76 FR 15704). That action constitutes the EPA's response to the voluntary remand of the 2000 CISWI rule and to the 2007 vacatur and remand of the CISWI Definitions Rule. In addition, the EPA addressed the 5-year technology review that is required under CAA section 129(a)(5). Following that action, the Administrator received petition[s] for reconsideration as well as identified some issues that warrant further opportunity for public comment. In response to the petition[s], the EPA is reconsidering and requesting comment on several provisions of the final new source performance standards and emission guidelines for commercial and industrial solid waste incineration units.

2. How is the definition of solid waste addressed in the final CISWI rule?

The RCRA definition of solid waste is integral in defining the CISWI source category. The EPA defines the NHSM that are

solid waste under RCRA in the final "Identification of Non-Hazardous Secondary Materials That Are Solid Waste" Rulemaking. In an action parallel to the March 21, 2011, final CISWI rule, the EPA promulgated a final rule that identifies the standards and procedures for identifying whether NHSM are or are not solid waste when used as fuels or ingredients in combustion units. That action, hereinafter referred to as the "2011 NHSM final rule," is relevant to the final CISWI rule because some ERUs and waste-burning kilns combust, in their combustion units, secondary materials that are solid waste under the 2011 NHSM final rule. Commercial and industrial units that combust solid waste are subject to standards issued pursuant to CAA section 129, rather than to standards issued pursuant to CAA section 112 that would otherwise be applicable to such units (e.g., boilers, process heaters and cement kilns).

3. What is the relationship between this rule and other combustion rules?

These amendments address the combustion of solid waste materials (as defined by the Administrator under RCRA in the concurrent Non-hazardous Solid Waste Definition Rulemaking) in combustion units at commercial and industrial facilities. If an owner or operator of a CISWI unit permanently ceases combusting solid waste, the affected unit would no longer be subject to this regulation under CAA section 129. Section 112 rules of the

CAA, applicable to boilers and process heaters at major sources and boilers at area sources, would apply to subject boilers and process heaters that do not combust solid waste. Boilers and process heaters that combust solid waste are subject to CISWI as ERUs. EPA has also finalized revised CAA section 112 NESHAP from the Portland Cement Manufacturing Industry (75 FR 21136, September 9, 2010). Cement kilns combusting solid waste are waste-burning kilns subject to CISWI, not the otherwise applicable NESHAP.

#### B. Actions We Are Taking

In this notice, we are granting reconsideration of, and requesting comment on, certain issues raised by Petitioners in their petitions for reconsideration and the issues identified by the EPA in the March 21, 2011, notice of reconsideration. These provisions are: 1) revision of the subcategory of ERUs; 2) establishment of limitations on fuel switching provisions; 3) revision of the definition of cyclonic burn barrels; 4) establishment of the procedures for providing an affirmative defense for malfunction events; 5) revisions to the carbon monoxide monitoring requirements; 6) establishment of a full-load stack test requirement for CO coupled with continuous oxygen monitoring for CISWI units; and 7) establishment of a definition of "homogeneous waste" in the CISWI rule. The EPA is also proposing certain revisions, which are: 1) revised emission

limits for the waste-burning kiln and ERU subcategories to reflect updated inventories and additional data, 2) the removal of continuous CO monitoring with CO CEMS requirements, 3) the removal of oxygen correction requirements for CO emission limits for ERUs during periods of startup and shutdown, and 4) the replacement of continuous PM monitoring for ERUs greater than 250 MMBtu/hr design heat input capacity with continuous parameter monitoring system requirements. The EPA is taking comment on those revisions. Additionally, the EPA is proposing amendments and technical corrections to the final rule to clarify questions on final rule language and correct minor typographical errors raised by stakeholders subject to the final rule. Section I.C. of this preamble summarizes these issues and discusses our proposed responses to each issue.

We are also proposing other clarification changes and technical corrections to certain provisions in the final rule.

We are seeking public comment only on the issues specifically identified in this notice. We will not respond to any comments addressing other aspects of the final rule or any other related rulemakings.

### C. Discussion of Issues for Reconsideration

This section of the preamble contains the EPA's basis for the provisions we are reconsidering in this proposed rule. We

solicit comment on all proposed responses and revisions discussed in the following sections.

### 1. Revision of the Subcategories

Today's proposal incorporates new emission limits based on revised inventories for two of the final rule subcategories, solid-fuel burning ERUs and waste-burning kilns. Tables 1 and 2 present the proposed emission limits for all subcategories for existing and new sources, respectively.

**Table 1. Comparison of Existing Source MACT Floor Limits for 2000 CISWI Rule and the Proposed MACT Floor Limits**

Pollutant (units) <sup>a</sup>	Incin- erators (2000 CISWI limit)	CISWI Subcategories				
		Incin- erators	ERUs - Solids	ERUs - Liquid/Gas	Waste- burning kilns	Small, remote incin- erators
HCl (ppmv)	62	29	0.50	14 <sup>b</sup>	3.0 <sup>b</sup>	220
CO (ppmv)	157	36 <sup>b</sup>	490 (bioma ss units) / 46 (coal units)	36	120 (long kilns) / 410 (preheater / precalcine r)	20
Pb (mg/dscm)	0.04	0.0036	0.0019 (bioma ss units) / 0.0031 (coal units)	0.096	0.0043	2.7

Pollutant (units) <sup>a</sup>	Incinerators (2000 CISWI limit)	CISWI Subcategories				
		Incinerators	ERUs - Solids	ERUs - Liquid/Gas	Waste- burning kilns	Small, remote incinerators
Cd (mg/dscm)	0.004	0.0026	0.00078 (biomass units) / 0.058 (coal units)	0.023	0.00082	0.61
Hg (mg/dscm)	0.47	0.0054	0.0020	0.0031 <sup>b</sup>	0.011 <sup>b</sup>	0.0057
PM, filterable (mg/dscm)	70	34	11 (biomass units) / 86 (coal units)	110	9.2	230
Dioxin, furans, total (ng/dscm)	(no limit)	4.6	0.52 (biomass units) / 0.51 (coal units) b	2.9 <sup>b</sup>	3.6	1,200
Dioxin, furans, TEQ (ng/dscm)	0.41	0.13	0.12 (biomass units) / 0.075 (coal units) b	0.32 <sup>b</sup>	0.075 <sup>b</sup>	57
NO <sub>x</sub> (ppmv)	388	53	290 (biomass units) / 340 (coal units)	76	630	240

Pollutant (units) <sup>a</sup>	Incinerators (2000 CISWI limit)	CISWI Subcategories				
		Incinerators	ERUs - Solids	ERUs - Liquid/Gas	Waste- burning kilns	Small, remote incinerators
SO <sub>2</sub> (ppmv)	20	11	7.3 (biomass units) / 650 (coal units)	720	830	420

<sup>a</sup> All emission limits are expressed as concentrations corrected to 7 percent oxygen.

<sup>b</sup> See the memorandum "CISWI Emission Limit Calculations for Existing and New Sources for Reconsideration Proposal" for details on this calculation.

**Table 2. Comparison of New Source MACT Floor Limits for 2000 CISWI Rule and the Proposed MACT Floor Limits**

Pollutant (units) <sup>a</sup>	Incinerators (2000 limit)	Final CISWI Subcategories				
		Incinerators	ERUs - Solids	ERUs - Liquid/Gas	Waste- burning kilns	Small, remote incinerators
HCl (ppmv)	62	0.091	0.50 <sup>c</sup>	14 <sup>b</sup>	3.0 <sup>b</sup>	200
CO (ppmv)	157	12	160 (biomass units) / 46 (coal units)	36	90 (long kilns) / 320 (preheater / precalciner)	12
Pb (mg/dscm)	0.04	0.0019 <sup>b</sup>	0.0019 <sup>c</sup> (biomass units) / 0.0031 (coal units)	0.096	0.0043 <sup>c</sup>	0.26
Cd (mg/dscm)	0.004	0.0023	0.00014 (biomass units) / 0.058 (coal units)	0.023	0.00082 <sup>c</sup>	0.61 <sup>c</sup>

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.



Pollutant (units) <sup>a</sup>	Incinerators (2000 limit)	Final CISWI Subcategories				
		Incinerators	ERUs - Solids	ERUs - Liquid/Gas	Waste- burning kilns	Small, remote incinerators
Hg (mg/dscm)	0.47	0.00084 <sup>b</sup>	0.0020 <sup>c</sup>	0.00091 <sup>d</sup>	0.0037 <sup>b</sup>	0.0035 <sup>b</sup>
PM, filterable (mg/dscm)	70	18	5.1 (biomass units) / 86 (coal units) <sup>c</sup>	110	8.9	230 <sup>c</sup>
Dioxin, furans, total (ng/dscm)	(no limit)	0.058 <sup>b</sup>	0.52 (biomass units) / 0.51 (coal units) <sup>b</sup>	(no limit)	0.51 <sup>b</sup>	1,200 <sup>c</sup>
Dioxin, furans, TEQ (ng/dscm)	0.41	0.13	0.076 (biomass units) / 0.075 (coal units) <sup>b</sup>	0.093 <sup>d</sup>	0.075 <sup>b</sup>	31
NO <sub>x</sub> (ppmv)	388	23	290 <sup>c</sup> (biomass units) / 340 (coal units)	76	200 <sup>b</sup>	78
SO <sub>2</sub> (ppmv)	20	11 <sup>c</sup>	7.3 <sup>c</sup> (biomass units) / 650 (coal units)	720	130	1.2

<sup>a</sup> All emission limits are measured at 7 percent oxygen.

<sup>b</sup> See the memorandum "CISWI Emission Limit Calculations for Existing and New Sources for Reconsideration Proposal" for details on this calculation.

<sup>c</sup> The NSPS limit equals the EG limit. The EG limit was selected as the NSPS limit.

<sup>d</sup> D/F TEQ and Hg limits for ERUs - liquid/gas were replaced with D/F TEQ limits for liquid fuel major source boilers. See "CISWI Emission Limit Calculations for Existing and New Sources for Reconsideration Proposal" for details.

<sup>e</sup> Hg limit was developed using material input data from CISWI kilns identified within the Portland Cement NESHAP database. See the memorandum "CISWI Emission Limit Calculations for Existing and New Sources for Reconsideration Proposal" for details on this calculation.

#### a. Energy Recovery Units

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.  
We have taken steps to ensure the accuracy of this version, but it is not the official version.

In the final rule, we established separate subcategories based on the types of fuels and wastes ERUs were designed to burn. Energy Recover Units (i.e., units that would be boilers and process heaters but that they combust solid waste) designed to burn gaseous fuels and liquids that are solid waste were included in one primary subcategory, and the other primary subcategory was for units designed to burn solid fuels or predominantly non-coal solid materials. The solid fuel ERU subcategory was further divided into separate subcategories for coal and biomass units, with separate limits for CO, NO<sub>x</sub> and SO<sub>2</sub> to account for significant differences in unit design for these two types of fuels and the impacts the different unit designs have on emissions of these pollutants.

Petitioners have contended that they did not have adequate opportunity to comment on the ERU subcategories presented in the final rule. Some have suggested that all nine emission limits should be divided between coal and biomass ERUs, instead of only having different limits for CO, NO<sub>x</sub> and SO<sub>2</sub>. We are granting reconsideration of our subcategorization approach for ERUs and are also proposing to divide emission limits for PM, Cd, Pb and D/F between coal and biomass units. The generation of PM is affected by the combustor design and operation. Therefore, design differences between biomass and coal ERU units have an impact on the generation of PM. We also are separating Cd and Pb

with PM primarily due to the observation that these metals typically precipitate onto PM and are controlled along with PM. Finally, while D/F formation depends to some extent on the amount of chlorine available in the combustion gases, it is also affected by the amount of time the chlorine and hydrocarbon materials remain within a particular temperature range. The time gases remain in this range is a function of the combustor design, therefore, we have proposed separate limits for D/F as well. We are taking comment on the proposed revisions to the subcategorization of ERUs, including whether we should also subcategorize for HCl and Hg.

Since issuing the final CISWI rule, we have received data and information in both petitions and data submittals that indicated our inventory of ERUs used to develop the final rule standards required some adjustments to more accurately reflect the definition of solid waste in the 2011 NHSM final rule. Based on the new data, we removed five units from the final rule inventory that we determined to be non-waste burning units, and we added three units to our inventory that we determined combust solid waste. We also received emissions data for the newly added units and re-analyzed the performance of ERUs in the solid-biomass and solid-coal ERU subcategories. The emission limits in today's proposal reflect the new inventory and emission data received; however, we have used the same methodology as in the

final rule for establishing emission limits. We are not taking comment on this methodology.

b. Waste-burning Kilns

The EPA has performed an analysis of the materials being combusted in the entire inventory of Portland cement kilns in light of the final NHSM rule (See memorandum "Revised Floors without Kilns that Would have been CISWI Kilns Had the Solid Waste Definition Applied" in the CISWI docket). As a result of this analysis, we have added 11 more kilns to our inventory of waste-burning kilns. We have also obtained emissions test data for the newly identified CISWI kilns and re-calculated the MACT floor emission limits for the waste-burning kilns subcategory based on the new inventory and additional data.

We determined that in the case of CO emissions, it is appropriate to subcategorize by kiln type. In this case we are subcategorizing into two kiln types, long kilns (which include both dry and wet process kilns) and kilns that have preheaters (with or without precalciners. A review of the available data for CO emissions for CISWI kilns indicates that there are significant differences between CO emissions for these two types of kilns. The CO emissions from the three long kilns were all below 100 ppmv. CO emissions from the three preheater kilns were all above 300 ppmv. We note that the CO emission factors for long kilns are at least a factor of 5 less than those for

preheater or preheater precalciner kilns. We attribute this difference to the presence of the preheater, which results in a different temperature profile than exists in the cold end section of a long kiln.

As with the new ERU standards, we have used the same methodology to establish today's proposed emission limits as we used for the final rule; therefore, we are not accepting comment on the methodology used to calculate the limits. We are also requesting comment on whether waste-burning kiln emission limits should be expressed on a production (e.g., lb per million tons clinker produced) basis instead of, or in addition to, concentration based limits. Table 3 presents the emission limits for PM, NO<sub>x</sub>, SO<sub>2</sub> and Hg on a production basis for comparison. Comments should clarify which pollutants could warrant production-based limits and the rationale for using a production basis.

**Table 3. Waste-burning Kiln Emission Limits Expressed in Production Basis**

Pollutant (units)	Existing kilns	New kilns
Hg (lb/MM ton clinker)	58	21
PM (lb/ton clinker)	0.052	0.050
NO <sub>x</sub> (lb/ton clinker)	6.7	2.1
SO <sub>2</sub> (lb/ton clinker)	12.3	1.9

2. Establishment of Limitations on Fuel Switching Provisions

The final rule included provisions to address the situation where CISWI units cease combusting solid waste, and where

existing commercial and industrial facilities start combusting solid waste. Units that cease combusting solid waste remain subject to CISWI for at least 6 months after solid waste is added to the combustion chamber. After 6 months, sources must either comply with any applicable section 112 standards or, if they intend to combust solid waste in the unit in the future, opt to remain subject to CISWI. Sources switching out of CISWI due to cessation of solid waste combustion must submit advance notification of the effective date of the waste-to-non-waste fuel switch consistent with new procedures in the final rule. Units that begin combusting solid waste are considered affected sources under CISWI EG, and must comply as expeditiously as possible as required by the state or federal CISWI 111(d)/129 plan revision, whichever is applicable.

The EPA acknowledges that sources may stop and start combusting solid waste in their combustion units, and that regulatory procedures are necessary to guide sources through the changes in applicability that may result due to a switch in combustion materials. The provisions in the final rule account for the fact that facilities may start and stop combusting solid waste and ensure that any resulting changes in applicability between section 129 and section 112 rules do not occur with so much frequency that sources are unable to demonstrate continuing compliance with the applicable standards. To ensure that

frequent switching does not impede our ability to determine continuous compliance and create undue permitting and testing burdens, sources remain subject to CISWI for a minimum of 6 months. The definition of CISWI unit has been revised to clarify that a CISWI unit includes a distinct operating unit of any commercial or industrial facility that combusts any solid waste in a consecutive 6-month period. We believe this change will reduce administrative and compliance costs to both the source and the regulatory agencies. For example, sources will not have to re-establish initial compliance with CISWI or revise their operating permit to reflect a switch out of and back into the CISWI regulations. Instead, facilities that combust solid waste would continue to be subject to the CISWI regulations for the 6 month period after waste is added to the combustion unit. For example, if a source burns waste on January 1, they would be subject to CISWI through June 30. If during that 6 month period they burned waste again, for example on March 1, the 6 month window would now be until September 30. The regulations also allow facilities to remain subject to CISWI beyond 6 months after cessation of solid waste combustion, at their own discretion, if the source determines that continued compliance with CISWI is appropriate because the source intends to combust solid waste in the future. Source owners or operators may, alternatively, choose a date at least 6 months after ceasing

solid waste combustion on which they would no longer be subject to CISWI, and would instead be subject to any applicable section 112 standards. This date is called the effective date of the waste-to-fuel switch.

Specifically, the new provisions direct a source owner or operator to establish an effective date for the waste-to-non-waste fuel, or non-waste fuel-to-waste switch, and that date becomes the date on which all of the newly applicable requirements apply. When a source begins combusting solid waste, the effective date of the non-waste fuel-to-waste switch must be the same as the actual date the unit begins combusting solid waste because by statute any source that combusts any solid waste is a solid waste incineration unit subject to standards under CAA section 129. See section 129(g)(1) (defining "solid waste incineration unit"). For sources that cease burning solid waste, the effective date for the waste-to-fuel switch is a date that is at least 6 months after the last date on which solid waste is added to the combustion unit. This allows sources that cease combusting solid waste to comply with an applicable NESHAP or opt to remain subject to CISWI at the discretion of the owner or operator. We allow the owner or operator of a CISWI unit the option of remaining subject to CISWI to account for sources that may want to retain the ability to burn waste intermittently without having to periodically switch between the section 112



and section 129 regulatory programs. If a source wishes to end applicability of CISWI to its unit, the source must submit an advance notification of the effective date, established as described above, of the waste-to-non-waste fuel switch. The source must be in compliance on the effective date of the waste-to-non-waste fuel switch with any NESHAP that applies as a result of ceasing the combustion of solid waste. The source must remain in continuous compliance with the CISWI regulations until that date.

The new waste-to-non-waste fuel switch provisions in the final rule include requirements to conduct performance testing that will assure compliance with all applicable standards. Specifically, performance tests must be conducted within 60 days of the date on which the unit begins combusting solid waste. In addition, the owner or operator must collect and report any PM CEMS and/or PM parametric monitoring data for those monitors that are operated at the same time as the performance test to determine whether the existing calibrations and/or correlations are still applicable. After the testing is completed, and it is demonstrated that the source is operating in compliance with the applicable standards, the owner or operator should adjust any PM CEMS calibration and any correlation for PM to correspond to the performance test results and data.

The new provisions also require advance notification of the effective date of the waste-to-non-waste fuel switch. The notification includes basic information that will enable the reviewing authority to determine the date on which CISWI will no longer apply to the facility and the date on which any newly applicable section 112 regulations may apply. Notification must be submitted to both the EPA Regional Office and the delegated state or local agency. To ensure that frequent switching does not impede our ability to determine continuous compliance, sources may not switch between applicable section 129 and section 112 standards without completing the initial performance test. Therefore, sources that wish to start burning solid waste before they have demonstrated compliance with their existing section 112 standard must complete the performance test for the 112 rule before switching to solid waste combustion. If a source switches back to a non-waste fuel or non-waste material for which a performance test was conducted within the 6 months preceding the effective date of the switch, and if there are no changed conditions that would affect emissions, the source need not retest that source until 6 months from the effective date of the switch. If a source is subject to any emission limits for which compliance is determined on an annual average or other averaging period that is for a period of time greater than the period in which the source will be combusting the fuel or non-

waste material, the source must comply with the emission limit averaged over the shorter time period in which the fuel or material is combusted. For example, if a source chooses to demonstrate compliance with the Hg limits of the major source Boiler NESHAP through fuel analysis, which has a 12-month rolling average limit, and opts to start combusting solid waste and become subject to CISWI after combusting the fuel under the Boiler NESHAP for only 9 months, the source must demonstrate compliance with the Hg limit based on a 9 month rolling average instead of the annual average. The EPA believes this is necessary to assure that switching to solid waste combustion does not compromise our ability to determine compliance with standards under section 112.

The rules do not allow for compliance extensions associated with changes to the fuels or materials that are combusted. After the first substantive compliance date (e.g., the effective date of the state program or 5 years after publication of the final CISWI rule for incineration units), sources must be in compliance with the standard that is applicable to the source based on the type of unit and the fuels or materials that are combusted. An existing source will not be considered a new source solely due to a combustion material switch. Assuming new source applicability is not triggered, existing sources that change fuels or materials are considered existing sources and,

as such, they must be in compliance on the date they begin combusting the new fuel or material. For all sources that commence combustion of solid waste, the CISWI requirements become applicable on the date that the fuel switch occurs.

While we believe the final rule reflects reasonable approaches consistent with the requirements of the CAA, we believe reconsideration and an additional opportunity for public review and comment are appropriate. Therefore, we are seeking comment on the fuel switching provisions included in the final CISWI rule, particularly on whether the provisions should include further clarification on the timeline and regulatory requirements of a fuel switch. Additionally, we are soliciting comment on an alternative time period for switching frequency (e.g., 12 months).

### 3. Definitions of Cyclonic Burn Barrels, Burn-off Ovens, Soil Treatment Units, Laboratory Analysis Units, and Space Heaters from CISWI Subcategories

The EPA included in the final rule definitions for units that differentiated such units from the four subcategories for which the Agency finalized standards on March 21, 2011. The definitions were not proposed and the EPA is proposing those definitions in this notice to provide the public an opportunity to comment on them. We discuss each definition below.

In the proposed CISWI rule, the EPA included cyclonic burn barrels within the definition for incinerators. Based on the information received during the comment period, the EPA determined that cyclonic burn barrels and traditional incinerators should be separate subcategories. See 40 CFR 60.2265 and 60.2875 (defining "cyclonic burn barrel" to mean a combustion device for waste materials that is attached to a 55 gallon, openhead 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. A cyclonic burn barrel is not an incinerator, waste-burning kiln, an ERU or a small, remote incinerator under subparts CCCC or DDDD.)

In addition, information we have obtained since proposal indicates that there may be many more cyclonic burn barrels than those we have identified, and we have almost no emission data on which to set emissions standards for cyclonic burn barrels. We also received information that it is difficult, if not impossible, to test cyclonic burn barrels for the CAA section 129 pollutants using available test methods. For these reasons, we concluded in the final rules that cyclonic burn barrels were not incinerators and that we could not establish standards for such units at the time we issued the final rules. We further determined in the final rule that we did not need to regulate

cyclonic burn barrels to comply with our CAA section 112(c)(6) obligation for the reasons set forth in the preamble to the final rule. We have not received any new emission data for cyclonic burn barrels; therefore, we are not proposing to establish standards such units in this notice. We solicit comment concerning our decisions in regard to cyclonic burn barrels and the definition as set forth in the final rule.

We estimated in the proposed CISWI rule that there were approximately 36 burn-off ovens and we proposed standards for the subcategory based on an incomplete emission data set. We received many comments during the comment period that indicated that there may be 15,000 more units in the burn-off oven subcategory than we had identified, and the comments also indicated that the subcategory for which we established one set of standards in fact has many different types of units that should not be regulated under one standard. Based on the comments, the lack of data, and our determination that we did not need to regulate burn-off ovens to comply with our CAA section 112(c)(6) obligation, we did not finalize standards for burn-off ovens. We revised the definition of burn-off oven in the final rule to distinguish such units from the units for which we established standards. We have not received data that would allow us to establish standards for the various burn-off oven subcategories and, therefore, we are not proposing

standards in this reconsideration notice. We solicit comment on our decisions concerning to burn-off ovens and on our definition as set forth in the final rule.

The EPA believed there were two soil treatment units prior to proposing the CISWI standards and we proposed to include soil treatment units in the waste-burning kilns subcategory.

Commenters indicated that soil treatment units are not kilns and also that the Agency had significantly underestimated the number of such units currently in operation. Based on the comments and our determination that we did not need such units to comply with our CAA section 112(c)(6) obligation, we did not finalize standards for soil treatment units. We included a definition for soil treatment unit in the final rule to distinguish such units from the units for which we established standards. We have not received additional data since issuing the final standards that would allow us to adequately characterize the soil treatment unit subcategory and we are not proposing standards for such units in this reconsideration notice. We solicit comment concerning our decisions in regard to soil treatment units and our definition as set forth in the final rule.

The EPA received many comments concerning laboratory analysis units during the comment period on the proposed rule. The EPA concluded based on those comments that samples used in laboratory analysis units have a purpose separate from the

disposal of material. Furthermore, we believe based on the information available that the material that is combusted in such units is likely not a solid waste as that term is defined in the 2011 NHSM final rule. For these reasons and because we determined we do not need such units to comply with our CAA 112(c)(6) obligation, we included in the final rule a definition of laboratory analysis unit that distinguishes such units from the units for which we established standards. We have not received any information since issuing the final rule on the emissions from laboratory analysis units or the nature of the material combusted in such units that causes us to revise the conclusions reached in the final rule. We solicit comment concerning our decisions in regard to laboratory analysis units and our definition as set forth in the final rule.

The EPA did not consider space heaters in the proposed rule. The Agency received comments inquiring whether such units were subject to the proposed standards if they combusted solid waste. Because the EPA did not consider such units when proposing the CISWI standards and we did not have emissions data for space heaters, we included in the final rule a definition of space heaters that was intended to distinguish such units from the units for which the Agency finalized standards. As with the other units discussed in this section, the EPA does not have to regulate space heaters to comply with the CAA 112(c)(6)



obligation. We have not received any emissions information on space heaters since issuing the final CISWI standards; therefore, we are not proposing to regulate such units in the reconsideration notice. We have, however, identified typographical errors included in the definition of space heater contained in the final CISWI standards and we are proposing a definition that corrects those typographical errors: "Space heater means a usually portable appliance for heating a relatively small area. A space heater is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart." We solicit comment our decisions in regard to space heaters and our revised definition set forth above.

#### 4. Providing an affirmative defense for malfunction events

The EPA recognizes that even equipment that is properly designed and maintained can sometimes fail and that such failure can sometimes cause an exceedance of the relevant emission standard. (See, e.g., State Implementation Plans: Policy Regarding Excessive Emissions During Malfunctions, Startup, and Shutdown (Sept. 20, 1999); Policy on Excess Emissions During Startup, Shutdown, Maintenance, and Malfunctions (Feb. 15, 1983)). The EPA therefore added to the final rule an affirmative defense to civil penalties for exceedances of emission limits that are caused by malfunctions. See 40 CFR 60.2265 and 60.2875

(defining "affirmative defense" to mean, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.). We also added other regulatory provisions to specify the elements that are necessary to establish this affirmative defense; the source must prove by a preponderance of the evidence that it has met all of the elements set forth in 60.2120 and 60.2685. See 40 CFR 22.24. The criteria ensure that the affirmative defense is available only where the event that causes an exceedance of the emission limit meets the narrow definition of malfunction in 40 CFR 60.2 (sudden, infrequent, not reasonable preventable and not caused by poor maintenance and/or careless operation). For example, to successfully assert the affirmative defense, the source must prove by a preponderance of the evidence that excess emissions "[w]ere caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner...." The criteria also are designed to ensure that steps are taken to correct the malfunction, to minimize emissions in accordance with section §60.11(d) and to prevent future malfunctions. For example, the source must prove by a preponderance of the evidence that "[r]epairs were made as

expeditiously as possible when the applicable emission limitations were being exceeded...." and that "[a]ll possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment and human health..." In any judicial or administrative proceeding, the Administrator may challenge the assertion of the affirmative defense and, if the respondent has not met its burden of proving all of the requirements in the affirmative defense, appropriate penalties may be assessed in accordance with section 113 of the CAA. See also 40 CFR 22.77.

While we believe the final rule reflects reasonable approaches consistent with the requirements of the CAA, we believe reconsideration and additional opportunity for public review and comment should be obtained. We are therefore seeking comment on the inclusion of the affirmative defense provisions in the final rule.

#### 5. Revisions to the CO Monitoring Requirements

In the March 21, 2011, notice of reconsideration, the EPA initiated reconsideration of the requirements to continuously monitor for CO. Petitioners have identified computational issues for correcting CO concentration measurements to 7 percent oxygen for periods when the oxygen content of the flue gas approaches the ambient air oxygen content. The equation for the 7 percent oxygen correction is  $X \text{ ppm CO} * (20.9 - 7) / (20.9 - \%O_2 \text{ of flue gas})$

stream). As seen by this equation, as the flue gas stream oxygen content gets closer to 20.9, the value of X is multiplied by an ever increasing factor. For example, when the stack gas oxygen content is 4 percent, the factor is 0.82. If the stack gas oxygen content is 20 percent, the factor increases to 15.4. Therefore, a flue gas CO concentration reading of 100 ppm would be corrected to 82 ppm for a stack gas at 4 percent oxygen content, but would become a 1,540 ppm corrected concentration for a stack gas at 20 percent oxygen content. In the extreme, at a 20.8 percent stack gas concentration (i.e., approximating ambient air oxygen content), the same 100 ppm measurement would be corrected to 13,700 ppm.

Petitioners have noted that oxygen contents relatively close to ambient air are often maintained during combustion unit startup and shutdown in order to safely operate the combustion unit. Therefore, CO readings during these periods would be multiplied by an uncharacteristically high correction factor, and the resulting corrected CO concentrations are artificially inflated due to the 7 percent oxygen correction. Petitioners and commenters argue and presented data that show these artificially inflated data points drive the 30-day rolling average values for the unit beyond the emission limit.

Petitioners have suggested various approaches to remedy this situation, with one being to simply waive the 7 percent

oxygen correction requirement during unit startup and shutdowns. In other words, the CEMS data as reported at stack gas concentration would be included in the rolling average calculations for periods when the combustion unit is either being started up or shutdown. During all other operating periods, the CEMS data are corrected to a 7 percent oxygen concentration prior to calculating the rolling average.

We received data for one unit in one subcategory (coal ERUs) that indicates startups usually occur over a 4 hour period, and shutdowns occur over a 1 hour period. Therefore, we are proposing provisions for calculating the 30-day CO rolling average that allow the uncorrected CEMS reading to be used during the first 4 hours of operation from a cold start and the 1 hour of operation following the last waste material being fed to the combustion unit during shutdown procedures of the unit. Sources must indicate in the CEMS data records which CEMS data are obtained during the 4 hour startup and 1 hour shutdown period.

Additionally, in order to be consistent with similar requirements for non-waste fuel-fired boilers and process heaters, we are proposing to remove continuous CO monitoring requirements for new and existing ERU units, instead making CO monitoring with CEMS a compliance alternative and, for larger units, requiring annual CO stack tests and continuous oxygen

monitoring instead. We have also removed the continuous CO monitoring requirements for new CISWI units in the other subcategories, but allow them to demonstrate compliance using CO CEMS if they so choose. The 7 percent oxygen correction waiver during startup and shutdowns discussed above would apply to any CISWI sources that elect to demonstrate compliance with the CO limits with a CO CEMS instead of performing stack tests. We are requesting comment on these proposed revisions to the final rule CO monitoring requirements.

6. Establishing a Full-load Stack Test Requirement for CO Coupled with Continuous Oxygen Monitoring

In the March 21, 2011, notice of reconsideration, the EPA initiated reconsideration on the requirement of coupling a full-load stack test for CO coupled with continuous oxygen monitoring to demonstrate continuous compliance with the CO emission limits. While this requirement pertains primarily to requirements contained within the major source boiler NESHAP, there are similar requirements in the final CISWI rule for existing units. Specifically, existing ERUs with a design heat input capacity over 100 MMBtu/hr must demonstrate continuous compliance with the CO emission limits with an annual CO stack test and monitoring the oxygen content of the flue gas using a continuous oxygen monitoring system.

As discussed earlier, we have removed the CO CEMS requirements for existing units, instead allowing the option for sources to use CO CEMS to demonstrate compliance with the standards. We are also requesting comment on whether allowing the option to use CO CEMS instead of oxygen monitoring is of potential use to affected sources and implementing agencies, and also whether the oxygen monitoring requirements coupled with an annual CO stack provides an appropriate parameter to ensure optimized combustion short of direct CO measurements.

Petitioners have also commented that the final rule continuous oxygen monitoring requirements would preclude the use of existing oxygen monitoring systems that may already be installed on these units to help manage combustor operation. Petitioners have claimed that, by requiring the system meet Performance Specification 3 requirements, it is unlikely that existing oxygen monitors are located in a position that would enable their use for compliance demonstration. As a result, sources would need to install and operate an additional oxygen monitoring system. Petitioners contend that this additional system would be an added expense and would be located too far downstream of the combustion chamber to provide accurate data regarding combustion characteristics so would be of no use to combustor operation.

We are therefore proposing revisions to the continuous oxygen monitoring provisions in today's action that would afford the ability for existing sources to use their current oxygen analyzer and oxygen trim systems to demonstrate continuous compliance. We are requesting comment on the practicality of the proposed provisions, and whether alternative monitoring approaches are available that would ensure that the oxygen monitoring system is sited and operated to give accurate readings while minimizing the need for potentially duplicative monitoring systems.

#### 7. Establishing a Definition of "Homogeneous Waste"

The EPA included in the final CISWI rule a definition of homogenous waste and a process for evaluating claims that a particular waste stream is homogenous.

Homogeneous wastes are stable, consistent in formulation, have known fuel properties, have a defined origin, have predictable chemical and physical attributes, and result in consistent combustion characteristics and have a consistent emissions profile. Qualifying small power production and cogeneration facilities requesting an exemption from CISWI on the basis that they burn homogeneous waste may be asked to demonstrate, using defined test methods acceptable to the EPA, that the physical and chemical characteristics of the waste are consistent throughout such that the emission profile of any



sample of waste combusted is similar or identical to any other sample. Mixtures of different types of wastes are generally not homogeneous, unless the mixtures are from materials that are each individually determined to be homogeneous, are from known origin, are mixed in constant proportion, and are conditioned or processed, such as could occur in the gasification of the wastes. MSW can never be homogeneous because it does not have a defined origin. Likewise, refuse derived fuel cannot be homogeneous because it is derived from MSW. Refuse derived fuel is also specifically excluded from the qualifying small power production and cogeneration facilities exemption at CAA section 129(g) (1).

In the final rule, the EPA stated that a determination concerning whether a waste is homogeneous is made on a case-by-case basis. The EPA added provisions to the CISWI final rule that require source owners or operators seeking the exemption to submit a request for a homogeneous waste fuel determination to the EPA, and that they support their request with information describing the materials to be combusted and why they believe the waste is homogeneous. The final rule also indicated that the determination of what constitutes a homogeneous waste is not delegable to the state or local agencies.

We are proposing the definition of homogeneous waste and the provisions for making homogenous waste determinations to provide the public an opportunity to comment on the provision.

8. Incorporating Fuel Variability into Emission Limit Calculations

The proposed and final CISWI rule emission limits were calculated based primarily on emissions test data. Commenters urged the EPA to incorporate fuel variability into the emission limit calculations as was done in the boiler NESHAP. Petitioners have since claimed that the EPA did not adequately address comments regarding this issue. In today's proposal, we are providing further clarification on our response to this issue.

In the preamble to the final CISWI rule, we explained the methodology used to establish the final emission limits, which relied almost exclusively on direct measurements. Commercial and Industrial Solid Waste Incineration units by definition are burning wastes, usually in combination with various non-waste fuels, and often with a variety of different waste streams. As a result, fuel variability data would only account for a variability found in a fraction of the materials being input into the unit. We have, in fact, considered total material feed variability in establishing limits for Hg for waste-burning kilns (76 FR 15727). To enable this analysis, we had to rely on data available from sources that provided materials analysis for

all materials being fed into Portland cement kilns over a 30-day span. We did not, and do not still, have such data available for other pollutants and other types of CISWI units. Therefore, we are not proposing the use of fuel variability in our emission limit methodology, except as noted above. We are requesting comments and supporting data that would allow us to consider an approach similar to the waste-burning kiln Hg limits for other pollutants and subcategories .

9. Review of D/F Data and Non-detect Methodology Using Three Times the Detection Level

Several petitioners have argued that the D/F emission limits are based primarily on emissions data that are below detection levels and have suggested that these data not be included in emissions calculations, or at a minimum, establish a minimum emission limit value that is quantifiable by most laboratories available to analyze this data. We proposed and, in the final rule, used a methodology that sets the emission limit at a level that is at least three times the detection limit of the emission tests of the best performing units used in the MACT floor emission limit calculations. We have, however, reviewed the D/F data in more detail to ensure that all data are correctly identified as either non-detection or detection level limited, where some of the fractions may be non-detection, but not all of them. While our findings found the most data were

accurately identified, there were a few average values that were reclassified as "detection level limited." However, these corresponding run data were correctly identified and were included in the three times the detection limit methodology. Therefore, no D/F emission limits were impacted due to this review.

In addition, the EPA conducted a review of sampling volumes and detection levels across various emission testing ICR efforts on various combustion sources (See memorandum "Updated data and procedure for handling below detection level data in analyzing various pollutant emissions databases for MACT and RTR emissions limits" in the CISWI docket). As a result of this analysis, we have determined recommended values for three times the RDL (3xRDL) that may be used as a minimum emission limit value that can be accurately measured by most laboratories. These recommended values were then compared with calculated emission limits and, if the calculated limit is less than the recommended 3xRDL, the 3xRDL value is selected as the limit. This premise for this approach is the same as described in the final rule, but using a broader data set to establish the 3xRDL value. We have not changed the methodology of the emission limit calculation or tabulation of the three times the detection limit value that was used in the final CISWI rule. Therefore, we are

not accepting comment on the emission limit calculation methodology.

One petitioner has suggested that D/F emission limits should not be less than 0.3 ng/dscm. We are requesting comment and data on whether 0.3 ng/dscm or the recommended 3xRDL values for each test method are sufficient to reflect quantifiable concentration levels, or whether other values should be selected as a lower quantification boundary for emission limits for CISWI sources.

#### 10. Providing an Option for Sources to Use Emissions Averaging to Demonstrate Compliance

Several petitioners contend that the EPA did not adequately address comments on the issue of allowing sources with multiple CISWI units at a facility to use emissions averaging to demonstrate compliance, similar to the provisions provided in the major source boiler NESHAP. The boiler MACT allows emissions averaging across subcategories within an affected facility. The applicability of CISWI is such that each unit is an affected facility, if it otherwise meets the applicability of the rule. We cannot allow emissions averaging across affected facilities because we establish MACT on an affected facility basis and it would be impossible to justify MACT when averaged across affected facilities.

#### 11. Definitions

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

a. Establishing a Definition of Foundry Sand Thermal Reclamation Unit

Following publication of the final rule and the NHSM rule, we were made aware of a certain class of unit that had not previously been considered a CISWI unit, but could potentially be considered a type of CISWI once the NHSM rule came into effect. These units are called TSR units, and are a component of a foundry's "sand loop." We have concluded that these units are parts reclamation units as defined in the 2000 CISWI rule. We defined parts reclamation units as "unit[s] that burn coatings off parts (e.g., tools, equipment) so that the parts can be reconditioned and reused." In the 2011 CISWI rule, parts reclamation units are a subcategory of burn-off ovens. Thermal reclamation units that recover foundry sands serve the same purpose as other parts reclamation units that recover metal parts. Specifically, foundry sand units recover parts (i.e., sand) by removing coatings (e.g., binders and resins) from the foundry molds. Thus, TSR units are part reclamation units that remove coatings that are on foundry sand, which allows re-use of the sand. As with other burn-off ovens, TSR parts reclamation units conserve natural resources (i.e., virgin sand) and minimize the use of landfill capacity for foundry sand.

As with other burn-off ovens, we do not currently have emissions data for TSR units and regulation of such units is not

required to comply with the Agency's CAA 112(c)(6) obligation. For these reasons, we are not proposing standards for TSR units are this time.

We are soliciting comment on the proposed definition of TSR units.

b. Removing the Definition of Contained Gaseous Material

The EPA did not propose to remove the definition of contained gaseous material in the proposed CISWI standards. In the final CISWI rule preamble (76 FR 15708), we removed definitions that define or clarify what constitutes a solid waste from the standards to minimize confusion in light of the definition of solid waste in the final NHSM rule. The definition of "contained gaseous material" was one of the definitions that was removed from the 2000 CISWI standards.

Several petitioners asked for confirmation that the Agency had not changed its historical interpretation of what gases could be considered to be solid waste (i.e., a "contained gas"). These petitioners also requested that the EPA reconsider the removal of the definition of "contained gaseous material" in the CISWI rule, since the same definition appears in subparts EEEE and FFFF of part 60 (§60.2977 and §60.3078) and subpart III of part 62 (§62.14840). The Agency did not intend to create ambiguity by removing the definition of "contained gaseous

material" from the CISWI rule. Accordingly, the proposed CISWI reconsideration rule includes the same definition of "contained gaseous material" that was removed from the final CISWI rule. This definition is consistent with the definition in the subparts cited above. Moreover, our proposal to add the definition of "contained gaseous material" to the proposed CISWI reconsideration rule is consistent with the position in other sections of this preamble that address the NHSM rule where we make clear that the Agency is not changing any of its previous positions with regard to contained gas. The EPA is soliciting comment on the need to retain the definition of contained gaseous material.

c. Revising Definition of Chemical Recovery Unit

Following publication of the final rule and the NHSM rule, we received additional information about a handful of combustion units that had previously not been regulated as CISWI sources, but could potentially be considered a type of CISWI unit once the 2011 NHSM final rule came into effect. However, these units do not adequately fit into any of the four subcategories of units in the final CISWI standards. The units that have been identified are SARUs that may be burning sulfur-bearing compounds which are classified as non-hazardous waste at facilities that are non-RCRA part B permitted SARUs.

Stakeholders have identified four such facilities, and have

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.



contended that response to comments and preamble language in both the 2011 NHSM final rule and the final CISWI rule are confusing and inadequately address their particular questions on applicability of CISWI to these units. The stakeholders ask specifically which subcategory should apply to these units, noting that none of the four subcategory definitions expressly includes SARUs in their definitions. Furthermore, stakeholders note that the EPA has included a definition of chemical recovery unit in the final rule that more properly addresses SARUs as well as other types of chemical recovery unit.

To address this issue and clarify applicability for chemical recovery units more generally, we are revising the definition of chemical recovery unit to clarify that chemical recovery units are not incinerators, waste-burning kilns, ERUs or small, remote incinerators under subparts CCCC or DDDD.

#### 12. Allowances for Using Feed Stream Analysis or Other Supplemental Information to Demonstrate Compliance

The final rule specifies emissions testing, continuous emissions monitoring, and control device parameter monitoring to ensure continuing compliance with the emission standards. Some petitioners have requested responses to comments on providing provisions that would allow use of feed stream analysis and other supplemental information instead of the monitoring requirements specified. As an example, petitioners have asked if

a source could use a material analysis to show that only minimal amounts of a pollutant compound enter the combustion unit. That data, along with data on the flue gas flow rate information could be used by sources to calculate a maximum possible pollutant concentration. The petitioners further argue that the source could then demonstrate that the maximum potential concentration is less than the applicable emission limit, and the source would not have to perform an emissions test for that pollutant.

We have not proposed any such provisions in today's rule, and believe that direct measurement of emissions is the most comprehensive and accurate method to ascertain compliance with the final standards. Furthermore, CAA section 129(c) states that the EPA "shall... promulgate regulations requiring the owner or operator of each solid waste incineration unit - (1) To monitor emissions from the unit at the point at which such emissions are emitted into the ambient air... and at such other points as necessary to protect public health and the environment." The EPA is thus constrained by the statute in our ability to implement the commenter's proposed monitoring approach.

### 13. Providing Percent Reduction Alternative Standards

The final rule contains numeric emission limits for all nine pollutants listed in CAA section 129(a)(4) (requiring numerical emissions limits for the 9 identified pollutants). The

proposed and final rules describe at length the methodology used to establish these emission limits. However, petitioners and commenters suggested that the EPA should also establish alternative percent reduction standards to the numeric emission limits. Petitioners allege that we did not adequately address this comment in the preamble to our final rule or supporting documents. Therefore, we are providing our response to this issue in today's proposal.

The CISWI database does not include percent removal data except in very limited instances. These data were seldom provided voluntarily, and were not required by the EPA during the emission test ICR. This is due to the increased cost of performing pre- and post-emission control device emissions tests to determine the removal efficiency of the control device. Source operators will typically not choose to perform extra testing at additional cost voluntarily, and the EPA went to great lengths to minimize burden on sources during the testing ICR. As a result, we do not have percent reduction data for the best performing CISWI sources, and cannot develop a percent reduction alternative standard that reflects the best sources' performance.

Additionally, there are arguments that percent reduction standards are not legally permissible (See 74 FR 21149). As discussed in the Portland cement NESHAP proposal preamble, the

Brick MACT opinion states "that best performers are those emitting the least HAP." It further discusses how a percent reduction standard downplays the role of pollutant inputs on emissions, thereby allowing more pollutants to be emitted provided a given level of removal efficiency.

Finally, we do not specify the control devices necessary to meet the numeric limits as in some other rules. Sources may evaluate their source emissions and determine the appropriate control strategy or devices needed to comply with the emission limits. Percent reduction standards are more appropriately applied when there is a specified control device that potential emission streams must be routed through, such as a flare. In these cases, a percent reduction alternative provides a design and performance metric for the required type of control device. This is not the case with CISWI since the rule does not specify a control device for all sources.

Due to the reasons discussed above, we have not proposed any percent reduction alternative standards.

#### 14. Providing Parametric Monitoring Provisions for Additional Control Device Types

The final rules added monitoring parameters for sources that use wet scrubbers, ESPs, activated carbon sorbent injection, or SCR. However, one petitioner has claimed that we did not adequately address comments on this issue in the final

rule preamble or supporting documents. Therefore, we are responding that we have included such provisions that commenters requested. The control devices with monitoring provisions expressly identified in the rules should encompass most types of control devices that we would anticipate the various types of CISWI units to use to meet the emission limits. In the case that there is another type of control that is not addressed, we have provided provisions for sources to petition for specific operating limits for the control device to be established during a performance test. These provisions also allow specific operating limits to be established for CISWI units without any air pollution control devices, such as material balance operating limits to demonstrate continuous compliance. However, we recognize that dry sorbent injection for acid gas control may be one additional type of control that affected sources may use, and are requesting comment on whether we should specify monitoring provisions for this type of control and recommendations on which parameters should be specified. Lastly, we also request comment on whether there are any additional types of control devices that we should identify monitoring parameters for in the rule.

15. Revisions to the Continuous Monitoring Provisions for Large

ERUs

In today's rule, we are proposing some revisions to the monitoring requirements for ERUs with a design heat input capacity greater than 250 MMBtu/hr. In the final rules, these units were required to monitor continuously for PM using a PM CEMS; however, recent EPA experience with the utility boiler source category has led the EPA to allow PM CEMS as an alternative, rather than a requirement. The PM CEMS technology may not be sufficient to certify accurate monitor performance in the PM concentration range of the CISWI ERU limits. Therefore, we are requiring continuous parameter monitoring systems for these units similar to those being required for major industrial boilers and utility boilers. Likewise, to be consistent with these other rules, we have revised all operating parameter averaging for ERU units to be on a 30-day rolling average. Due to the relatively long operational campaigns of ERUs, the longer averaging time will allow operators sufficient flexibility for operational and control device adjustments should they be needed for short term fuel or waste characteristics variability. The EPA has determined the 30-day rolling average reporting basis is appropriate for this rule. The operating limits established through performance testing in this rule represent short term process and control operating conditions representative of compliance. Concerns of variability outside the operators control such as fuel content, seasonal factors, load cycling,

and infrequent hours of needed operation prompted us to look at longer averaging periods on which to base operating compliance determination. We are aware from studies of emissions over long averaging periods (See memorandums "Changing Averaging Time as an Incentive" and "Assessment of Using Single Point Stack Test Data to Derive 30-Day Rolling Average Emissions Limits" in the CISWI docket) that long term (e.g., 30-day) average emissions for a operating in compliance will have a variability of about half of that represented by the results of short term testing. Given that short term tests are representative of distinct points along a continuum of that inherent operational variability, we believe it appropriate to provide a means for the source operator to account for that variability by applying a long term average for establishing compliance. We expect more problematic control system variability (e.g., ESP transformer failure or scrubber Venturi fan failure) to result in deviations from a 30-day average relative to compliance almost as much as for a shorter term average.

#### 16. Extending Compliance Dates

On May 18, 2011, the EPA issued a stay of the effective date of the final rule. The EPA plans to reset the compliance dates of the rule when the final reconsideration is published. The EPA is proposing to set the compliance date for existing sources in the incinerator, ERU, and waste-burning kiln

subcategories 5 years after the date of publication of the final reconsideration rule or 3 years after the state plan is approved, whichever happens earlier. This date is being proposed in order to provide facilities sufficient time to install controls or to make other compliance-related decisions. For new sources in the incinerator, ERU, and waste-burning kiln subcategories, the EPA is proposing to change the compliance date to 6 months after the date of publication of the final reconsideration rule. Since there were no major changes to the emission standards from final rule for the small remote incinerator subcategory, the EPA is soliciting comment on the need to extend the compliance date for this subcategory. Particularly, the EPA is requesting additional data that supports the need to revise the emission standards for the small remote incinerator subcategory.

The EPA determined that it is appropriate to extend the compliance dates for the incinerator, ERU, and waste-burning kiln subcategories for several reasons. First, proposed changes to the emission limits for these subcategories will have a significant impact on the compliance strategies that are selected by the affected sources. For instance, the proposed changes in emission limits for existing ERU, and waste-burning kiln subcategories may require different control strategies selections than the emission limits finalized in March 2011.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.



Second, when the EPA announced the reconsideration and issued the stay of the effective date, a signal was sent to industry and to the states responsible for implementing the EG that requirements may change significantly. The resulting uncertainty has limited the ability of affected sources to begin making appropriate selections of control technologies and other compliance decisions. Even if significant changes were not being proposed, an extended compliance date would likely be necessary to provide enough time for facilities to achieve compliance. Additionally, not extending the compliance date may be problematic for states and implementing agencies since the increments of progress for rule compliance are keyed off of the approval date of the revised state plan. Without a final rule in place, states and implementing agencies will be unable to adequately update and implement a state plan. For all of the reasons discussed above, the EPA has determined that it is necessary to extend the compliance date for existing sources in the ERU and waste-burning kiln subcategories based on the date that the reconsideration of the final rule is completed. Finally, the EPA has received comments that the availability of control equipment and vendors to install control equipment for CISWI units is in question due to the large number of units requiring controls in conjunction with the parallel rulemaking for industrial boilers and electric generating units that will

require controls from many of the same vendors. While the EPA believes that the maximum time allotted under section 129 provides enough time for CISWI units to achieve compliance, the EPA recognizes that maintaining the compliance dates from the final rule would essentially provide less than 2 years for states to implement a revised state plan and for increments of progress to be scheduled. Because the stringency of the final standards will not be determined until the reconsideration is final, sources will not be able to begin planning a compliance strategy and states will be uncertain on an appropriate schedule for increments of progress, which includes submittal of a final control plan. The EPA is requesting comment on the proposed changes to the compliance dates.

#### D. Technical Corrections and Clarifications

In today's rule, we are also proposing some changes to the final rule to correct minor typographical errors and clarify portions. This section of the preamble summarizes these corrections and clarifications.

##### 1. Providing a Definition of Municipal Solid Waste

We are including the definition of "municipal solid waste" in the CISWI rule definitions. This definition is the same definition used in the CAA section 129 standards for MWC units. We believe that including this definition will further clarify

applicability for MWC owners who question whether CISWI or MWC rules are applicable to their solid waste combustion unit.

## 2. Energy Recovery Units Designed to Burn Non-coal Solid Materials

We are amending the definition of "Energy recovery unit designed to burn biomass (Biomass)" to clarify that this definition applies to all ERUs designed to burn non-coal solid materials. While we believe biomass to be the majority of such materials, we wanted to more broadly define this source category to clarify applicability for ERUs that are burning less than 10 percent coal on a heat input basis. We are also amending recordkeeping requirements for ERU units to require records of fuel inputs to ensure that the units are meeting the applicability for coal or non-coal ERUs.

## 3. Typographical Errors and Corrections

The following items are typographical errors in the final rule that we are correcting in today's proposal:

- Final rule §60.2165, a new paragraph break is needed for (n) (4);
- Final rule §60.2265, a new paragraph break is needed for the definition of "Solid waste incineration unit;"
- Amendatory instruction #50, paragraph (b) was not added but was amended; and
- Footnote "a" for Table 9 to Subpart DDDD does not have the sentence allowing facilities to meet either the Total or TEQ for the D/F standard. It is included in all other tables (for new and existing sources).

## E. Environmental, Energy and Economic Impacts

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

1. What are the Primary Air Impacts?

We have estimated the potential emissions reductions from existing sources that may be achieved through implementation of the emission limits. However, we realize that some CISWI owners and operators are likely to determine that alternatives to waste incineration are viable, such as further waste segregation or sending the waste to a landfill or MWC, if available. In fact, sources operating incinerators, where energy recovery is not a goal, may find it cost-effective to discontinue use of their CISWI unit altogether. Therefore, we have estimated emissions reductions attributable to existing sources complying with the limits, as well as those reductions that would occur if the facilities with incinerators and small, remote incinerators decide to discontinue the use of their CISWI unit and use alternative waste disposal options.

For units combusting wastes for energy production, such as ERUs and waste-burning kilns, the decision to combust or not to combust waste will depend on several factors. One factor is the cost to replace the energy provided by the waste material with a traditional fuel, such as natural gas. Another factor would be whether the owner or operator is purchasing the waste or obtaining it at no cost from other generators, or if they are generating the waste on-site and will have to dispose of the materials in another fashion, such as landfills. Lastly, these

units would have to compare the control requirements needed to meet the CISWI emission limits with those needed if they stop burning solid waste and are then subject to a NESHAP instead. As mentioned before, we have attempted to align the monitoring requirements for similar non-waste-burning sources as closely as possible in an effort to make them consistent and to help sources make the cross-walk between waste and non-waste regulatory requirements as simple as possible.

The emissions reductions that would be achieved under this proposed rule using the definition of solid waste under RCRA and the proposed CISWI emission limits are presented in Table 4 of this preamble.

**Table 4. Emissions Reductions for MACT Compliance and Alternative Disposal Options for Existing CISWI Using the Emission Limits**

<b>Pollutant</b>	<b>Reductions achieved through meeting MACT (ton/yr)</b>	<b>Reductions achieved assuming incinerators and small, remote incinerators use alternative disposal (ton/yr)<sup>a</sup></b>
HCl	578.0	590.1
CO	22,104	22,069
Pb	3.09	3.09
Cd	1.620	1.622
Hg	0.143	0.147
PM (filterable)	1,439	1,442
dioxin, furans	0.000101	0.000104
NO <sub>x</sub>	5,299	5,405
SO <sub>2</sub>	4,983	5,033
Total	34,406	34,544

<sup>a</sup> The estimated emission reduction does not account for any secondary impacts associated with alternate disposal of diverted ERU fuel.

The EPA expects that many existing CISWI owners and operators may find that alternate disposal options are preferable to complying with the standards for the incinerator and small, remote incinerator subcategories. Our experience with regulations for MWC, HMIWI and, in fact, CISWI, has shown that negative growth in the source category historically occurs upon implementation of CAA section 129 standards. Since CISWI rules were promulgated in 2000 and have been in effect for existing sources since 2005, many existing units have closed. At promulgation in 2000, the EPA estimated 122 units in the CISWI population. In comparison, the incinerator subcategory in this rule, which contains any such units subject to the 2000 CISWI rule, has 28 units. The EPA is not aware of any construction of new units since 2000, so we do not believe there are any units that are currently subject to the 2000 CISWI NSPS. The revised CISWI rule is more stringent, so we expect this trend to continue. However, the EPA does recognize that some facilities may opt to replace aging incinerator units with new units where it is cost-effective or alternative disposal options are not feasible, as may be the case with some incinerators, or in very remote locations. We estimate that there could be one new incineration unit within the next 5 years following this

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

proposal, and possibly five new small remote incinerators within that time. In these cases, we have developed model CISWI unit emissions reduction estimates for these subcategories using the current existing unit baseline, based on average emission concentration values and sizes from our current inventory and the new source proposed emission limits. Table 5 of this preamble presents the model plant emissions reductions that would be expected for new sources.

**Table 5. Emissions Reductions on a Model Plant Basis**

Pollutant	Emission reduction for CISWI Subcategory Model Units (tpy unless otherwise noted)	
	Incinerator	Small, remote incinerator
HCl	3.67	0.0
CO	1.23	0.25
Pb	0.83	0.0037
Cd	0.022	0.0007
Hg	0.004	0.000012
PM (filterable)	148	0.5
D/F (total mass) <sup>a</sup>	0.0018	0.0
NO <sub>x</sub>	16.3	0.15
SO <sub>2</sub>	7.6	0.15
Total	178	1.05

<sup>a</sup> D/F estimates are given in lb/yr.

We do not anticipate that any new energy recovery or waste-burning kiln units will be constructed and will instead use alternative waste disposal methods or alternative fuels that will not subject them to the CISWI rule. For example, whole tires obtained from approved tire management programs and tire-

derived fuel from which the metal has been removed is not considered solid waste under the definition of solid waste. Consequently, new cement kiln owners will assess their regulatory requirements under CISWI for burning whole tires or tire-derived fuel that does not have metals removed against the costs associated with removing the metal or obtaining tires from an approved source and complying with the applicable NESHAP instead of the CISWI rule. Our research suggests that metal removal is routinely practiced and that several state waste tire management programs are already in place, and would most likely be a viable option for new kiln owners so that they would not be subject to the CISWI regulations. Indeed, we expect that all existing cement kilns that are classified as being waste-burning solely due to whole tires will, by the compliance date for the CISWI standards, find a way to obtain their tires through an approved tire management plan. Likewise, new sources could engineer their process to minimize waste generation in the first place, or to separate wastes so that the materials sent to a combustion unit would not meet the definition of solid waste to begin with. For waste that is generated, our cost analyses have found that alternative waste disposal is generally available and less expensive.

## 2. What are the Water and Solid Waste Impacts?



In our analysis, we have selected the lowest cost alternative (i.e., compliance or alternative disposal) for each facility. We anticipate affected sources will need to apply additional controls to meet the emission limits. These controls may use water, such as wet scrubbers, which would need to be treated. We estimate an annual requirement of 90 billion gallons per year of additional water would be required as a result of operating additional controls or increased sorbent use.

Likewise, the addition of PM controls or improvements to controls already in place will increase the amount of particulate collected that will require disposal. Furthermore, ACI may be used by some sources, which will result in additional solid waste needing disposal. The annual amounts of solid waste that would require disposal are anticipated to be approximately 22,549 tpy from PM capture and 9,820 tpy from ACI.

Perhaps the largest impact on solid waste would come from owners and operators who decide to discontinue the use of their CISWI unit and instead send waste to the landfill or MWC for disposal. Based on tipping fees and availability, we would expect most, if not all, of this diverted waste to be sent to a local landfill. As we discuss above, it may be that a good portion of the incinerators would determine that alternative disposal is a better choice than compliance with the standards.

We estimate that approximately 110,417 tpy of waste would be diverted to a landfill.

For new CISWI units, we estimate an annual requirement of 9,102 million gallons per year of additional water would be required as a result of operating additional controls. The annual amounts of solid waste that would require disposal are anticipated to be approximately 7,275 tpy from PM capture and 8,173 tpy from ACI.

### 3. What are the Energy Impacts?

The energy impacts associated with meeting the emission limits would consist primarily of additional electricity needs to run added or improved air pollution control devices. For example, increased scrubber pump horsepower may cause slight increases in electricity consumption and sorbent injection controls would likewise require electricity to power pumps and motors. In our analysis, we have selected the lowest cost alternative (i.e., compliance or alternative disposal) for each facility. By our estimate, we anticipate that an additional 242,283 MW-hours per year would be required for the additional and improved control devices.

As discussed earlier, there could be instances where owners and operators of ERUs and waste-burning kilns decide to cease burning waste materials. In these cases, the energy provided by the burning of waste would need to be replaced with a

traditional fuel, such as natural gas. Assuming an estimate that 50 percent of the energy input to ERUs and kilns are from waste materials, an estimate of the energy that would be replaced with a traditional fuel if all existing units stopped burning waste materials, is approximately 56 TBtu/yr.

For new CISWI units, we anticipate that 511 MW-hours per year would be required for additional and improved control devices. Since we do not anticipate any new energy recovery or waste-burning kiln units to be constructed, there would be no additional estimate for energy that would be replaced with a traditional fuel.

#### 4. What are the Secondary Air Impacts?

For CISWI units adding controls to meet the emission limits, we anticipate minor secondary air impacts. The combustion of fuel needed to generate additional electricity and to operate RTO controls would yield slight increases in emissions, including NO<sub>x</sub>, CO, PM and SO<sub>2</sub> and an increase in CO<sub>2</sub> emissions. Since NO<sub>x</sub> and SO<sub>2</sub> are covered by capped emissions trading programs, and methodological limitations prevent us from quantifying the change in CO and PM, we do not estimate an increase in secondary air impacts for this rule from additional electricity demand.

We believe it likely that the incinerators may elect to discontinue the use of their CISWI unit and send the waste to

the landfill or other disposal means. As we discussed in the solid waste impacts above, this could result in approximately 110,417 tpy of waste going to landfills. By using the EPA's Landfill Gas Estimation Model, we estimate that, over the 20-year expected life of a CISWI unit, the resulting methane generated by a landfill receiving the waste would be about 96,300 tons. If this landfill gas were combusted in a flare, assuming typical flare emission factors and landfill gas chlorine, Hg, and sulfur concentrations, the following emissions would be expected: 20 tons of PM; 8 tons of HCl; 16 tons of SO<sub>2</sub>; 890 tons of CO; 46 tons of NO<sub>x</sub>; and 1.4 lbs of Hg.

Similar to existing units, we anticipate minor secondary air impacts for new CISWI units adding controls as discussed above.

#### 5. What are the Cost and Economic Impacts?

We have estimated compliance costs for all existing units to add the necessary controls and monitoring equipment, and to implement the inspections, recordkeeping and reporting requirements to comply with the proposed CISWI standards. We have also analyzed the costs of alternative disposal for the subcategories that may have alternative options to burning waste, specifically for the incinerators and the small, remote incinerators that may have an alternative to incineration. In our analysis, we have selected the lowest cost alternative

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.  
We have taken steps to ensure the accuracy of this version, but it is not the official version.

(i.e., compliance or alternative disposal) for each facility. Based on this analysis, we anticipate an overall total capital investment of \$859 million with an associated total annual cost of \$270 million (\$2008).

Under the rule, the EPA's economic model suggests the average national market-level variables (prices, production-levels, consumption, international trade) will not change significantly (e.g., are less than 0.02 percent).

The EPA performed a screening analysis for impacts on small entities by comparing compliance costs to sales/revenues (e.g., sales and revenue tests). The EPA's analysis found the tests were below 3 percent for five of the nine small entities included in the screening analysis.

In addition to estimating this rule's social costs and benefits, the EPA has estimated the employment impacts of the final rule. We expect that the rule's direct impact on employment will be small. We have not quantified the rule's indirect or induced impacts. For further explanation and discussion of our analysis, see Chapter 4 of the RIA.

For new CISWI units, we have estimated compliance costs for units coming online in the next 5 years. This analysis is based on the assumption that one new incinerator will come online over 5 years and one new small, remote incinerator will come online each year over the next 5 years. Additionally, it was assumed

that each model unit will add the necessary controls, monitoring equipment, inspections, recordkeeping, and reporting requirements to comply with NSPS limits. Based on our analysis, we anticipate an overall total capital investment of \$8.4 million over 5 years with an associated total annual cost (for 2015) of \$2.6 million.

6. What are the Benefits?

We estimate the monetized benefits of this regulatory action to be \$330 million to \$800 million (2008\$), 3 percent discount rate) in the implementation year (2015). The monetized benefits of the regulatory action at a 7 percent discount rate are \$300 million to \$720 million (2008\$). These estimates reflect energy disbenefits valued at \$3.8 million. Using alternate relationships between PM<sub>2.5</sub> and premature mortality supplied by experts, higher and lower benefits estimates are plausible, but most of the expert-based estimates fall between these two estimates.<sup>1</sup> A summary of the monetized benefits estimates at discount rates of 3 percent and 7 percent is in Table 6 of this preamble.

---

<sup>1</sup> Roman, et al., 2008. Expert Judgment Assessment of the Mortality Impact of Changes in Ambient Fine Particulate Matter in the U.S. Environ. Sci. Technol., 42, 7, 2268 - 2274.

**Table 6. Summary of the Monetized Benefits Estimates For the CISWI NSPS and EG in 2015 (Millions of 2008\$)<sup>a,b</sup>**

<b>Pollutant</b>	<b>Estimated Emission Reductions (tpy)</b>	<b>Total Monetized Benefits (3% Discount Rate)</b>	<b>Total Monetized Benefits (7% Discount Rate)</b>
PM <sub>2.5</sub>	670	\$150 to \$370	\$140 to \$340
PM <sub>2.5</sub> Precursors			
SO <sub>2</sub>	5,033	\$150 to \$360	\$130 to \$330
NO <sub>x</sub>	5,405	\$26 to \$64	\$24 to \$58
Total		\$330 to \$800	\$300 to \$720

<sup>a</sup> All estimates are for the implementation year (2015) and are rounded to two significant figures so numbers may not sum across rows. All fine particles are assumed to have equivalent health effects, but the benefit-per-ton estimates vary between precursors because each ton of precursor reduced has a different propensity to form PM<sub>2.5</sub>. Benefits from reducing HAP are not included. These estimates do not include the energy disbenefits valued at \$3.8 million, but the rounded totals do not change. CO<sub>2</sub>-related disbenefits were calculated using the social cost of carbon, which is discussed further in the RIA.

<sup>b</sup> The estimates in this table reflect the estimates in the RIA. Due to last minute changes to the March 2011 final CISWI rule, we were unable to incorporate the final engineering costs and emission reductions into the RIA, which would decrease the costs by approximately 22 percent and increase the monetized benefits by approximately 4 percent from those shown here.

These benefits estimates represent the total monetized human health benefits for populations exposed to less PM<sub>2.5</sub> in 2015 from controls installed to reduce air pollutants in order to meet these standards. These estimates are calculated as the sum of the monetized value of avoided premature mortality and morbidity associated with reducing a ton of PM<sub>2.5</sub> and PM<sub>2.5</sub> precursor emissions. To estimate human health benefits derived from reducing PM<sub>2.5</sub> and PM<sub>2.5</sub> precursor emissions, we used the

general approach and methodology laid out in Fann, Fulcher, and Hubbell (2009).<sup>2</sup>

To generate the benefit-per-ton estimates, we used a model to convert emissions of direct PM<sub>2.5</sub> and PM<sub>2.5</sub> precursors into changes in ambient PM<sub>2.5</sub> levels and another model to estimate the changes in human health associated with that change in air quality. Finally, the monetized health benefits were divided by the emission reductions to create the benefit-per-ton estimates. These models assume that all fine particles, regardless of their chemical composition, are equally potent in causing premature mortality because there is no clear scientific evidence that would support the development of differential effects estimates by particle type. Directly emitted PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> are the primary precursors affected by this rule. Even though we assume that all fine particles have equivalent health effects, the benefit-per-ton estimates vary between precursors because each ton of precursor reduced has a different propensity to form PM<sub>2.5</sub>. For example, SO<sub>2</sub> has a lower benefit-per-ton estimate than direct PM<sub>2.5</sub> because it does not directly transform into PM<sub>2.5</sub>, and because sulfate particles formed from SO<sub>2</sub> emissions can transport many miles, including over areas with low

---

<sup>2</sup> Fann, N., C.M. Fulcher, B.J. Hubbell. 2009. "The influence of location, source, and emission type in estimates of the human health benefits of reducing a ton of air pollution." *Air Qual Atmos Health* (2009) 2:169-176.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.



populations. Direct PM<sub>2.5</sub> emissions convert directly into ambient PM<sub>2.5</sub>, thus, to the extent that emissions occur in population areas, exposures to direct PM<sub>2.5</sub> will tend to be higher, and monetized health benefits will be higher than for SO<sub>2</sub> emissions.

For context, it is important to note that the magnitude of the PM benefits is largely driven by the concentration response function for premature mortality. Experts have advised the EPA to consider a variety of assumptions, including estimates based on both empirical (epidemiological) studies and judgments elicited from scientific experts, to characterize the uncertainty in the relationship between PM<sub>2.5</sub> concentrations and premature mortality. For this rule, we cite two key empirical studies, the American Cancer Society cohort study<sup>3</sup> and the extended Six Cities cohort study.<sup>4</sup> In the RIA for this rule, which is available in the docket, we also include benefits estimates derived from expert judgments and other assumptions.

The EPA strives to use the best available science to support our benefits analyses. We recognize that interpretation of the science regarding air pollution and health is dynamic and

---

<sup>3</sup> Pope, et al., 2002. "Lung Cancer, Cardiopulmonary Mortality, and Long-term Exposure to Fine Particulate Air Pollution." *Journal of the American Medical Association* 287:1132-1141

<sup>4</sup> Laden, et al., 2006. "Reduction in Fine Particulate Air Pollution and Mortality." *American Journal of Respiratory and Critical Care Medicine*. 173: 667-672

evolving. After reviewing the scientific literature and recent scientific advice, we have determined that the no-threshold model is the most appropriate model for assessing the mortality benefits associated with reducing PM<sub>2.5</sub> exposure. Consistent with this recent advice, we are replacing the previous threshold sensitivity analysis with a new "LML" assessment. While a LML assessment provides some insight into the level of uncertainty in the estimated PM mortality benefits, the EPA does not view the LML as a threshold and continues to quantify PM-related mortality impacts using a full range of modeled air quality concentrations.

Most of the estimated PM-related benefits in this rule would accrue to populations exposed to higher levels of PM<sub>2.5</sub>. Using the Pope, et al., (2002) study, 85 percent of the population is exposed at or above the LML of 7.5 µg/m<sup>3</sup>. Using the Laden, et al., (2006) study, 40 percent of the population is exposed above the LML of 10 µg/m<sup>3</sup>. It is important to emphasize that we have high confidence in PM<sub>2.5</sub>-related effects down to the lowest LML of the major cohort studies. This fact is important, because as we estimate PM-related mortality among populations exposed to levels of PM<sub>2.5</sub> that are successively lower, our confidence in the results diminishes. However, our

analysis shows that the great majority of the impacts occur at higher exposures .

This analysis does not include the type of detailed uncertainty assessment found in the 2006 PM<sub>2.5</sub> NAAQS RIA because we lack the necessary air quality input and monitoring data to run the benefits model. In addition, we have not conducted any air quality modeling for this rule. The 2006 PM<sub>2.5</sub> NAAQS benefits analysis<sup>5</sup> provides an indication of the sensitivity of our results to various assumptions.

It should be emphasized that the monetized benefits estimates provided above do not include benefits from several important benefit categories, including reducing other air pollutants, ecosystem effects, and visibility impairment. The benefits from reducing HAP have not been monetized in this analysis, including reducing 25,000 tons of CO, 470 tons of HCl, 4.1 tons of Pb, 0.95 tons of Cd, 260 pounds of Hg and 92 grams of total D/F each year. Although we do not have sufficient information or modeling available to provide monetized estimates for this rulemaking, we include a qualitative assessment of the

---

<sup>5</sup> U.S. Environmental Protection Agency, 2006. Final Regulatory Impact Analysis: PM<sub>2.5</sub> NAAQS. Prepared by Office of Air and Radiation. October. Available on the Internet at <http://www.epa.gov/ttn/ecas/ria.html>

health effects of these air pollutants in the RIA for this rule, which is available in the docket.

In addition, the monetized benefits estimates provided in Table 12 of this preamble do not reflect the disbenefits associated with increased electricity and fuel consumption to operate the control devices. We estimate that the increases in emissions of CO<sub>2</sub> would have disbenefits valued at \$3.8M at a 3 percent discount rate. Carbon Dioxide-related disbenefits were calculated using the social cost of carbon, which is discussed further in the RIA. However, these disbenefits do not change the rounded total monetized benefits. In the RIA, we also provide the monetized CO<sub>2</sub> disbenefits using discount rates of 5 percent (average), 2.5 percent (average), and 3 percent (95th percentile).

## **II. NHSM Proposed Revisions**

### **A. Statutory Authority**

The EPA is proposing amendments to the NHSM regulations under the authority of sections 2002(a)(1) and 1004(27) of the RCRA, as amended, 42 U.S.C. 6912(a)(1) and 6903(27). Section 129(a)(1)(D) of the CAA directs the EPA to establish standards for CISWI, which burn solid waste. Section 129(g)(6) provides that the term "solid waste" is to be established by the EPA under RCRA (42 U.S.C. 7429). Section 2002(a)(1) of RCRA authorizes the Agency to promulgate regulations as are necessary

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.  
We have taken steps to ensure the accuracy of this version, but it is not the official version.

to carry out its functions under the Act. The statutory definition of "solid waste" is provided in RCRA section 1004(27).

**B. What is the intent of this proposal?**

Today's proposal would clarify several provisions in 40 CFR part 241, which provides the standards and procedures for identifying whether NHSM are solid waste when used as fuels or ingredients in combustion units. The part 241 regulations were promulgated on March 21, 2011, in the "Identification of Non-Hazardous Secondary Materials That Are Solid Waste" final rule (the 2011 NHSM final rule)<sup>6</sup>. On the same day, the EPA promulgated final emissions standards for both area and major source boilers and process heaters under section 112 of the CAA and for CISWI under section 129 of the CAA, as well as for new and existing sewage sludge incinerators<sup>7</sup>. These rules are interrelated because facilities that burn solid waste, as that term is defined under section 129(g)(6) of the CAA, are regulated as CISWI units pursuant to section 129 and facilities that do not burn solid

---

<sup>6</sup> 76 FR 15456.

<sup>7</sup> See National Emissions Standards for Area Source Industrial, Commercial, and Institutional Boilers (76 FR 15554), National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (76 FR 15608), Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units (76 FR 15704), and Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Sewage Sludge Incineration Units (76 FR 15372). We also note that on the same day, EPA announced it was initiating a reconsideration process with respect to certain aspects of the CAA section 112 and 129 rules so as to take additional comment and provide opportunity for submission of information relevant to those standards. 76 FR 15266.

waste are regulated as boilers and process heaters, under section 112.

Since promulgation of the 2011 NHSM final rule, the regulated community has raised a number of issues and concerns regarding the part 241 requirements, including the implementation of those requirements. For example, the regulated community raised concerns and questions as to certainty about whether particular materials are solid wastes and how they could demonstrate compliance with the legitimacy criteria—with most focusing on the contaminant legitimacy criterion for NHSM used as fuels (codified in §241.3(d)(1)(iii)). Further, the regulated community asserts that under the current NHSM rule, waste streams that the Agency itself found to be non-waste fuels when combusted may not meet the legitimacy criteria as established (e.g., resinated wood). It was also brought to the Agency's attention that the provision identifying tires recovered from an established tire collection program as a non-waste fuel when combusted is limited to tires "from the point of removal from the vehicle through arrival at the combustion facility." The regulated community asserts that this language precludes burning as a non-waste fuel off-specification tires (including factory scrap tires) that have never been placed on an automobile, even though they are not discarded.

The Agency has re-examined the 2011 NHSM final rule and is proposing amendments and clarifications on certain issues on which we have received new information, as well as specific targeted revisions that are appropriate in order to allow implementation of the rule as the EPA originally intended. The Agency is not reopening the entire rule for reconsideration and will not respond to comments directed toward rule provisions that are not specifically identified in this proposal.

**C. What is the scope of this proposal?**

The regulatory changes being proposed today are summarized below. The intent of this summary is to give a brief overview of the proposed changes. More detailed discussions, including the Agency's rationale for these proposed changes, are discussed in section II.D of today's action. In addition, to aid commenters in their review, the EPA has also included in the docket for today's proposal an informational redline/strikeout version of the proposed revised regulations as compared to the current CFR.

The EPA is soliciting comment only on these targeted changes and is not reopening any other issues in the final NHSM rule. Comments that go beyond the scope of this narrow RCRA rulemaking will not be addressed by the Agency when it finalizes today's proposed rule.

1. Revised Definitions

In today's action, the EPA is proposing to revise certain definitions codified in §241.2. Specifically, the EPA is proposing to revise, for the purposes of clarifying the regulations, the following definitions: (1) "clean cellulosic biomass," (2) "contaminants," and (3) "established tire collection programs."

a. Clean Cellulosic Biomass

The EPA is proposing to revise the definition of "clean cellulosic biomass" to list additional examples of biomass materials that are appropriately included within this definition. The 2011 NHSM final rule defined "clean cellulosic biomass" as meaning "those residuals that are akin to traditional cellulosic biomass, such as forest-derived biomass (e.g., green wood, forest thinnings, clean and unadulterated bark, sawdust, trim, and tree harvesting residuals from logging and sawmill materials), corn stover and other biomass crops used specifically for energy production (e.g., energy cane, other fast growing grasses), bagasse and other crop residues (e.g., peanut shells), wood collected from forest fire clearance activities, trees and clean wood found in disaster debris, clean biomass from land clearing operations, and clean construction and demolition wood. These fuels are not secondary materials or solid wastes unless discarded. Clean biomass is biomass that does not contain contaminants at concentrations not normally



associated with virgin biomass materials" (codified in 40 CFR 241.2).

In today's proposal, the EPA is adding more examples of biomass materials that should be included within this definition. This regulatory revision would not change the Agency's intent under the March 2011 final rule, but would identify additional materials that are "clean cellulosic biomass," and, thus, would be a traditional fuel under these regulations. While the list of clean biomass materials is not exhaustive, it is more comprehensive than the list that appeared in the definition included in the 2011 NHSM final rule.

Thus, the EPA is proposing to revise the definition of "clean cellulosic biomass" as follows: "Clean cellulosic biomass means those residuals that are akin to traditional cellulosic biomass, including, but not limited to: agricultural and forest-derived biomass (e.g., green wood, forest thinnings, clean and unadulterated bark, sawdust, trim, tree harvesting residuals from logging and sawmill materials, hogged fuel, wood pellets, untreated wood pallets); urban wood (e.g., tree trimmings, stumps, and related forest-derived biomass from urban settings); corn stover and other biomass crops used specifically for the production of cellulosic biofuels (e.g., energy cane, other fast growing grasses, byproducts of ethanol natural fermentation processes); bagasse and other crop residues (e.g., peanut

shells, vines, orchard trees, hulls, seeds, spent grains, cotton byproducts, corn and peanut production residues, rice milling and grain elevator operation residues); wood collected from forest fire clearance activities, trees and clean wood found in disaster debris, clean biomass from land clearing operations, and clean construction and demolition wood. These fuels are not secondary materials or solid wastes unless discarded. Clean biomass is biomass that does not contain contaminants at concentrations not normally associated with virgin biomass materials."

In accordance with the above traditional fuels definition, clean construction and demolition wood could be combusted as a traditional fuel if it does not contain contaminants at concentrations not normally associated with virgin wood. However, the final NHSM rule also addressed construction and demolition wood that may contain contaminated material (76 FR 15485). Additionally, construction and demolition wood that has been processed (e.g., sorted) to remove contaminants (such as lead-painted wood, treated wood containing contaminants such as arsenic and chromium, metals and other non-wood materials), and is size-reduced prior to burning likely meets the processing and legitimacy criteria for contaminants, and thus can be combusted as a non-waste fuel. Such construction and demolition wood may contain de minimis amounts of contaminants and other materials

provided it meets the legitimacy criteria for contaminant levels (76 FR 154586).

See section II.D.1 for more information regarding the revised definition of "clean cellulosic biomass."

b. Contaminants

The 2011 NHSM final rule defined "contaminants" as meaning "any constituent in non-hazardous secondary materials that will result in emissions of the air pollutants identified in Clean Air Act section 112(b) or the nine pollutants listed under Clean Air Act section 129(a)(4) when such non-hazardous secondary materials are burned as a fuel or used as an ingredient, including those constituents that could generate products of incomplete combustion" (codified in 40 CFR 241.2).

The EPA is proposing to revise the definition of "contaminants" to clarify what will be considered contaminants for the purposes of the legitimacy criteria. Specifically, several pollutants listed in CAA sections 112(b) and 129(a)(4) form during combustion, so elemental precursors to those pollutants that are found in the NHSM prior to combustion are being added to the revised contaminant definition in place of the pollutants themselves. In addition, those pollutants from CAA section 112(b) and 129(a)(4) lists that we do not expect to find in any NHSM are also specifically excluded from the definition of contaminants (see discussion in section II.D.1.b).

We do not expect this change to affect any of the decisions previously made on whether NHSMs are solid wastes when burned as fuels.

We are also proposing to revise this definition to clarify that, for the purpose of meeting the contaminant legitimacy criterion, contaminant levels found in the NHSM prior to being fed into combustion units, should be evaluated rather than emissions from those units. Specifically, there appears to be confusion within the regulated community that in determining whether or not a NHSM meets the "contaminant legitimacy criterion," emissions from the combustion unit are to be considered in making such an evaluation. Both in today's proposal and in the 2011 NHSM final rule preamble and regulatory text, it was clear that the NHSM itself was to be evaluated and not the emissions from the combustion unit. This approach is more appropriate, since the question is whether or not a NHSM is being burned for discard, and elevated contaminant levels in the NHSM could be indicative of burning for discard. Thus, the EPA is clearing up any inadvertent ambiguity in the regulation itself. The rationale for this approach can be found in the rulemaking record for the final rule.<sup>8</sup> EPA is not proposing any revisions to that approach, but is simply clarifying the regulatory text to better reflect the Agency's intention.

---

<sup>8</sup> For example, see 76 FR 15524-5.

Thus, the Agency is proposing to revise the definition of "contaminants" as follows: "Contaminants means all pollutants listed in Clean Air Act sections 112(b) and 129(a)(4), with modifications outlined in this definition to reflect constituents found in non-hazardous secondary materials prior to combustion. The definition includes the following elemental contaminants that commonly form Clean Air Act section 112(b) and 129(a)(4) pollutants: antimony, arsenic, beryllium, cadmium, chlorine, chromium, cobalt, fluorine, lead, manganese, mercury, nickel, nitrogen, selenium, and sulfur. The definition does not include the following Clean Air Act section 112(b) and 129(a)(4) pollutants that are either unlikely to be found in non-hazardous secondary materials prior to combustion or are adequately measured by other parts of this definition: hydrogen chloride (HCl), chlorine gas (Cl<sub>2</sub>), hydrogen fluoride (HF), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), fine mineral fibers, particulate matter, coke oven emissions, diazomethane, white phosphorus, titanium tetrachloride, m-cresol, o-cresol, p-cresol, m-xylene, o-xylene, and p-xylene." For more information and the rationale regarding the proposed revision to the definition of "contaminants," see section II.D.1 of today's proposed rule.

c. Established Tire Collection Programs

The EPA is proposing to revise the definition of "established tire collection programs" to clarify that off-specification tires (including factory scrap tires) are not discarded when combusted, in the same way as tires that are removed from vehicles.

The 2011 NHSM final rule defined "established tire collection program" as meaning "a comprehensive collection system that ensures scrap tires are not discarded and are handled as valuable commodities in accordance with section 241.3(b)(2)(i) from the point of removal from the vehicle through arrival at the combustion facility" (codified in 40 CFR 241.2). However, that definition did not account for "factory scrap" or "off-specification" tires that are contractually arranged to be collected, managed, and transported between a tire manufacturer (including retailers or other parties involved in the distribution and sale of new tires) and a combustor, which is analogous to how scrap tires removed from vehicles are managed.

Thus, the Agency is proposing to revise the definition of "established tire collection program" to mean "a comprehensive collection system or contractual arrangement that ensures scrap tires are not discarded and are handled as valuable commodities through arrival at the combustion facility." For more information regarding the proposed revision to the definition of

"established tire collection program," see section II.D.1 of today's proposed rule.

## 2. Contaminant Legitimacy Criterion for NHSM Used as Fuels

The 2011 NHSM final rule codified three self-implementing legitimacy criteria that NHSM must meet in order to be considered a non-waste fuel when burned in a combustion unit (40 CFR 241.3(d)(1)(i)-(iii)). One of these criteria focused on comparing levels of contaminants contained in the NHSM to levels of those constituents found in traditional fuels. Specifically, the contaminant legitimacy criterion for fuels was finalized as follows: "The non-hazardous secondary material must contain contaminants at levels comparable in concentration to or lower than those in traditional fuels which the combustion unit is designed to burn. Such comparison is to be based on a direct comparison of the contaminant levels in the non-hazardous secondary material to the traditional fuel itself." 40 CFR 241.3(d)(1)(iii). The existing language provides flexibility for persons to make comparisons on a contaminant-by-contaminant basis or on a group of contaminants-by-group of contaminants basis in determining what constituents to compare. The phrase "traditional fuels which the combustion unit is designed to burn" also provides the flexibility to choose among multiple fuel options.

Industry groups have expressed concern that the regulatory language does not clearly reflect the EPA's intent<sup>9</sup>. The EPA agrees that the regulatory language can be revised to better reflect the EPA's intent in implementing the contaminant legitimacy criterion. Therefore, the Agency is proposing to revise this criterion to read, "The non-hazardous secondary material must contain contaminants or groups of contaminants at levels comparable in concentration to or lower than those in traditional fuel(s) which the combustion unit is designed to burn. In determining which traditional fuel(s) a unit is designed to burn, persons can choose a traditional fuel that can be or is burned in the particular type of boiler, whether or not the combustion unit is permitted to burn that traditional fuel. In comparing contaminants between traditional fuel(s) and a non-hazardous secondary material, persons can use ranges of traditional fuel contaminant levels compiled from national surveys, as well as contaminant level data from the specific traditional fuel being replaced. Such comparisons are to be based on a direct comparison of the contaminant levels in both the non-hazardous secondary material and traditional fuel(s) prior to combustion." We are taking comment on how this revised contaminant legitimacy criterion would apply to specific fuels.

---

<sup>9</sup> See, for example, June 24, 2011 letter from Tracey Norberg of the Rubber Manufacturers Association and Paul Noe of the American Forest & Paper Association to OSWER Assistant Administrator Mathy Stanislaus. A copy of this letter can be found in the docket for today's rule.



For more information regarding the proposed revisions to the contaminant legitimacy criterion for NHSM used as fuels, see section II.D.2 of today's proposed rule.

1. Categorical Non-Waste Determinations for Specific NHSM Used as Fuels

The EPA is proposing to identify several NHSMs as not being solid waste when burned as a fuel in a combustion unit where the Agency has sufficient information to determine that discard is not occurring when these materials are being used as fuels. Specifically, the Agency recognizes that certain NHSMs may not meet the legitimacy criteria, especially the "contaminant legitimacy criterion," in all instances, but the material would still generally be considered a non-waste fuel. While we do not agree it is appropriate for the regulated community to make these judgments as part of the self-implementing aspects of the NHSM final rule, it is appropriate that the Agency do so, by balancing the legitimacy criteria and such other relevant factors that the Administrator may identify, in determining that a NHSM is not a solid waste when used as a fuel in a combustion unit. Thus, in today's proposed rule, we are identifying the following specific materials as non-waste fuels: (1) scrap tires that have not been discarded and are managed under the oversight of established tire collection programs, including tires removed from vehicles and off-specification tires, and (2) resinated

wood. Thus, persons who burn these NHSMs as a fuel would not need to evaluate them using the self-implementing legitimacy criteria when burned.

In addition, the Agency recognizes that there may be other NHSMs that should also be considered non-waste fuels, based on a balancing of the legitimacy criteria with other relevant factors. Therefore, we are proposing to create a petition process that would provide the regulated community an opportunity to submit a rulemaking petition to the EPA for a determination that a particular NHSM that should not be considered solid waste when burned as a fuel in a combustion unit. This process could be used when a facility does not believe that the self-implementing legitimacy criteria yields a clear result or does not accurately reflect whether the material is being discarded. A brief discussion of the specific NHSMs being proposed to be listed as not solid waste is provided below, as well as an overview of the petition process for identifying additional NHSMs as not being solid wastes when burned as a fuel in a combustion unit for energy recovery. See section II.D.3 and 4 of today's proposed rule for a detailed discussion of these topics.

a. Scrap tires

In the 2011 NHSM final rule, the EPA determined that scrap tires removed from vehicles and managed pursuant to established

tire collection programs would not be considered a solid waste. This determination was codified in §241.3(b)(2)(i). This determination was made after the EPA analyzed scrap tires removed from vehicles and managed pursuant to established tire collection programs and concluded that (1) these materials would meet the legitimacy criteria for fuels, and (2) these materials were not discarded when transferred off-site from the generating facility<sup>10</sup>.

Since promulgation of the 2011 NHSM final rule, the EPA has received information that tire manufacturers, including downstream distribution channels, may produce tires that are not suitable for use on vehicles, but like the tires removed from vehicles, are usable as legitimate fuels. They are, for all intents and purposes, the same as the vehicle tires managed under the oversight of established tire collection programs. As a result, the revised definition of "established tire collection program," would encompass off-specification tires (including factory scrap tires) that are contractually arranged to be collected, managed, and transported between a tire manufacturer, which would include retailers and other parties involved in the distribution and sale of new tires and a combustor. We note that tires coming from vehicles that are part of an established tire collection program would be a non-waste fuel under the 2011 NHSM

---

<sup>10</sup> See 76 FR 15490-15499.

final rule. The EPA is not reopening this determination in today's proposed rule.

For clarity, the Agency is proposing to add scrap tires that are not discarded and are managed under the oversight of established tire collection programs, including tires removed from vehicles and off-specification tires, to the categorical list of non-waste fuels (see 40 CFR 241.4(a)). For more on this determination and the off-specification tires from tire manufacturers or downstream distribution channels, see section II.D.3 of today's proposed rule.

b. Resinated Wood

The 2011 NHSM final rule determined that resinated wood is not a solid waste when used as a fuel regardless of whether it remained within the control of the generator (see 40 CFR 241.3(b)(2)(ii)). This determination was made after the EPA analyzed resinated wood and concluded that (1) resinated wood generally would meet the legitimacy criteria for fuels, and (2) resinated wood was not discarded when transferred off-site from the generating facility<sup>11</sup>. Today's action proposes to revise part 241 to state affirmatively that resinated wood, when used as a fuel, is not being burned for discard and is not a solid waste. We are proposing to codify this determination based on our

---

<sup>11</sup> For a full discussion and rationale for why EPA reached this conclusion, see 76 FR 15499-15502.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

belief that the use of resinated wood as fuel represents an integral component to the wood manufacturing process and, as such, resinated wood is not being discarded, and therefore not solid waste, when burned as fuel. For more on this proposed revision, see section II.D.3 of today's proposed rule.

#### c. Rulemaking Petition Process for Other Non-Waste Determinations

Under today's rule, the Agency is proposing to create a rulemaking petition process that would provide persons an opportunity to submit a rulemaking petition to the Administrator, seeking a categorical determination for additional NHSMs to be listed in section 241.4(a) as non-waste fuels. The process for submitting a rulemaking petition to the Agency, as well as the factors a successful application must include, is proposed in 241.4(b). For more information regarding the rulemaking petition process, see section II.D.4 of today's proposal. Parties have identified the potential of manure not being solid waste. Parties can present information including data demonstrating that manure is not discarded either through the existing non-waste petition process or the proposed categorical determination process.

#### 4. Additional Request for Comment

As discussed elsewhere in this preamble, the Agency requests additional information regarding pulp and paper sludge

in order for the Agency to determine whether a categorical determination that pulp and paper sludge is a non-waste, when used as fuel, is appropriate. Information that would be particularly helpful includes: (1) documentation of how the use of pulp and paper sludges that are used as a fuel are integrated into the industrial production process and the steps taken industry-wide to ensure that this NHSM is consistently used as a legitimate fuel and is not discarded, including when transferred to a different person for use as a fuel; (2) documentation on the amount of pulp and paper sludges burned as a fuel (whether within the control of the generator or outside the control of the generator), and what determines which pulp and paper sludges are burned as a fuel, as opposed to being land applied or disposed; (3) additional data regarding the contaminant levels of the various HAP, such as chlorine and metals, and what steps the industry has taken to ensure the quality of these sludges when used as a fuel are consistent with that of fuel product; (4) information on standard practices used to ensure that these sludges have a meaningful heating value, including the types of dewatering and other processing steps that these sludges are subject to, as well as information on whether any pulp and paper sludges that are burned as a fuel are done so without any processing, including dewatering; and (5) when shipped to a different person for use as a fuel, how these sludges are

managed, including how they are shipped, any processing that may occur, and how long these sludges are typically stored prior to being burned as a fuel.

#### 5. Clarification Letters Issued After Promulgation of the NHSM Final Rule

After promulgation of the 2011 NHSM final rule, a number of questions were raised regarding certain issues, including whether the EPA was changing its position regarding "contained gaseous materials" and whether they are solid wastes when burned in combustion units. While there was no regulatory text or discussion in the preamble to the final NHSM rule, the Agency did respond to several comments that were submitted to the EPA during the comment period. Specifically, its response to the fourth comment in part 3b.I3 of the document entitled, "Responses to Comments Document for the Identification of Non-Hazardous Secondary Materials that are Solid Waste (February 2011),"<sup>12</sup> created concerns among the regulated community that the Agency had changed a long-standing interpretation of what constitutes a "contained gaseous material" for purposes of defining the term solid waste under RCRA.

In a letter sent to the American Forest and Paper Association, the EPA clarified that it was not changing its

---

<sup>12</sup> See "Responses to Comments Document for the Identification of Non-Hazardous Secondary Materials that are Solid Waste (February 2011). A copy of this document can be found at [www.epa.gov/epawaste/nonhaz/define/index.htm](http://www.epa.gov/epawaste/nonhaz/define/index.htm).

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

previous interpretations and that such interpretations still were the Agency's position.<sup>13</sup> Specifically, as we state in the letter, "EPA was responding to a comment requesting that we include in the NHSM final rule a definition of 'contained gaseous material.' The Agency does not believe that including such a definition in the rule is necessary. However, our response seems to have caused confusion about whether the Agency was changing its prior interpretations regarding the burning of gaseous materials, for example in fume incinerators, and whether or not such burning is considered to be treatment of a solid waste by burning. The response does not change any previous EPA positions. We clarify here that the Agency's previous statements and interpretations remain effective. Thus, burning of gaseous material, such as in fume incinerators (as well as other combustion units, including air pollution control devices that may combust gaseous material) does not involve treatment or other management of a solid waste (as defined in RCRA section 1004(27))." Thus, we are stating again in the preamble to today's proposed rule that we are not changing any of our previous interpretations as it relates to whether "contained gaseous material" is a solid waste.

---

<sup>13</sup> May 13, 2011 Letter to Tim Hunt, American Forest and Paper Association. A copy of this letter has been placed in the docket for today's proposed rule. This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.



In addition to this letter, the Agency has also issued a number of other letters in which we clarify how the 2011 NHSM final rule addresses certain materials or activities. For example, the EPA has issued clarification letters covering the following materials and issues: (1) July 21, 2011, letter to Pamela F. Faggert, Dominion Resources Services, regarding materials that are used in recirculation/reinjection processes and CBO units; (2) August 5, 2011, letter to Sue Briggum, Waste Management, regarding landfill gas; (3) August 5, 2011, letter to Tracey Norberg, Rubber Manufacturers Association, regarding off-specification tires (including factory scrap tires); and (4) August 15, 2011, letter to Jeff A. McNelly, ARIPPA, regarding coal refuse in legacy piles. We are not taking comment on these letters, since they reflect the Agency's interpretation of its existing March 21, 2011, NHSM rule.

#### 6. Clarification of the Process for Submittal of Non-Waste Petitions

The 2011 NHSM final rule established a non-waste determination process that provides persons with an administrative petition process for receiving a formal determination from the EPA Regional Administrator that a NHSM that is used as a fuel, and which is not managed within the control of the generator, can be considered a non-waste fuel provided they are able to demonstrate that such material has not

been discarded and is indistinguishable in all relevant aspects from a fuel product. (40 CFR 241.3(c)).

As discussed in the March 21, 2011 final rule (76 FR 15471), EPA has not arbitrarily determined that secondary materials transferred between companies are wastes. Instead, EPA examined a number of specific recycled materials, both within the control of the generator and transferred to a third party for recycling and decided that materials are to be considered solid wastes except in certain instances described in 40 CFR 241.3(b). These determinations were based on the record available to EPA. In order to better reflect the evidentiary record, EPA is proposing to amend the language of 40 CFR 241.3(a) to state that except for materials described in 241.3(b), and newly proposed section 241.4, combusted non-hazardous secondary materials are "presumed" to be solid wastes.

This petition process provides an opportunity under 40 CFR 241.3(c) for companies to show that their materials are not wastes. The petition process is essential because NHSMs are recycled and managed in many different ways and the Agency may lack the specific details in certain cases to know whether or not such NHSMs are or are not waste (76 FR 15472). We believe that the petition process provides an important assurance to the community on waste status and relevant standards and also provides an opportunity to demonstrate that the particular NHSM

was not discarded. The Agency solicits comment on the petition process as it relates this approach, and on whether or not the regulatory text should also be changed to address this situation as it relates to the petition process where such NHSM has not in fact been discarded.

In evaluating whether to grant or deny the petition, the ultimate question that EPA will need to answer is whether or not the NHSM has been discarded. If the applicant is able to demonstrate that such NHSM has not been discarded, including meeting the legitimacy criteria, it is likely that the Agency will grant the petition. Under the existing regulations, until EPA acts on such petition, the NHSM is considered to be a solid waste. However, we would note that if the NHSM has not been discarded, EPA's grant of the petition would apply as of the date that the petition was submitted to the Agency. The Agency solicits comment on whether or not the regulatory text should also be changed to address this situation where such NHSM has not in fact been discarded.

Since promulgation of the 2011 NHSM final rule, concerns have been raised that the information required for a non-waste determination petition would be extensive and the timeframe for issuance of the decision lengthy. The Agency wishes to clarify that we do not intend that the application required or the

petition process itself to be burdensome or time and resource intensive for the applicant.

As noted in the March 2011 final rule, the applicant must demonstrate that the NHSM that is to be burned as a fuel has not been discarded, is a legitimate product fuel (per §241.3(d)(1)), considering the five criteria identified in §241.3(c)(1)(i)-(v):

- (1) Whether market participants treat the non-hazardous secondary material as a product rather than as a solid waste;
- (2) Whether the chemical and physical identity of the non-hazardous secondary material is comparable to commercial fuels;<sup>14</sup>
- (3) Whether the non-hazardous secondary material will be used in a reasonable time frame given the state of the market;
- (4) Whether the constituents in the non-hazardous secondary material are released to the air, water or land from the point of generation to the point just prior to combustion of the secondary material at levels comparable to what would otherwise be released from traditional fuels; and
- (5) Other relevant factors.<sup>15</sup>

---

<sup>14</sup> As discussed elsewhere in today's proposal, EPA is clarifying that in making comparisons between the NHSM and the traditional fuel, the owner or operator can consider individual constituents or grouping of constituents. See section II.D.2 of this preamble for further discussion.

<sup>15</sup> The Agency included this criterion to allow the applicant to make additional arguments that such NHSMs are a non-waste fuel. For example, if there is a contractual or other written agreement between the generator of

Overall, applicants, in many cases can utilize existing information already in hand (e.g., laboratory analysis data or process knowledge) rather than develop additional information specifically for the non-waste determination petition. In addition, as noted in the previous footnote, there may already be a contractual or other written agreement between the generator of the NHSM and the combustion facility that burns such NHSM that lays out how this material is to be handled or used as a fuel that may indicate how the material would meet the legitimacy criteria that would be a relevant factor that EPA would consider in determining whether such NHSM is a non-waste fuel. As noted elsewhere in this preamble, EPA has collected contaminant data for various traditional fuels, which are available for use in meeting the contaminant legitimacy criterion as needed, to the extent that the applicant wants to utilize these data.<sup>16</sup> Potential applicants can include the generator of the NHSM, the facility that combusts the NHSM, an interested third party or a state agency (see FR 15530). Applications can also be submitted for a single combustor or a

---

the NHSM and the facility that combusts the NHSM that lays out how this material is to be handled or used as a fuel that may indicate how the material would meet the legitimacy criteria, this would be a relevant factor that EPA would consider in determining whether such NHSM is a non-waste fuel.

<sup>16</sup> EPA's contaminant data are provided at the website for the NHSM rule at [www.epa.gov/epawaste/nonhaz/define/index.htm](http://www.epa.gov/epawaste/nonhaz/define/index.htm) However, as we have noted elsewhere, the applicant can rely on other data that they may have or become aware of.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.  
We have taken steps to ensure the accuracy of this version, but it is not the official version.

class of combustors, provided such combustion units are within the jurisdiction of the Regional Administrator. Useful information could also include a description of the nature of the relationship between the generator and the combustor, as well as a description of how the NHSM will be managed as it is transported off-site and after it arrives at the combustor. We believe this type of information should be readily available to potential applicants.

In addition, the EPA does not intend that the application review process itself be either time consuming or extensive. Rather, the Regional Administrator will evaluate the petition and issue a draft notice tentatively granting or denying the petition. Notification of the decision will be provided by local newspaper or radio. Public comment will be accepted for thirty days and a public hearing held upon request. A final decision will be issued after consideration of the comments as expeditiously as possible.

In summary, we do not envision that the information submitted in a petition for a non-waste determination would be more than is required for making a self-determination that a NHSM is a non-waste when burned within the control of the generator. However, because there are nearly 200,000 boilers and incinerators that can be used to burn such NHSMs, the EPA believes it is important that the Agency have the information

necessary to ensure that the legitimacy criteria are met and that materials are not being discarded. The Agency requests comment on whether any other changes could be made to the non-waste determination petition process to streamline the process, while at the same time provide EPA with the opportunity to ensure that such NHSMs are not being discarded. For example, because the public has had the opportunity to comment on the basic criteria in determining whether the NHSM should be considered a non-waste fuel, we are seeking comment on whether the Agency should further streamline the process by not seeking public comment on each individual petition.

#### **D. Rationale for the Proposed Revisions to the Part 241**

##### **Requirements**

As noted above, the intent of this proposal is to identify certain specific aspects of the rule which EPA is reconsidering and on which it is soliciting public comment. The Agency is not reopening the entire rule for reconsideration and will not respond to comments directed toward rule provisions that are not specifically identified in this proposal. Thus, the Agency is not providing additional discussion of the background or rationale for the NHSM rule in general. For a detailed discussion of the NHSM final rule, see 76 FR 15532-15545. The EPA is proposing the revisions and clarifications discussed below.

## 1. Revised Definitions

In today's action, the EPA is proposing to revise several definitions codified in §241.2, including the definitions of "clean cellulosic biomass," "contaminants," and "established tire collection programs."

### *a. Clean Cellulosic Biomass*

In today's action, we are proposing to revise the definition of "clean cellulosic biomass." In particular, following promulgation of the 2011 NHSM final rule, the Agency received additional information regarding other types of biomass not explicitly listed in the definition of clean cellulosic biomass codified in §241.2, which persons believe also are clean cellulosic biomass. However, there was some confusion as to whether the definition included these materials. For example, questions arose whether the EPA would consider orchard trees, vines and hulls, to be within the definition of clean cellulosic biomass (and, therefore, a traditional fuel) if the biomass material was not specifically listed within the regulatory definition. Consequently, we are proposing to revise the definition of "clean cellulosic biomass" in two ways: (1) to clarify that the list of biomass materials are examples within the definition and is not intended to be an exhaustive list, and (2) to provide a more comprehensive list of clean cellulosic biomass to guide the regulated community.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.



Specifically, we are proposing to make the following revisions and additions to the definition: (1) explicitly acknowledge that the list of biomass materials is not exclusive by adding the phrase, "including, but not limited to"; (2) revise the category "forest-derived biomass" to include "agricultural biomass"; (3) add hogged fuel, wood pellets, and untreated wood pallets as examples of forest-derived biomass; (4) add the category of "urban wood" and provide examples, including tree trimmings, stumps, and related forest-derived biomass from urban settings (note that "urban wood" is limited to forest-derived biomass from urban settings and does not include construction and demolition materials. Certain construction and demolition materials are included as a separate type of biomass within the definition of "clean cellulosic biomass"); (5) add more examples of types of crop residues (vines, orchard trees, hulls, seeds spent grains, cotton byproducts, corn and peanut production residues, rice milling and grain elevator operation residues); and (6) revise the category of "other biomass crops used specifically for energy production" to read as "other biomass crops used specifically for the production of cellulosic biofuels" and include "byproducts of ethanol natural fermentation processes" as an example of this type of biomass.

These proposed revisions and additional examples more clearly recognize and describe the various categories of biomass materials that we consider to be within the definition of "clean cellulosic biomass" and, therefore, within the definition of traditional fuels. We believe that these additional examples clearly meet the definition of clean cellulosic biomass, in that they will not contain contaminants at concentrations not normally associated with virgin biomass materials. In fact, many of the examples being added in today's proposal are themselves virgin materials (e.g., tree trimmings, stumps, orchard trees, etc.). We believe that providing these additional examples within the definition of clean cellulosic biomass is consistent with the intent of the 2011 NHSM final rule. Further, we believe that such revisions make it more clear that the types of biomass materials the Agency would consider to be within the definition of clean cellulosic biomass (and a traditional fuel) are not limited to those explicitly listed in the definition, as we believe that it would be impractical if not impossible to capture all types of biomass materials that can be used as fuels within this single definition.

Thus, in today's proposed rule, the EPA is proposing to revise the definition of "clean cellulosic biomass" as follows: "*Clean cellulosic biomass* means those residuals that are akin to traditional cellulosic biomass, including, but not limited to:

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.  
We have taken steps to ensure the accuracy of this version, but it is not the official version.

agricultural and forest-derived biomass (e.g., green wood, forest thinnings, clean and unadulterated bark, sawdust, trim, tree harvesting residuals from logging and sawmill materials, hogged fuel, wood pellets, untreated wood pallets); urban wood (e.g., tree trimmings, stumps, and related forest-derived biomass from urban settings); corn stover and other biomass crops used specifically for the production of cellulosic biofuels (e.g., energy cane, other fast growing grasses, byproducts of ethanol natural fermentation processes); bagasse and other crop residues (e.g., peanut shells, vines, orchard trees, hulls, seeds, spent grains, cotton byproducts, corn and peanut production residues, rice milling and grain elevator operation residues); wood collected from forest fire clearance activities, trees and clean wood found in disaster debris, clean biomass from land clearing operations, and clean construction and demolition wood. These fuels are not secondary materials or solid wastes unless discarded. Clean biomass is biomass that does not contain contaminants at concentrations not normally associated with virgin biomass materials."

b. Contaminants

In today's action, we are proposing a number of changes to the definition of "contaminants" in an effort to clarify what constituents are subject to the contaminant legitimacy criterion. The proposed definition is as follows: "*Contaminants*

means all pollutants listed in Clean Air Act sections 112(b) and 129(a)(4), with modifications outlined in this definition to reflect constituents found in non-hazardous secondary materials prior to combustion. The definition includes the following elemental contaminants that commonly form Clean Air Act section 112(b) and 129(a)(4) pollutants: antimony, arsenic, beryllium, cadmium, chlorine, chromium, cobalt, fluorine, lead, manganese, mercury, nickel, nitrogen, selenium, and sulfur. The definition does not include the following Clean Air Act section 112(b) and 129(a)(4) pollutants that are either unlikely to be found in non-hazardous secondary materials prior to combustion or are adequately measured by other parts of this definition: hydrogen chloride (HCl), chlorine gas (Cl<sub>2</sub>), hydrogen fluoride (HF), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), fine mineral fibers, particulate matter, coke oven emissions, diazomethane, white phosphorus, titanium tetrachloride, m-cresol, o-cresol, p-cresol, m-xylene, o-xylene, and p-xylene."

Before discussing these changes, we first want to note that the 2011 NHSM final rule and today's proposed rule identify the same three ways a chemical can be labeled a contaminant. First, it may be one of the 187 HAP currently listed in CAA section 112(b); second, it may be one of the nine pollutants listed under CAA section 129(a)(4); and third, it may be one of a handful of chemicals whose combustion will result in the

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.  
We have taken steps to ensure the accuracy of this version, but it is not the official version.

formation of listed CAA section 112(b) and section 129(a) (4) pollutants (e.g., sulfur that will result in SO<sub>2</sub>). Today's proposed definition provides clarification by listing the constituents that belong to the third group.<sup>17</sup> Specifically, several pollutants listed in CAA section 112(b) and section 129(a) (4) form during combustion, so elemental precursors to those pollutants that are found in the NHSM prior to combustion are being added to the contaminant definition in place of the pollutants themselves. For example, when present in a NHSM undergoing combustion, chlorine readily forms HCl, fluorine readily forms HF, nitrogen readily forms NO<sub>x</sub>, and sulfur readily forms SO<sub>2</sub>. Because forms of these four elements found in materials prior to combustion are not directly identified as CAA air pollutants, yet the forms they take due to combustion are directly identified as CAA air pollutants, we believe it would be less confusing to include these elements in the "contaminants" definition.

Also, we are proposing to exclude from the definition of contaminants those pollutants in the CAA sections 112(b) and 129(a) (4) lists that we do not expect to find in any NHSM. Specifically:

---

<sup>17</sup> Eleven metal elements directly identified in CAA section 112(b) are listed in the definition to provide the regulated community with a complete list of elements that are considered "contaminants" under the rule.

- Hydrogen chloride, Cl<sub>2</sub>, HF, NO<sub>x</sub>, and SO<sub>2</sub> are identified as CAA list pollutants that are excluded from the definition since they are unlikely to be found in NHSM prior to combustion and have been replaced by the elements chlorine, fluorine, nitrogen and sulfur as discussed above;<sup>18</sup>
- Fine mineral fibers are excluded because they are releases from the manufacturing and processing (not combustion) of non-combustible rock, glass, or slag into mineral fibers;
- Particulate matter and coke oven emissions are excluded because they are products of combustion unlikely to exist in NHSM prior to combustion;
- Cresol isomers m-cresol, o-cresol and p-cresol are excluded because the listed pollutant cresols/cresylic acid includes these three isomers;
- Xylene isomers m-xylene, o-xylene and p-xylene are excluded because the listed pollutant xylenes includes these three isomers; and
- Diazomethane, white phosphorus and titanium tetrachloride are excluded because their high reactivity makes their presence in NHSMs very unlikely.

---

<sup>18</sup> Carbon monoxide (CO) is unlikely to be found in solid or liquid NHSMs, and EPA expects that combustors can use process knowledge to justify not testing for CO in these cases. CO remains in the contaminants definition, however, because no clear surrogate exists to replace it—neither the 2011 NHSM final rule nor today's proposed rule considers the elements carbon and oxygen to be contaminants.

In addition, two phrases present in the 2011 NHSM final rule "contaminants" definition are not present in today's proposed definition. First, the phrase concerning constituents "that will result in emissions of air pollutants" has been removed since the regulated community appears to be confused that in determining whether or not a NHSM meets the "contaminant legitimacy criterion," emissions from the combustion unit were to be considered in making the evaluation. The EPA disagrees and directs readers to the language in sections 241.3(d)(1)(iii) and 241.3(d)(2)(iv), which clearly states that the contaminant comparisons are based on the presence of contaminants in the NHSM that enters the combustion unit.

Second, the phrase "including those constituents that could generate products of incomplete combustion," also referred to as PICs, has been removed because it is duplicative and potentially misleading. Specifically, this phrase has been removed because all PICs that the Agency considers air pollutants—including dioxins, dibenzofurans, PCBs, and PAHs—are already listed in CAA sections 112(b) or 129(a)(4) and are thus included in the "contaminants" definition. More importantly, it is potentially misleading because PIC formation depends heavily on combustion conditions, such as air/fuel ratio and mixing. These conditions are controlled to limit emissions, and neither these conditions nor emissions are the subject of this rule. The NHSM itself, and

what it contains prior to combustion, is the subject of this rule. Thus, both changes clarify—but do not alter—the constituents subject to the contaminant legitimacy criterion.

c. Established Tire Collection Programs

Under the 2011 NHSM final rule, whole scrap tires (that are removed from vehicles) had to be managed under an “established tire collection program” in addition to meeting other criteria in order to be considered a non-waste fuel. The 2011 NHSM final rule defined “established tire collection program” as meaning “a comprehensive collection system that ensures scrap tires are not discarded and are handled as valuable commodities in accordance with section 241.3(b)(2)(i) from the point of removal from the vehicle through arrival at the combustion facility” (codified in 40 CFR 241.2).

However, this definition does not directly account for “factory scrap” tires or “off-specification” tires that are contractually arranged to be collected, managed and transported between a tire manufacturer (including retailers and other parties involved in the distribution and sale of new tires) and a combustor—a fact pattern the Agency views as being within the intent of the regulatory definition of “established tire collection program” because the tires are not discarded. Thus, the Agency is proposing to define “established tire collection program” to mean “a comprehensive collection system or



contractual arrangement that ensures scrap tires are not discarded and are handled as valuable commodities from the point of removal from the vehicle or the point at which they are generated at a tire manufacturer (including retailers or other parties involved in the distribution and sale of new tires) through arrival at the combustion facility." The Agency did not include the provisions for the "factory scrap" or "off-specification" tires in the 2011 NHSM final rule since information or comments were not provided to the EPA during the rulemaking process and thus, the Agency was not aware of the issue. The Agency did not receive comments about factory scrap or off-specification tires on the ANPRM or the proposed rule. Following promulgation of the 2011 NHSM final rule, the EPA learned that off-specification tires (including factory scrap tires), which include whole tires and tire components that do not meet manufacturer specifications, are collected at tire manufacturing facilities or manufacturer's downstream distribution channels—retailers and other parties involved in the distribution and sale of new tires. As noted in the revised definition, we interpret the term "tire manufacturers" broadly to include retailers and other parties that are involved in the distribution and sale of new tires, as we believe that these parties also manage tires as valuable commodities, such that

discard is not occurring when these tires are transferred to a combustor.

If at any point in the process, a tire component or whole tire is not suitable for use as a vehicle tire, it is separated from the other tire components (or whole tires) and is stored in a protected environment in order to accumulate a sufficient quantity for shipment. The management of these tires is tightly controlled. Proprietary information could be collected by competitors by analyzing the factory scrap tire components, particularly from the uncured components (not yet vulcanized through heat and pressure), so the tires are stored in a safe manner, in part, to prevent theft.<sup>19</sup> Thus, we believe that factory scrap and off-specification tires are handled in the same protective manner as those that qualified to be managed under the oversight of established tire collection programs as described in the 2011 NHSM final rule.

The tire manufacturers, as well as the manufacturers' downstream distribution channels, that are included in the definition of "established tire collection programs" (1) have contractual arrangements with combustors, typically cement kilns (due to the high heating value and beneficial contribution to the cement production), to take and use their tires as fuels; or

---

<sup>19</sup> Personal communication from Tracey Norberg to EPA, September 13, 2011. A copy of this communication has been placed in the docket in today's rule.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

(2) are covered under the oversight of other collection programs that qualify under established tire collection programs (i.e., oversight of state tire programs).

As discussed in the 2011 NHSM final rule, the intent of the requirement for "removal from the vehicle" was to distinguish these tires from those that were previously abandoned, and thus discarded. The changes to the definition in this proposed rule align the codified definition of established tire collection programs with the intent of the definition. We also note that we are proposing to delete the reference to section 241.3(b)(2)(i) that was included in the previous definition of established tire collection programs, since the citation is no longer accurate based on other revisions being proposed today (e.g., see the discussion regarding scrap tires managed pursuant to established tire collection programs in section II.D.3). Refer to the 2011 NHSM final rule for more background and information regarding the characterization of "established tire collection programs."<sup>20</sup>

## 2. Revisions to the Contaminant Legitimacy Criterion for NHSM Used as Fuels

Several changes are being proposed in today's rule to the contaminant legitimacy criterion for NHSM used as fuel. These proposed changes to the wording in §241.3(d)(1)(iii) emphasize the flexibility that is already embodied in the 2011 NHSM final

---

<sup>20</sup> See 76 FR 15490-15499 and 15534-15535.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

rule. First, today's proposal replaces "contaminants" with the phrase "contaminants or groups of contaminants" to clarify that the regulatory definition allows groups of contaminants to be evaluated, where appropriate, in determining whether a NHSM meets the contaminant legitimacy criterion. Second, today's proposal codifies language from the preamble of the 2011 NHSM final rule stating that the "designed to burn" concept includes traditional fuels that can be burned or are burned in a particular unit, whether or not the unit is permitted to burn that traditional fuel.

In addition, the proposed regulations include text confirming that contaminant comparisons may use ranges from national surveys of traditional fuel data. Neither the 2011 NHSM final rule nor today's proposed rule requires persons to compare contaminants in their NHSM to contaminants in the specific traditional fuel source they burn (or would otherwise burn). As an example, persons who would otherwise burn coal may use any as-burned coal available in coal markets in making a comparison between the contaminants in their NHSM and the contaminants in coal—they are not limited to coal from a specific coal supplier they have used in the past or currently use. Regulatory text confirming this flexibility is only included in today's proposed regulations to clarify what is inherent in the 2011 NHSM final rule.

Two other issues have arisen during implementation of the 2011 NHSM final rule that, while not leading to specific regulatory changes in today's proposal, still merit discussion. The first issue is that contaminant legitimacy criterion determinations do not require testing contaminant levels, in either the NHSM or an appropriate traditional fuel. Persons can use expert or process knowledge to justify decisions to rule out certain constituents. The second issue is that persons may use data from a group of similar traditional fuels for contaminant comparisons, provided the unit could burn each traditional fuel. This idea grows from the "designed to burn" concept explained in the 2011 NHSM final rule and codified in today's proposal, as it allows a person with a unit that can or does burn similar traditional fuels (e.g., anthracite, lignite, bituminous, and sub-bituminous coal) to group those traditional fuels when making contaminant comparisons. See section II.D.2.b for more discussion of this rationale.

a. What are the contaminants?

While persons may satisfy the contaminant legitimacy criterion on a contaminant-by-contaminant basis, comparing groups of contaminants in the NHSM to similar groups in traditional fuels could also be appropriate, provided the grouped contaminants share physical and chemical properties that influence behavior in the combustion unit prior to the point

where emissions occur. Volatility, the presence of specific elements, and compound structure are three such properties. One approach to grouping contaminants, as shown in Tables 1 and 2 below, could include TOX, nitrogenated compounds, VOC, SVOC, D/F, PCB, PAH, and radionuclides. Persons may consider other groupings that they can show are technically reasonable.

Grouping of contaminants is a standard practice often employed by the Agency as it develops regulations. In fact, the monitoring standards included in the CAA sections 112 and 129 regulations also utilize the grouping concept and they apply to the same combustion units impacted by the NHSM rule (i.e., industrial, commercial and institutional boilers and process heaters and CISWI units). For example,

- Volatile hydrocarbons and semi-volatile hydrocarbons can both be expected to result from incomplete combustion; therefore, the emission standards promulgated under the CAA regulations are grouped into one category: CO.<sup>21</sup>
- Halogenated organics are expected to contribute to emissions of dioxin and acid gases (HCl and HF); therefore, the emission standards promulgated under the CAA are grouped into two categories: D/F and HCl.<sup>22</sup>

---

<sup>21</sup> Area Source Boilers NESHAP, Major Source Boilers NESHAP, and Commercial and Industrial Solid Waste Incinerators NESHAP.

<sup>22</sup> Major Source Boilers NESHAP and Commercial and Industrial Solid Waste Incinerators NESHAP.

- Nitrogenated compounds are expected to contribute to emissions of NO<sub>x</sub>; therefore, the emission standards promulgated under the CAA are grouped into one category: NO<sub>x</sub>.<sup>23</sup>

A look at Tables 7 and 8 below also reveals that a number of the seemingly "individual" pollutants listed in sections 112 and 129 of the CAA are actually classes of structurally-related compounds (e.g., PCBs, POM, D/F, cyanide compounds, cresols, glycol ethers, radionuclides, xylenes, antimony compounds, arsenic compounds, beryllium compounds, Cd compounds, etc.).

If persons choose to group contaminants, analytical methods for the NHSM and traditional fuel should account for the same list of compounds to the extent possible. Persons may be able to exclude some members of a particular contaminant group from testing based on process knowledge, but methods for testing the group as a whole should generally account for all other members of the contaminant group.

Some data sources may define contaminant groups more broadly than this rule, thus resulting in a definition for a particular group that includes compounds not considered contaminants under the rule. Such data sources may be all that is available in the literature in some cases, but they may still be appropriate. Total VOC and total SVOC analyses offer an

---

<sup>23</sup> Commercial and Industrial Solid Waste Incinerators NESHAP.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

instructive example because, depending on the test used and the material analyzed, such analyses may include concentrations of methane, acetone, or other compounds not considered contaminants under the NHSM final rule. Several solutions exist to make the results meaningful, however. One approach would be to specifically subtract compounds like methane that are not considered contaminants under the rule and are expected to boost a total group count in traditional fuels. Another approach would be to measure each applicable compound individually and add the totals.

The tables presented below would separate the list of potential contaminants into the 15 elements listed in today's proposed definition of "contaminants" and the 163 compounds or groups of compounds inferred from that definition by their inclusion on the CAA sections 112 or 129 lists. The elements listed in Table 7 are considered contaminants because they commonly form air pollutants listed on either the CAA section 112 HAP list, the CAA section 129 list, or both lists. The compounds or groups of compounds listed in Table 8 are considered contaminants because they are directly on either the CAA section 112 HAP list, the CAA section 129 list, or both



lists.<sup>24,25</sup> The Agency wants to make clear that persons can use other approaches that they can show are technically reasonable, whether it is on a contaminant-by-contaminant basis or involves grouping contaminants. The Agency is only offering these tables to provide the regulated community with one reasonable approach for how a grouping of contaminants could be implemented.

**Table 7: Elements Considered Contaminants—With Explanation**

1	Antimony (Sb)	Antimony compounds are a CAA section 112 HAP
2	Arsenic (As)	Arsenic compounds are a CAA section 112 HAP
3	Beryllium (Be)	Beryllium compounds are a CAA section 112 HAP
4	Cadmium (Cd)	Cadmium compounds are a CAA section 112 HAP
5	Chlorine (Cl)	Hydrogen chloride/hydrochloric acid is on the CAA HAP & 129 lists
6	Chromium (Cr)	Chromium compounds are a CAA section 112 HAP
7	Cobalt (Co)	Cobalt compounds are a CAA section 112 HAP
8	Fluorine (F)	Hydrogen fluoride/hydrofluoric acid is a CAA section 112 HAP
9	Lead (Pb)	Lead compounds are a CAA section 112 HAP
10	Manganese (Mn)	Manganese compounds are a CAA section 112 HAP
11	Mercury (Hg)	Mercury compounds are a CAA section 112 HAP
12	Nickel (Ni)	Nickel compounds are a CAA section 112 HAP
13	Nitrogen (N)	Nitrogen oxides (NO <sub>x</sub> ) are a CAA section 129 pollutant
14	Selenium (Se)	Selenium compounds are a CAA section 112 HAP
15	Sulfur (S)	Sulfur dioxide (SO <sub>2</sub> ) is a CAA section 129 pollutant

**Table 8: Compounds Considered Contaminants—With Group Information<sup>26</sup>**

1	Acetaldehyde	VOC <sup>27</sup>			
---	--------------	-------------------	--	--	--

<sup>24</sup> Clean Air Act section 112(b). See [www.epa.gov/ttn/atw/pollutants/atwsmod.html](http://www.epa.gov/ttn/atw/pollutants/atwsmod.html) for modifications to the original list of Hazardous Air Pollutants.

<sup>25</sup> Clean Air Act section 129(a)(4). See [www.epa.gov/ttnatw01/129/sec129.pdf](http://www.epa.gov/ttnatw01/129/sec129.pdf)

<sup>26</sup> Spicer, Chester W. et al., Hazardous Air Pollutant Handbook, Lewis, Boca Raton, FL, 2002, pg 23-53.

<sup>27</sup> Volatile organic compounds (VOC) are identified here as organic compounds with a vapor pressure greater than 0.1 mm Hg at 25°C.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.

We have taken steps to ensure the accuracy of this version, but it is not the official version.

2	Acetamide		SVOC <sup>28</sup>		Nitrogenated
3	Acetonitrile (methyl cyanide)	VOC			Nitrogenated
4	Acetophenone	VOC			
5	2-Acetylaminofluorene				Nitrogenated
6	Acrolein	VOC			
7	Acrylamide	VOC			Nitrogenated
8	Acrylic acid	VOC			
9	Acrylonitrile	VOC			Nitrogenated
10	Allyl chloride	VOC		Org. Halogen <sup>29</sup>	
11	4-Aminobiphenyl		SVOC		Nitrogenated
12	Aniline	VOC			Nitrogenated
13	o-Anisidine		SVOC		Nitrogenated
14	Asbestos				
15	Benzene	VOC			
16	Benzidine		SVOC		Nitrogenated
17	Benzotrichloride		SVOC	Org. Halogen	
18	Benzyl chloride	VOC		Org. Halogen	
19	Biphenyl		SVOC		
20	Bis(2-ethylhexyl)phthalate (DEHP)		SVOC		
21	Bis(chloromethyl) ether	VOC		Org. Halogen	
22	Bromoform	VOC		Org. Halogen	
23	1,3-Butadiene	VOC			
24	Calcium cyanamide				Nitrogenated
25	Captan		SVOC	Org. Halogen	Nitrogenated
26	Carbaryl		SVOC		Nitrogenated
27	Carbon disulfide	VOC			
28	Carbon monoxide				
29	Carbon tetrachloride	VOC		Org. Halogen	
30	Carbonyl sulfide	VOC			
31	Catechol	VOC			
32	Chloramben		SVOC	Org. Halogen	Nitrogenated
33	Chlordane		SVOC	Org. Halogen	
34	Chloroacetic acid	VOC		Org. Halogen	
35	2-Chloroacetophenone		SVOC	Org. Halogen	
36	Chlorobenzene	VOC		Org. Halogen	
37	Chlorobenzilate		SVOC	Org. Halogen	
38	Chloroform	VOC		Org. Halogen	
39	Chloromethyl methyl ether	VOC		Org. Halogen	
40	Chloroprene	VOC		Org. Halogen	
41 *	Cresols/Cresylic acid <sup>30</sup>	VOC			
42	Cumene	VOC			
43 *	Cyanide compounds <sup>31</sup>				Nitrogenated
44	2,4-D, salts and esters		SVOC	Org. Halogen	

<sup>28</sup> Semi-volatile organic compounds (SVOC) are identified here as organic compounds with a vapor pressure between  $10^{-7}$  and 0.1 mm Hg at 25°C.

<sup>29</sup> Organic halogens are identified here as any compound that contains both carbon and a halogen (chlorine, bromine, fluorine, or iodine).

<sup>30</sup> Cresols are a group that includes three compounds.

<sup>31</sup> Cyanide compounds are a group that includes hydrogen cyanide, propionitrile, cyanogens, and a number of possible particle phase compounds.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.

We have taken steps to ensure the accuracy of this version, but it is not the official version.

45	DDE		SVOC	Org. Halogen	
46 *	Dibenzofurans <sup>32</sup>	Consider Dioxins & Furans as a Distinct Group			
47	1,2-Dibromo-3-chloropropane	VOC		Org. Halogen	
48	Dibutylphthalate		SVOC		
49	1,4-Dichlorobenzene (p)	VOC		Org. Halogen	
50	3,3-Dichlorobenzidene		SVOC	Org. Halogen	Nitrogenated
51	Dichloroethyl ether (bis(2-chloroethyl) ether)	VOC		Org. Halogen	
52	1,3-Dichloropropene	VOC		Org. Halogen	
53	Dichlorvos		SVOC	Org. Halogen	
54	Diethanolamine		SVOC		Nitrogenated
55	Diethyl sulfate	VOC			
56	3,3-Dimethoxybenzidine				Nitrogenated
57	Dimethyl aminoazobenzene				Nitrogenated
58	N,N-Dimethylaniline	VOC			Nitrogenated
59	3,3'-Dimethyl benzidine		SVOC		Nitrogenated
60	Dimethyl carbamoyl chloride	VOC		Org. Halogen	Nitrogenated
61	Dimethyl formamide	VOC			Nitrogenated
62	1,1-Dimethyl hydrazine	VOC			Nitrogenated
63	Dimethyl phthalate		SVOC		
64	Dimethyl sulfate	VOC			
65	4,6-Dinitro-o-cresol, and salts		SVOC		Nitrogenated
66	2,4-Dinitrophenol		SVOC		Nitrogenated
67	2,4-Dinitrotoluene		SVOC		Nitrogenated
68	1,4-Dioxane (1,4-diethyleneoxide)	VOC			
69	1,2-Diphenylhydrazine		SVOC		Nitrogenated
70	Epichlorohydrin (1-chloro-2,3-epoxypropane)	VOC		Org. Halogen	
71	1,2-Epoxybutane	VOC			
72	Ethyl acrylate	VOC			
73	Ethyl benzene	VOC			
74	Ethyl carbamate (urethane)	VOC			Nitrogenated
75	Ethyl chloride (chloroethane)	VOC		Org. Halogen	
76	Ethylene dibromide (dibromoethane)	VOC		Org. Halogen	
77	Ethylene dichloride (1,2-Dichloroethane)	VOC		Org. Halogen	
78	Ethylene glycol		SVOC		
79	Ethylene imine (aziridine)	VOC			Nitrogenated
80	Ethylene oxide	VOC			
81	Ethylene thiourea		SVOC		Nitrogenated
82	Ethylidene dichloride (1,1-Dichloroethane)	VOC		Org. Halogen	
83	Formaldehyde	VOC			
84 *	Glycol ethers <sup>33</sup>		SVOC		

<sup>32</sup> Dibenzofurans are a group that includes 135 polychlorinated dibenzofurans (PCDFs).

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.  
We have taken steps to ensure the accuracy of this version, but it is not the official version.

85	Heptachlor		SVOC	Org. Halogen	
86	Hexachlorobenzene		SVOC	Org. Halogen	
87	Hexachlorobutadiene	VOC		Org. Halogen	
88	Hexachlorocyclopentadiene (HCCPD)		SVOC	Org. Halogen	
89	Hexachloroethane	VOC		Org. Halogen	
90	Hexamethylene-1,6-diisocyanate		SVOC		Nitrogenated
91	Hexamethylphosphoramide		SVOC		Nitrogenated
92	Hexane	VOC			
93	Hydrazine				Nitrogenated
94	Hydroquinone		SVOC		
95	Isophorone	VOC			
96	Lindane (all isomers)		SVOC	Org. Halogen	
97	Maleic anhydride		SVOC		
98	Methanol	VOC			
99	Methoxychlor		SVOC	Org. Halogen	
100	Methyl bromide (bromomethane)	VOC		Org. Halogen	
101	Methyl chloride (chloromethane)	VOC		Org. Halogen	
102	Methyl chloroform (1,1,1-trichloroethane)	VOC		Org. Halogen	
103	Methyl hydrazine	VOC			Nitrogenated
104	Methyl iodide (Iodomethane)	VOC		Org. Halogen	
105	Methyl isobutyl ketone	VOC			
106	Methyl isocyanate	VOC			Nitrogenated
107	Methyl methacrylate	VOC			
108	Methyl tert butyl ether (MTBE)	VOC			
109	4,4-Methylene bis(2-chloroaniline)			Org. Halogen	Nitrogenated
110	Methylene chloride (dichloromethane)	VOC		Org. Halogen	
111	4,4'-Methylenedianiline				Nitrogenated
112	Methylene diphenyl diisocyanate (MDI)		SVOC		Nitrogenated
113	Naphthalene		SVOC		
114	Nitrobenzene	VOC			Nitrogenated
115	4-Nitrobiphenyl		SVOC		Nitrogenated
116	4-Nitrophenol		SVOC		Nitrogenated
117	2-Nitropropane	VOC			Nitrogenated
118	N-Nitrosodimethylamine (NDMA)	VOC			Nitrogenated
119	N-Nitroso-N-methylurea	VOC			Nitrogenated
120	N-Nitrosomorpholine	VOC			Nitrogenated
121	Parathion		SVOC		Nitrogenated
122	Pentachloronitrobenzene (Quintobenzene)		SVOC	Org. Halogen	Nitrogenated
123	Pentachlorophenol		SVOC	Org. Halogen	

<sup>33</sup> Glycol ethers are a group that includes roughly 30 compounds.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.

We have taken steps to ensure the accuracy of this version, but it is not the official version.

124	Phenol	VOC			
125	p-Phenylenediamine		SVOC		Nitrogenated
126	Phosgene	VOC		Org. Halogen	
127	Phosphine				
128	Phthalic anhydride		SVOC		
129 *	Polychlorinated biphenyls (PCBs) <sup>34</sup>	Consider PCBs as a Distinct Group			
130 *	Polycyclic Organic Matter (or Total PAH) <sup>35</sup>	Consider Total PAH as a Distinct Group			
131	1,3-Propane sultone	VOC			
132	β-Propiolactone	VOC			
133	Propionaldehyde	VOC			
134	Propoxur (Baygon)		SVOC		Nitrogenated
135	Propylene dichloride (1,2-dichloropropane)	VOC		Org. Halogen	
136	Propylene oxide	VOC			
137	1,2-Propylenimine (2-methyl aziridine)	VOC			Nitrogenated
138	Quinoline		SVOC		Nitrogenated
139	Quinone		SVOC		
140 *	Radionuclides (including radon) <sup>36</sup>				
141	Styrene	VOC			
142	Styrene oxide	VOC			
143 *	2,3,7,8-Tetrachlorodibenzo-p-dioxin & other dioxins <sup>37</sup>	Consider Dioxins / Furans as a Distinct Group			
144	1,2,2,2-Tetrachloroethane	VOC		Org. Halogen	
145	Tetrachloroethylene (perchloroethylene)	VOC		Org. Halogen	
146	Toluene	VOC			
147	2,4-Toluene diamine		SVOC		Nitrogenated
148	2,4-Toluene diisocyanate		SVOC		Nitrogenated
149	o-Toluidine		SVOC		Nitrogenated
150	Toxaphene (chlorinated camphenes)		SVOC	Org. Halogen	
151	1,2,4-Trichlorobenzene	VOC		Org. Halogen	
152	1,1,2-Trichloroethane	VOC		Org. Halogen	
153	Trichloroethylene (TCE)	VOC		Org. Halogen	
154	2,4,5-Trichlorophenol		SVOC	Org. Halogen	
155	2,4,6-Trichlorophenol		SVOC	Org. Halogen	
156	Triethylamine	VOC			Nitrogenated
157	Trifluralin		SVOC	Org. Halogen	Nitrogenated
158	2,2,4-Trimethylpentane	VOC			
159	Vinyl acetate	VOC			

<sup>34</sup> PCBs are a group that includes 209 congeners.

<sup>35</sup> Polycyclic Organic Matter (POM) is a group that theoretically may include millions of compounds. Only 100 or so, however, have been identified and studied.

<sup>36</sup> Radionuclides are a group that includes uranium, radon, and radium isotopes.

<sup>37</sup> Dioxins are a group that includes 75 polychlorinated dibenzo dioxins (PCDDs).

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.  
We have taken steps to ensure the accuracy of this version, but it is not the official version.

160	Vinyl bromide	VOC		Org. Halogen	
161	Vinyl chloride	VOC		Org. Halogen	
162	Vinylidene chloride (1,1-dichloroethylene)	VOC		Org. Halogen	
163	* Xylenes <sup>38</sup>	VOC			

Tables 7 and 8 do not include the 17 compounds specifically removed from the proposed regulatory definition of contaminants in §241.2. As discussed in section II.D.1., HCl, Cl<sub>2</sub>, HF, NO<sub>x</sub>, and SO<sub>2</sub> are excluded from Table 8 and replaced by the elements chlorine, fluorine, nitrogen and sulfur in Table 7. This is necessary because of differences between NHSMs prior to combustion and the emissions that will result from that combustion. NHSMs prior to combustion are not expected to contain the CAA 112/129 pollutants HCl, Cl<sub>2</sub>, HF, NO<sub>x</sub> or SO<sub>2</sub>, and measuring forms of their precursors (the elements chlorine, fluorine, nitrogen and sulfur) is the only way to account for these pollutants prior to combustion.

In addition, fine mineral fibers, PM, and coke oven emissions are excluded because they are unlikely to exist in NHSMs prior to combustion. Diazomethane, white phosphorus and titanium tetrachloride are also excluded because their reactivity makes their presence in NHSMs very unlikely.<sup>39</sup> Finally, the three cresol isomers are included in Table 8 under cresols/cresylic acid, itself a listed HAP; and similarly, the

<sup>38</sup> Xylenes are a group that includes three compounds.

<sup>39</sup> Spicer, Chester W. et al., Hazardous Air Pollutant Handbook, Lewis, Boca Raton, FL, 2002, pp 11-21.

three xylene isomers are included in Table 8 under xylenes, also a listed HAP.

b. What does "designed to burn" mean?

To meet the contaminant legitimacy criterion, persons must compare contaminants in the NHSM they wish to burn to contaminants in the traditional fuel the unit is "designed to burn."<sup>40</sup> Today's proposal codifies that data for any traditional fuel the unit can burn or does burn may be used for these comparisons, whether or not the unit's air permit lists the traditional fuel. The reason such comparisons to traditional fuel(s) are conducted is to assist in making a determination of whether or not the NHSM is being discarded, which makes differentiating between "can burn" and "does burn" irrelevant. Please note that for a unit to be able to burn a traditional fuel, it needs an appropriate feed mechanism (e.g., a way to load solid fuel of a particular size into the unit). The unit would also need the ability to adjust physical parameters to ensure spatial mixing and flame stability per unit specifications.

Traditional fuels are defined in §241.2 as follows:

*"Traditional fuels* means materials that are produced as fuels and are unused products that have not been discarded and

---

<sup>40</sup> As explained in Section II.D.2.a, today's proposed rule makes it clear that "contaminants" may be an individual contaminant or group of contaminants.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

therefore, are not solid wastes, including: (1) fuels that have been historically managed as valuable fuel products rather than being managed as waste materials, including fossil fuels (e.g., coal, oil and natural gas), their derivatives (e.g., petroleum coke, bituminous coke, coal tar oil, refinery gas, synthetic fuel, heavy recycle, asphalts, blast furnace gas, recovered gaseous butane, and coke oven gas) and cellulosic biomass (virgin wood); and (2) alternative fuels developed from virgin materials that can now be used as fuel products, including used oil which meets the specifications outlined in 40 CFR 279.11, currently mined coal refuse that previously had not been usable as coal, and clean cellulosic biomass. These fuels are not secondary materials or solid wastes unless discarded.”

Because most combustion units can burn different—but related—traditional fuels, broad groups of similar traditional fuels may be used when comparing contaminants. The most common traditional fuel categories burned at major source boilers are coal, wood, oil and natural gas, as evidenced by data submitted to the EPA’s OAQPS.<sup>41,42</sup>

---

<sup>41</sup> EPA, Office of Air Quality Planning and Standards (OAQPS), Emissions Database for Boilers and Process Heaters Containing Stack Test, CEM & Fuel Analysis Data Reported Under ICR No. 2286.01 and ICR No. 2286.03 (Version 6). February 2011. <http://www.epa.gov/ttn/atw/boiler/boilerpg.html#TECH>

<sup>42</sup> The fuel analysis information in this OAQPS database is one example of a “national survey” of traditional fuel information, as referenced in the proposed contaminant legitimacy criterion at §241.3(d)(1)(iii).



To further clarify the impact of the new proposed "designed to burn" language on contaminant comparisons, potential categories for coal, wood and oil are described below. A coal group could include data on anthracite, lignite, bituminous and sub-bituminous coal. A wood or biomass group could include data on unadulterated lumber, timber, bark, biomass and hogged fuel. An oil group could include data on fuel oils 1-6, diesel fuel, kerosene and other petroleum based oils.<sup>43,44</sup> In cases where a unit can burn traditional fuels from several categories, such as a boiler that can burn either coal or biomass, contaminant comparisons could be made using data from either fuel category at the combustor's discretion. In other words, if a facility burns biomass in its combustion unit, but that same combustion unit could also burn coal, the facility could compare its secondary material to either traditional fuel.

Some fossil fuel derivatives (e.g., petroleum coke, coal tar oil) and alternative fuels (e.g., clean cellulosic biomass) are defined as traditional fuels and, therefore, do not need to meet the legitimacy criteria to be burned. The EPA lacks sufficient contaminant data, however, to assist those wishing to

---

<sup>43</sup> We do not believe that the oil group should include unrefined crude oil or gasoline, as neither is typically burned in combustion units subject to the CAA sections 112 or 129 standards.

<sup>44</sup> Used oil is a special case and does not need to undergo the contaminant comparison. If it meets the specifications in 40 CFR Part 279.11, it is a traditional fuel. If it does not meet the specifications (i.e., it is "off-spec" oil), it is a solid waste under the 2011 NHSM final rule.

compare NHSM to these traditional fuels. In addition, other units currently exist that burn only NHSMs. Both situations raise the question of what traditional fuel(s) to use for contaminant comparisons. In addition to being able to burn derivative fuels, alternative fuels, or NHSM, most combustion units can also burn other traditional fuel(s). In such cases, it is appropriate to make the comparison to one of the traditional fuel categories discussed above: either coal or wood for solids or oil for liquids. For example, if a combustion unit only burns a solid form of NHSM, the combustor could compare contaminants in the NHSM against either coal or wood in order to demonstrate compliance with the contaminant legitimacy criterion, provided the combustion unit is designed to burn such solid forms of fuel.

c. What contaminant comparisons are allowed?

Regardless of the specific methodology chosen, a comparison will have to be made for each contaminant or group of contaminants between a traditional fuel or group of traditional fuels and the NHSM. Generators or combustors can use either traditional fuel data collected by the EPA or their own data for traditional fuel comparison values.<sup>45</sup> Generators or combustors are responsible, however, for either providing NHSM comparison

---

<sup>45</sup> The EPA has collected current information on levels of contaminants in traditional fuels, which can be found at [www.epa.gov/epawaste/nonhaz/define/index](http://www.epa.gov/epawaste/nonhaz/define/index) and used by the regulated community as they so choose. The EPA will update this information as appropriate.

values in cases where testing is required or documenting why testing is unnecessary. Examples of acceptable NHSM data could include both laboratory test results from a specific generator or combustor and industry-recognized values provided by a national trade organization.

Given data for a particular traditional fuel, it makes intuitive sense to base the traditional fuel comparison value on the upper end of its statistical range. Anything less could result in "traditional fuel" samples being considered solid waste if burned in the very combustion units designed to burn them—not the Agency's intent in either the 2011 NHSM final rule or today's proposed rule.<sup>46</sup> Given that selection, acceptable NHSM comparison values would include the upper end of a statistical range, a calculation involving the mean and standard deviation, or perhaps a single data point in situations where data are limited. It would not be appropriate to compare an average NHSM contaminant value to the high end of a traditional fuel range, as the existence of an average implies multiple data points from which a more suitable statistic (e.g., range or standard deviation) could have been calculated.

If each NHSM comparison value is comparable to or lower than its corresponding traditional fuel value, the material

---

<sup>46</sup> Traditional fuels, as defined in §241.2, are not required to meet the legitimacy criteria, and this scenario is only used to explain the logic behind basing a traditional fuel comparison value on the upper end of a statistical range.

would be considered to meet the contaminant legitimacy criterion. An initial assessment would not generally need to be repeated, provided the facility continues to operate in the same manner and use the same type of NHSMs as when the original assessment was made.

We would finally note that despite presenting several approaches for calculating NHSM comparison values, such as the upper end of a statistical range or a calculation involving the mean and standard deviation, today's preamble discussion does not preclude other reasonable methodologies. In the context of an inspection or enforcement action, the Agency will evaluate the appropriateness of alternative methodologies and data sources on a case-by-case basis when determining whether the legitimacy criteria have been met.

Even when analytical testing is not necessary, combustors burning NHSM under CAA section 112 must document the basis of their determinations pertaining to the part 241 criteria (including the contaminant legitimacy criteria) in accordance with applicable air regulations. These regulations can be found in §63.11225(c)(2)(ii) for area source boilers, in §63.7555(d)(2) for major source boilers, and in §60.2175(v) and §60.2740(u) for incinerators.

### 3. Categorical Determinations That Specific NHSM Are Not Solid Waste When Used as a Fuel

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

Issues were raised after promulgation of the 2011 NHSM final rule concerning application of the legitimacy criteria, and the extent of the information required to make demonstrations that a NHSM was not a solid waste. To provide additional clarity and assist in implementation of the rule, the Agency is proposing to codify in §241.4 determinations that certain NHSMs are not solid wastes when used as a fuel, where the Agency has sufficient information and knowledge that these NHSMs are not wastes. The practical effect of these categorical listings is that persons that generate or burn these materials will not need to make individual determinations, as required under the existing rules, that these materials meet the legitimacy criteria. Except where noted, combustors of these materials will not be required to provide further information demonstrating their non-waste status.<sup>47</sup>

Thus, the Agency is proposing a list of secondary materials that are non-wastes when used as a fuel in a combustion unit, based on a balancing of the legitimacy criteria and other such relevant factors that the Administrator may identify. Such additional factors may include, but are not limited to, whether

---

<sup>47</sup> In the 2011 NHSM final rule, scrap tires managed under established tire collection programs and resinated wood were designated as non-wastes when used both within and outside generator control (see § 241.3(b)(2)). The final rule indicated that the Agency would solicit comment in the future on additional non-hazardous secondary materials that can be used as a non-waste fuel both by the generator and outside the control of the generator (76 FR 15472).

the NHSM's use as a fuel has been integrally tied to the industrial production process and the extent to which the NHSM is functionally the same as the comparable traditional fuel.

We note that a balancing approach to considering the legitimacy criteria along with other relevant factors is not included in the standards and procedures for making individual non-waste determinations under §241.3. The Agency is not considering any change to the self-implementing, mandatory nature of the §241.3 standards for individual facilities and will not respond to any comments on this topic.

Regarding the proposed categorical determinations in §241.4, where a particular NHSM may not meet all the legitimacy criteria outlined in §241.3(d)(1), it is necessary to require a formal determination in order to prevent sham recycling (i.e., materials being discarded under the guise of recycling). The EPA has long acknowledged that, "[w]ith respect to the issue of whether [an] activity is sham recycling, this question involves assessing the intent of the owner or operator by evaluating circumstantial evidence, always a difficult task."<sup>48</sup> In cases where the difference between recycling and treatment is difficult to distinguish, "[t]he potential for abuse is such that great care must be used when making a determination that a

---

<sup>48</sup> See April 26, 1989 Memorandum from Sylvia K. Lowrance, Director, Office of Solid Waste to Hazardous Waste Management Division Directors, Regions I-X. A copy of this document has been placed in the docket for today's rulemaking.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.  
We have taken steps to ensure the accuracy of this version, but it is not the official version.

particular activity is to go unregulated (i.e., it is one of those activities which is beyond the scope of our jurisdiction)."<sup>49</sup> However, the Agency also believes that there are cases where a secondary material may not fully meet the self-implementing legitimacy criteria, but upon consideration of other relevant factors, it can be determined that the material is a legitimate fuel and is not merely being discarded by being burned.

In addition to the proposed categorical determination that certain secondary materials are not wastes when combusted as a fuel, the Agency is proposing a rulemaking petition process for individuals to request categorical determinations for additional NHSM as not being a solid waste when burned as a fuel in combustion units. This process is outlined in section II.D.4.

The information and rationale that the Agency is relying upon to propose the section 241.4 categorical determinations for certain secondary materials is discussed below.

#### a. Scrap Tires

In the 2011 NHSM final rule, the EPA determined that scrap tires removed from vehicles and managed pursuant to established tire collection programs would not be considered a solid waste, provided they meet the legitimacy criteria in §241.3(d)(1). The 2011 NHSM final rule preamble also concluded that, as a

---

<sup>49</sup> Id.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

category, scrap tires managed pursuant to established tire collection programs would meet the legitimacy criteria for NHSMs used as fuels. Questions have arisen, however, as to whether persons must still demonstrate for each facility that this material meets the legitimacy criteria. To clarify this point, we are proposing to codify a categorical determination in today's rule to designate scrap tires that have not been discarded and are managed under the oversight of established tire collection programs (as defined in 241.2), including tires removed from vehicles and off-specification tires, are not solid wastes when used as fuels in combustion units. Thus, persons who generate and/or burn such scrap tires would not need to make an individual legitimacy determination that such scrap tires are non-waste fuels.

As discussed in section II.D.1 of today's action, the term "established tire collection program" is proposed to encompass off-specification tires (including factory scrap tires) that are contractually arranged to be collected, managed and transported between a tire manufacturer, including retailers or other parties involved in the distribution and sale of new tires, and a combustor. Thus, under the proposal, "established tire collection program" means "a comprehensive collection system or contractual arrangement that ensures scrap tires are not discarded and are handled as valuable commodities through



arrival at the combustion facility." The established tire collection programs ensure the tires are not discarded. The rationale for the related edits to the definition of established tire collection programs are described in the section II.D.1.

As discussed in the 2011 NHSM final rule, scrap tires from vehicles meet the legitimacy criteria (§241.3(d)(1)) for being handled as a valuable commodity, for having meaningful heating value, and for comparable contaminants.<sup>50</sup> Specifically, scrap tires are considered to be handled as a valuable commodity when they are collected under established tire collection programs. Because scrap tires have an exceptionally high heating value (12,000 Btu/lb to 16,000 Btu/lb), they are considered to meet the legitimacy criteria for meaningful heating value. In fact, the heating value of scrap tires is higher than typical coal values and other solid fuels.<sup>51</sup> In developing the 2011 NHSM final rule, the EPA analyzed contaminant concentrations in scrap tires and determined that contaminant levels were comparable to or lower than levels in traditional fuels; therefore, scrap tires are considered to meet the legitimacy criterion for comparable contaminants.<sup>52</sup>

---

<sup>50</sup> 76 FR at 15535.

<sup>51</sup> ASTM Standard D6700-01, 2006, "Standard Practice for Use of Scrap Tire-Derived Fuel," ASTM International, West Conshohocken, PA, 2003, DOI: 10.1520/C0033-03, [www.astm.org](http://www.astm.org)

<sup>52</sup> 76 FR at 15492. Data cited submitted as comments on the 2010 NHSM Proposed Rule and can be found in the docket EPA-HQ-RCRA-2008-0329. See also Materials Characterization Papers in Support of the Final Rulemakings -

The term "scrap tire" is a general term for tires and can include, for example, whole tires, chipped tires, off-specification tires, or off-specification tire components (i.e., tread, sidewall or base) that are removed from vehicles or are generated by tire manufacturers, including retailers or other parties involved in the distribution and sale of new tires; it does not include whole tires that have been discarded and burned directly without processing as a fuel. The provision in §241.4 specifically references only those scrap tires that have not been discarded and are managed under the oversight of established tire collection programs, including tires removed from vehicles and off-specification tires. Thus, the regulatory text has been revised to make this point clear.

b. Resinated Wood<sup>53</sup>

The EPA is proposing to designate resinated wood as not being a solid waste when used as a fuel. This determination was previously codified under §241.3 (b) (2) (ii) of the NHSM final rule, provided the resinated wood met the legitimacy criteria in

---

Identification of Non-Hazardous Secondary Materials that are Solid Wastes: Scrap Tires (February 3, 2011); Traditional Fuels and Key Derivatives (February 7, 2011) in docket EPA-HQ-RCRA-2008-0329. We also note that we have developed, in support of today's proposed rulemaking, a new background document that includes updated information regarding scrap tires, as well as the other NHSM discussed in today's proposal. This document is entitled "Resinated Wood, Scrap Tire, and Pulp/Paper Sludge Support Document" and can also be found in docket EPA-HQ-RCRA-2008-0329.

<sup>53</sup> 40 CFR 241.2 defines resinated wood as wood products (containing resin adhesives) derived from primary and secondary wood products manufacturing and comprised of such items as board trim, sander dust and panel trim.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.

We have taken steps to ensure the accuracy of this version, but it is not the official version.

§241.3(d)(1). However, based on the available information, as well as how this material is handled and used in the process, resinated wood is not being discarded when used as a fuel, and thus, should not be considered a solid waste when burned as a fuel.

As discussed in the 2011 NHSM final rule, wood product plants have been designed to specifically utilize these residuals that the wood manufacturing process creates and would not be able to operate as designed without this material. For example, sander dust injector systems have been specifically developed to accommodate the unique combustion requirements of this material and these injector systems have been installed on many boiler and wood drying systems within the industry.<sup>54</sup> Burners designed to combust sander dust or trim may not be suitable for combusting other fuels—thus, the cost of these residual materials relative to the cost of using other fuels would be a major consideration.<sup>55</sup> Overall, in composite panel

---

<sup>54</sup> American Forest and Paper Association, August 3, 2010. EPA Docket ID EPA-HQ-RCRA-2008-0329.

<sup>55</sup> For example, Composite Panel Association, in comments on the NHSM Proposed Rule, stated, "Estimates for the cost of a composite panel plant to switch boiler fuel from a trim/sander dust mix to natural gas ranged from \$1 million to \$3.5 million a year depending on boiler size and the price of natural gas. For direct fired dryers alone, the cost to switch from sander dust to natural gas ranged from \$350,000 to \$1.4 million a year, again depending on dryer size and gas prices. These costs do not include the re-engineering costs that would be necessitated nor do they include the cost of transportation or off-site disposal of this valuable fuel. Moreover, these costs do not take into account the severe costs implications on all wood product facilities that currently utilize resinated fuels in process heaters or dryers." EPA Docket ID: EPA-HQ-RCRA-2008-0329-1358.

manufacturing, plants typically reuse 58 percent of these residual materials in the process and 35 percent is burned for energy recovery.<sup>56</sup>

Resinated wood is highly valued within the wood products industry for its high fuel value relative to other wood fuels generated and burned at these facilities for energy recovery. Many facilities rely on mixing of these low moisture content wood materials with higher moisture materials. Resinated wood residuals are routinely transferred between either intra- or inter-company facilities and used as either "furnish" (i.e., raw materials) or fuel at the receiving facilities. The material being transferred off-site is used and handled in the same manner that resinated wood residuals are used when generated on-site. In general, the motivation to use the resinated wood as a fuel, even with the slightly higher formaldehyde levels, predominates over the motivation to dispose of the formaldehyde. See *American Petroleum Institute v. EPA*, 216 F.3d 50, 58 (DC Cir. 2000) (in declaring reclaimed oily wastewater to be a waste, the EPA failed to explain why the discard motivation predominated the recycling motivation). Indeed, discard of the formaldehyde is a very distant second to the fuel product use of the resinated wood.

---

<sup>56</sup> The Generation and Utilization of Residuals from Composite Panel Products; *Forest Products Journal* 54:2, 2004; David C. Smith.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.  
We have taken steps to ensure the accuracy of this version, but it is not the official version.

The heating value range presented (8,500 - 9,000 Btu/lb) indicates that resinated wood residuals have heating values significantly greater than the 5,000 Btu/lb level described in the preamble to the 2011 NHSM final rule for presuming compliance with the meaningful heating value legitimacy criterion (codified at §241.3(d)(1)(ii)). Resinated wood residuals also are managed as a valuable commodity since these residuals are managed as a primary fuel for wood products manufacturers.

While we received limited contaminant information prior to the promulgation of the final rule, the data we have suggest that resins and adhesives containing formaldehyde react within the resin curing process, leaving "free" formaldehyde at levels less than 0.02 percent (or 200 ppm). In addition, new national rules, as mandated by the CARB Composite Wood ATCM, per new Public Law No. 111-199, will reduce the formaldehyde levels even further.<sup>57</sup>

While we acknowledge that these levels may not always meet the contaminant legitimacy criterion in every situation, in today's action, we are proposing a categorical non-waste determination for resinated wood that is used as fuel. We are proposing to codify this determination, balancing the legitimacy

---

<sup>57</sup> Information received from the wood manufacturing industry indicates that formaldehyde levels will be reduced to less than 100 ppm in resinated wood based on the new CARB rules. These data are provided in the docket for today's proposed rule.

criteria and other relevant factors based on the fact that resinated wood residuals that are used as fuels represents an integral component to the wood manufacturing process and, as such, resinated wood residuals are not being discarded when burned as fuels. That is, the purpose of burning these wood residuals (including the resins that they contain, which themselves contribute to the heating value of the material) is not to destroy or discard them, as they are clearly considered and managed as a valuable commodity to the manufacturing process.

In making this determination, we note the extent to which resinated wood is used as fuels throughout the wood manufacturing industry and that often the use of resinated wood as fuel is essential to the wood manufacturing process. We also note the prevalence of wood product plants that have been designed specifically to utilize these residuals for their fuel value; in fact, many (if not most) wood products plants would not be able to operate as designed without the use of these materials as fuel. Thus, resinated wood residuals are not being discarded when used as fuel and, therefore, we are proposing to specifically identify them as a non-waste fuel in §241.4. By specifically listing them as a non-waste fuel, generators or combustors of this material will not need to make legitimacy determinations on a site-by-site basis.

#### 4. Rulemaking Petition Process for Other Non-Waste Determinations

The Agency recognizes that there may be other NHSMs that can also be considered non-wastes when burned as fuels in combustion units when balancing the legitimacy criteria and other relevant factors. Thus, under today's proposed rule, we are proposing a process whereby persons may submit a rulemaking petition to the Administrator where they can identify and request that additional NHSMs be listed in section 241.4.<sup>58</sup> The petition process would be similar to 40 CFR 260.20, where any person may petition the Administrator to modify or revoke any provisions of the hazardous waste rules, and where procedures governing the EPA's action on those petitions are established. The section 260.20 standards reflect normal, informal rulemaking procedures under the APA and thus serve as an appropriate model for the NHSM petitions under this section.

In the context of a rulemaking petition under section 241.4(b), any person would be able to petition the Administrator for a regulatory amendment to identify and request that

---

<sup>58</sup> This approach is consistent with the approach EPA recently proposed in the July 2011 Definition of Solid Waste (DSW) proposed rule (76 FR 44094), whereby the Agency is proposing to require that persons who claim that they are legitimately reclaiming a hazardous secondary material meet all four legitimacy criteria, but is providing a petition process whereby they can petition EPA that such materials, when looking at the hazardous secondary material and recycling activity as a whole, would still be considered legitimate recycling. The primary difference between the two is that in the DSW proposed rule, the demonstration is made on a site-specific basis, whereas in today's proposed rule, the demonstration would be made on a material-by-material basis.

additional NHSMs be included on the list of materials in section 241.4(a) that are not solid wastes when used as a fuel in a combustion unit. To be successful, the petitioner would need to demonstrate to the satisfaction of the Administrator that the proposed regulatory amendment involves a NHSM that has not been previously discarded (i.e., was not initially abandoned or thrown away). The petitioner must also demonstrate that the material is used as a non-waste fuel in a combustion unit because it either meets the legitimacy criteria, or, after balancing the legitimacy criteria with other relevant factors, such NHSM(s) is not a solid waste when used as a fuel in a combustion unit.

If the applicant believes that the NHSM is a legitimate product and not discarded despite not meeting legitimacy criteria, additional information must be submitted to explain or describe why such NHSM should be considered a non-waste fuel. Possible factors to address include, but are not limited to:

- The extent that use of the NHSM has been integrally tied to the industrial production process. Information can include combustor design specifications, the extent that use of the material is integrated across the industry, and the extent that use of the NHSM is essential to the industrial process, and/or

- The extent that the NHSM is functionally the same as the



comparable traditional fuel, and

- Other relevant factors.

The application would be required to include (1) the petitioner's name and address; (2) a statement of the petitioner's interest in the proposed action; (3) a description of the proposed action, including the specific NHSM, the industry (i.e., NAICS code) and functional use (i.e., industrial functional code listed in 40 CFR 710.52(c)(4)(i)(C)); and (4) a statement of the need and justification for the proposed action, including any supporting tests, studies, or other information. Where such NHSM(s) do not meet the legitimacy criteria, the applicant must explain why such NHSM should be considered a non-waste fuel, balancing the legitimacy criteria with other relevant factors.

Under this petition process, the Administrator would make a tentative decision to grant or deny a petition and then publish notice of such tentative decision, either in the form of an ANPRM, a proposed rule, or a tentative determination to deny the petition, in the Federal Register for written public comment. The Administrator could, at its discretion, hold an informal public hearing to consider oral comments on the tentative decision. After evaluating all public comments, the Administrator would make a final decision by publishing in the

Federal Register a regulatory amendment or a denial of the petition.

## **E. Additional Request for Comment**

### 1. Pulp and Paper Sludges

As we discuss elsewhere in this preamble, the Agency is proposing to identify and categorically list NHSMs as being a non-waste fuel, whether burned within the control of the generator or outside the control of the generator (see 241.4(a)). By listing these NHSMs categorically, persons would not have to make individual determinations as to whether or not these NHSMs are solid wastes. In addition, the Agency is also proposing that in considering whether or not to list a NHSM as a non-waste fuel, that the Agency can balance the legitimacy criteria, and such other relevant factors that the Administrator may identify. Such additional factors may include, but are not limited to, whether the NHSM's use as a fuel has been integrally tied to the industrial production process and the extent to which the NHSM when used as a fuel is consistent with that of fuel product.

With regard to pulp and paper sludges, the 2011 NHSM final rule specifically concluded the following "The final rule will retain the proposed approach - pulp and paper sludges managed within control of the generator are a non-waste fuel as they would seem to meet all of the legitimacy criteria . . .", (See

76 FR 15488, March 21, 2011). We received several questions about these materials following issuance of the final rule. As discussed below, based on the current record, the EPA continues to believe that these pulp and paper sludges meet the legitimacy criteria and can be burned as a non-waste fuel in accordance with existing section 241.3(b)(1) provided such combustion units are within the control of the generator. In this section, we discuss the information we currently have on these sludges, and the additional information that the Agency needs before we could categorically list these materials in section 241.4(a) as a non-waste fuel. If such information is provided to the EPA, and after balancing the legitimacy criteria with other relevant factors that the EPA believes that these sludges are not solid wastes when combusted, the EPA is prepared to add pulp and paper sludges to the list of non-waste fuels in section 241.4(a).

Pulp and paper mill sludges, both primary and secondary, are produced from the wastewater treatment of process effluents. In the pulping and papermaking process, maximizing wood fiber recovery is essential in making the process efficient and cost-effective. However, there are fibers that end up being too short (fines) that can be detrimental to paper quality and that inhibit the papermaking capacity of the paper machine. Mills thoroughly clean and screen the wood fibers to retain the suitable fibers and remove the excess fines. These fines end up

in the wastewater stream and, eventually, in the sludge. Therefore, these sludges, which are approximately 90-95 percent biomass on a dry weight basis, are essentially no different than the biomass-based wood fibers that enter the pulping or papermaking process, except that the fibers are too short to be suitable for papermaking; these sludges also contain microorganisms that feed on organic material in the wastewater stream.

The EPA compared the contaminant concentrations in pulp and paper sludges to levels found in coal and untreated wood, since both these traditional fuels can be burned in pulp and paper mills. As we discussed in the preamble to the final NHSM rule, chlorine levels from one set of pulp and paper sludge samples submitted in the public comments had an arithmetic mean of 465 ppm, a median of 318 ppm, a maximum level among mill means of 2,399 ppm, and a maximum among individual analyses of 4,800 ppm (all on a dry weight basis). Other samples had chlorine concentrations of between 1,050-4,800 ppm (dry basis). When comparing information on pulp and paper sludge to the information that we have compiled on coal, we found that chlorine levels in coal are reported to be as high as 7,400 ppm, and that average chlorine values for bituminous and sub-bituminous coal are 1,200 ppm and 140 ppm, respectively. Thus, the average chlorine levels reported in most pulp and paper

sludge are likely to be comparable with average chlorine levels found in bituminous coal. We also determined that the chlorine levels in pulp and paper sludge would be comparable to untreated wood, given that untreated wood had chlorine levels as high as 11,890 ppm.<sup>59</sup> We note that there is one sample in the submitted data set for a pulp and paper sludge that has a chlorine concentration of 16,550 ppm. However, since this was the only sample with such a high concentration of chlorine, we did not think that it was representative of pulp and paper sludges generally. Since promulgation of the 2011 NHSM final rule, EPA has received additional contaminant data regarding these pulp and paper sludges from the forest products industry, which demonstrate even more clearly that this one sample is anomalous. Regarding chlorine levels in particular, the forest products industry provided data for 93 samples of pulp and paper sludges. This data set shows the mean value for chlorine to be 361 ppm, with a standard deviation of 661 ppm, and a 90 percent confidence interval at 1,217 ppm. We also determined that the levels of metals were lower in pulp and paper sludges than in

---

<sup>59</sup> Since promulgation of the 2011 NHSM final rule, the EPA has updated and reorganized its traditional fuel data to reflect data supporting the 2011 Major Source Boiler final rule and the 2011 CISWI final rule, whereas the previous version of the paper relied on data supporting the 2010 Major Source Boiler proposed rule and the 2010 CISWI proposed rule. Contaminant data have also been reorganized to better reflect revisions to the definition of "contaminants" and the contaminant legitimacy criterion in today's proposed NHSM rule. The updated data can be found at [www.epa.gov/epawaste/nonhaz/define/index](http://www.epa.gov/epawaste/nonhaz/define/index). The Agency will update this information as appropriate.

both untreated wood and coal. Such data further support the conclusions outlined in the final NHSM rule that, based on information received by the Agency, pulp and paper sludge meets the contaminant legitimacy criterion (76 FR 15488).

While pulp and paper sludges can have a heating value below 5,000 Btu/lb, pulp and paper mills typically improve the heating value through dewatering. Data from the Boiler/CISWI database established for those rules indicate that Btu/lb values exceeded 5,000 Btu/lb for pulp and paper sludge measured on a dry weight basis. Thus, we believe that pulp and paper sludges meet the meaningful heating value legitimacy criterion when dewatered. Also, since pulp and paper sludges are handled promptly (i.e., not stored for long periods of time and are contained in storage units along with traditional fuels (such as wood and bark) with minimal loss (similar to a valuable commodity), the EPA believes that pulp and paper sludges are managed as a valuable commodity (see 76 FR 15488-89, March 21, 2011).

Thus, based on the current record, the EPA believes that these pulp and paper sludges meet the legitimacy criteria and can be burned as a non-waste fuel provided such combustion units are within the control of the generator in accordance with section 241.3(b)(1)<sup>60</sup>. As noted in section II. D., facilities are

---

<sup>60</sup> We also note that pulp and paper sludges almost entirely remain on-site and within the control of the generator when burned as fuels. To the extent that pulp and paper sludges do not remain within the control of the generator and

not required to test contaminant levels to demonstrate such legitimacy, but rather, persons can use expert or process knowledge, as well as data generated from similar facilities, to make those determinations.

To the extent industry and other commenters believe that these pulp and paper sludges should be categorically listed in section 241.4(a), they will need to provide the Agency with appropriate information, as discussed later in this section. In such instances, the Agency can list a NHSM as a non-waste fuel by balancing the legitimacy criteria and such other relevant factors that the Administrator may identify.

For example, the Agency is proposing to list categorically resinated wood residuals as a non-waste fuel balancing the legitimacy criteria with other relevant factors. These other additional factors include, but are not limited to, whether the NHSM's use as a fuel has been integrally tied to the industrial production process and the extent to which the NHSM is consistent with that of a fuel product. Specifically, as discussed in section II.D.3.b, we are relying on information about the high Btu values, the fact that wood product plants have been designed to specifically utilize these residuals that the wood manufacturing process creates and without which they

---

are used as fuels, the petition process established in 40 CFR 241.3(c) could apply to these materials, as appropriate.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.  
We have taken steps to ensure the accuracy of this version, but it is not the official version.

would not be able to operate as designed, and information about how the materials are managed off-site as an indication that these materials are not being discarded.

For pulp and paper sludges, we would need similar information to support adding these materials to section 241.4(a). Specifically, the types of information that would be particularly helpful include: (1) documentation of how the use of pulp and paper sludges that are used as a fuel are integrated into the industrial production process and the steps taken industry-wide to ensure that this NHSM is consistently used as a legitimate fuel and is not discarded, including when transferred to a different person for use as a fuel, (2) documentation on the amount of pulp and paper sludges burned as a fuel (whether within the control of the generator or outside the control of the generator), and what determines which pulp and paper sludges are burned as a fuel, as opposed to being land applied or disposed,<sup>61</sup> (3) additional data regarding the contaminant levels of the various HAP, such as chlorine and metals, and what steps the industry has taken to ensure the quality of these sludges when used as a fuel are consistent with that of fuel product, (4) information on standard practices used to ensure that these sludges have a meaningful heating value, including the types of

---

<sup>61</sup> The Agency's latest data indicate that between 20 and 25 percent of these pulp and paper sludge are burned as a fuel.



dewatering and other processing steps that these sludges are subject to, as well as information on whether any pulp and paper sludges that are burned as a fuel are done so without any processing, including dewatering, and (5) when shipped to a different person for use as a fuel, how these sludges are managed, including how they are shipped, any processing that may occur, and how long these sludges are typically stored prior to being burned as a fuel. If the information that the EPA receives suggests that after a balancing of the legitimacy criteria and any other relevant factors, such that when the facts are viewed, as a whole, the sludges are non-waste fuels, the EPA will consider adding pulp and paper sludge to the list of non-waste fuels in 40 CFR 241.4(a).

## 2. Coal Refuse

Coal refuse is generated when coal is mined, and is comprised of non-combustible rock with some attached carbon material that is not easily separated due to its small size. The EPA's Coal Refuse Materials Characterization Paper indicates that there are 18 coal refuse plants (Fossil Fuel Electric Power Generation-NAICS 221112), and 13 more that use it as a secondary fuel, with bituminous coal as their primary fuel. This paper did not provide an official estimate of the annual volume of coal refuse that is generated, nor the amount that is stored in legacy piles.

In an August 15, 2011 letter to the Anthracite Region Independent Power Producers Association (ARIPPA), EPA addressed industry concerns about whether coal refuse from legacy piles, when used as a fuel in combustion units, would be considered a solid waste under the non-hazardous secondary materials (NHSM) rule. After reaffirming that EPA has determined that currently-generated coal refuse is an alternative fuel, EPA addressed coal refuse from legacy piles. While noting that coal refuse from legacy piles "...has clearly been discarded and is a solid waste unless sufficiently processed into a new legitimate fuel product," EPA also states that it has determined that such refuse is processed no differently than currently generated coal refuse, and therefore meets EPA's requirements for processing under 40 CFR 241.2. The EPA goes on to declare that post-processed coal refuse from legacy piles meets the first two criteria for treatment as a non-waste fuel when combusted: materials are managed in the same manner, and would have similar heating values, as currently generated coal refuse, which is a traditional fuel.

The EPA then addresses the third criterion—whether the material contains contaminants at levels comparable to or lower than traditional fuels. The EPA affirms that because currently-generated coal refuse is a traditional fuel, such fuel is the traditional fuel benchmark when comparing contaminant levels

with coal refuse found in legacy piles. The EPA also notes that since legacy coal refuse is processed in the same manner as currently-generated coal refuse, EPA expects that post-processed coal refuse from legacy piles satisfies EPA's contaminant legitimacy criterion. Thus, post-processed coal refuse from legacy piles are not being discarded when used as fuel and, therefore, we are taking comment on specifically identifying them as a non-waste fuel in §241.4.

## **F. Effect of This Proposed Rule on Other Programs**

### 1. Clean Air Act

During the 2011 NHSM final rulemaking, the EPA assessed the effects of that final rule on other programs. See 76 FR 15545-15546. The reconsideration proposals for the CISWI and boiler rules are consistent with the proposed revisions. These proposed NHSM revisions resulted in only minimal changes to the inventories for CISWI and boilers.

### 2. Subtitle C Hazardous Waste Program/Definition of Solid Waste Rule

The result of this rule will have no effect on the RCRA subtitle C hazardous waste program because it does not address hazardous waste. The RCRA subtitle C hazardous waste federal program has a long regulatory history in defining "solid waste" for purposes of the hazardous waste regulations. However, the 40 CFR 261.2 definition of solid waste explicitly applies only to

wastes that also are hazardous for purposes of the subtitle C regulations (see 40 CFR 261.1(b)(1)). Section 129 of the CAA also specifically excludes subtitle C combustion units from coverage under that section.

Section 7003 of the RCRA gives the EPA the authority to compel actions to abate conditions that may present an "imminent and substantial endangerment" involving both solid and hazardous wastes. The EPA uses this authority on a case-by-case basis. The Agency can determine in a specific factual context whether a NHSM causes an imminent and substantial endangerment to human health and the environment. Also, RCRA sections 3007 and 3008 establish the EPA's inspection and federal enforcement authority to address violations of the subtitle C hazardous waste regulations. Nothing in this rule shall impact the EPA's ability to act pursuant to RCRA sections 3007, 3008 and 7003. The rule also does not limit or otherwise affect the EPA's ability to pursue potentially responsible persons under section 107 of CERCLA for releases or threatened releases of hazardous substances.

## **G. State Authority**

### 1. Relationship to State Programs

This proposal does not change the relationship to state programs as described in the 2011 NHSM final rule. Refer to section IX of the 2011 NHSM final rule (76 FR 15546) for the

discussion on state authority including: "Applicability of State Solid Waste Definitions and Beneficial Use Determinations" and "Clarifications on the Relationship to State Programs." The Agency, however, would like to reiterate a few points.

Section 129 of the CAA states that the term "solid waste" shall have the meaning "established by the Administrator pursuant to [RCRA]." Consequently, the EPA issued the final NHSM rule to provide a definition of "solid waste" under RCRA in order to determine which NHSMs would be subject to the emissions standards under sections 112 and 129 of the CAA. In short, if a NHSM is not a "solid waste" under RCRA, and is burned in a combustion unit, then the combustion unit that burns the material would be subject to the applicable CAA section 112 requirements. On the other hand, if the NHSM is considered a "solid waste," then the combustion unit that burns the material would be subject to the applicable CAA 129 requirements, even if energy or material recovery also occurs. The part 241 waste determination only applies to those NHSMs that are combusted and does not address other uses.

This proposed rule (like the March 2011 final rule) is not intended to interfere with a state's program authority over the general management of waste. For a further discussion on the relationship to state authority, see the discussion in the preamble to the 2011 NHSM final rule at 76 FR 15546.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

## 2. State Adoption of the Rulemaking

No federal approval procedures for state adoption of today's proposed rule are included in this rulemaking action under RCRA subtitle D. Although the EPA does promulgate criteria for solid waste landfills and approves state MSW landfill permitting programs, RCRA does not provide the EPA with authority to approve state programs beyond MSW landfill permitting programs. While states are not required to adopt regulations promulgated under RCRA subtitle D, some states incorporate federal regulations by reference or have specific state statutory requirements that their state program can be no more stringent than the federal regulations. In those cases, the EPA anticipates that, if required by state law, the changes being proposed today, if finalized, will be incorporated (or possibly adopted by authorized state air programs) consistent with the state's laws and administrative procedures.

### **H. Cost and Benefits of the Proposed Rule**

The RCRA aspects of this proposed rule do not directly invoke any costs (excluding minor administrative burden/cost), or benefits. Any RCRA related costs to the regulated community, and corresponding benefits to human health and the environment, have been considered as part of the current CISWI action, and the corresponding CISWI and Boiler MACT (area source and major source) final rules. As such, the Agency has not prepared a

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

separate cost-benefit assessment in support of this part of the proposal. Consequently, any potential costs or benefits, including impacts to small entities, indirectly associated with the RCRA aspects of this proposal are addressed in the corresponding impacts assessment prepared in support of the CISWI part of this action.

### **III. Statutory and Executive Order Reviews**

#### A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is a "significant regulatory action" because it may raise novel legal or policy issues. Accordingly, the EPA submitted this action to OMB for review under Executive Order 12866 and Executive Order 13563 (76 FR 3821, January 21, 2011). Any changes made in response to OMB recommendations have been documented in the docket for this action.

#### B. Paperwork Reduction Act

This proposed rule does not impose any new information collection burden. However, OMB has previously approved the information collection requirements contained in the existing CISWI and NHSM<sup>62</sup> regulations (40 CFR part 60, subparts CCCC and

---

<sup>62</sup> Identification of Non-Hazardous Secondary Materials That Are Solid Waste, Final Rule. March 11, 2011.

DDDD, and 40 CFR part 241) under the provisions of the PRA, 44 U.S.C. 3501, et seq., and has been assigned EPA ICR number 2384.03 for subpart CCCC, 40 CFR part 60, EPA ICR number 2385.03 for subpart DDDD, 40 CFR part 60, and EPA ICR number 2382.03 for 40 CFR part 241.

This action is believed to result in no changes to the information collection requirements of the final NHSM rule and will have no impact on the information collection estimate of project cost and hour burden made and approved by OMB. Due to changes in the CISWI inventory and monitoring requirements of the CISWI rule, the information collection estimate of project cost and hour burden have been revised. Therefore, only the CISWI ICR has been revised. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9.

### C. Regulatory Flexibility Act

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

For purposes of assessing the impacts of the rule on small entities, small entity is defined as: (1) A small business as



defined by the SBA's regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; or (3) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This proposed rule will not impose any new requirements on any entities because it does not impose any additional regulatory requirements relative to those specified in the March 2011 final CISWI and NHSM rules. The March 2011 final CISWI and NHSM rules were both certified as not having a significant economic impact on a substantial number of small entities. In this proposed action, there are three fewer small entities in the CISWI than in the March 2011 final CISWI rule, as discussed in the "Economic Impact Analysis: Reconsideration Proposal Inputs Comparison" memorandum in the CISWI docket. We continue to be interested in the potential impacts of the proposed rule on small entities and welcome comments on issues related to such impacts.

D. Unfunded Mandates Reform Act

This proposed 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 one year. This rule proposes amendments to the final CISWI rule provisions and technical clarifications to the final NHSM rule. Thus, this rule is not subject to the requirements of sections 202 or 205 of UMRA. However, the final CISWI rule contains 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. Accordingly, we have prepared under section 202 of the UMRA a written statement, which is summarized in the preamble to the final CISWI rule (76 FR 15747).

This action is not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments.

#### E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This proposed rule will not impose direct compliance

costs on state or local governments and will not preempt state law. Thus, Executive Order 13132 does not apply to this action.

In the spirit of Executive Order 13132 and consistent with the EPA policy to promote communications between the EPA and state and local governments, the EPA specifically solicited comment on the proposed CISWI and NHSM regulations from state and local officials.

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

This action does not have tribal implications, as specified in Executive Order 13175, (65 FR 67249; November 9, 2000). The EPA is not aware of any CISWI in Indian country or owned or operated by Indian tribal governments. The CISWI aspects of this rule may, however, invoke minor indirect tribal implications to the extent that entities generating solid wastes on tribal lands could be affected. However, any indirect NHSM impacts that may occur as a result of the CISWI action are expected to be negligible due to the very limited focus of the CISWI part of this rule. Thus, Executive Order 13175 does not apply to this action.

The EPA specifically solicits additional comment on this proposed action from tribal officials.

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

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

The EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying to those regulatory actions that concern 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 proposed rule is not subject to Executive Order 13045 because it is based solely on technology performance and technical corrections.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a "significant energy action" as defined in Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not likely to result in a significant adverse effect on the supply, distribution, or use of energy. The EPA estimates that the requirements in this rule would cause most CISWI in the ERU and waste-burning kiln subcategories to modify existing air pollution control devices (e.g., increase the horsepower of their wet scrubbers) or install and operate new control devices, resulting in approximately 242,283 MW-hours per year of additional electricity being used.

Given the negligible change in energy consumption expected to result from this rule, the EPA does not expect any significant price increase for any energy type. The cost of energy distribution should not be affected by this rule at all since the rule would not affect energy distribution facilities.

We also expect that any impacts on the import of foreign energy supplies, or any other adverse outcomes that may occur with regards to energy supplies, would not be significant. We, therefore, conclude that if there were to be any adverse energy effects associated with this rule, they would be minimal.

#### I. National Technology Transfer and Advancement Act

Section 12(d) of the NTTAA of 1995, Public Law No. 104-113, 12(d) (15 U.S.C. 272 note) directs the EPA to use VCS in its regulatory activities, unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by VCS bodies. The NTTAA directs the EPA to provide Congress, through OMB, explanations when the agency decides not use available and applicable VCS.

This proposed rulemaking does not involve any revisions to the technical standards or test methods required in the final CISWI rule. Therefore, the EPA did not reconsider the use of any VCS for this proposal.

#### J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994) establishes federal executive policy on EJ. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make EJ part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies and activities on minority populations and low-income populations in the United States.

The EPA has determined that this proposed rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population. The amendments do not relax the control measures on sources regulated by the CISWI rule, and, therefore, will not cause emissions increases from these sources. The March 2011 final CISWI rule will reduce emissions of all the listed HAP emitted from this source. Furthermore, the targeted revisions proposed in the NHSM section of this rule are designed to improve the management of these materials, thereby helping to further ensure against any disproportionately high and adverse human health or environmental effects on minority or low-income populations.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.



**List of Subjects 40 CFR Part 60**

Environmental protection, Administrative practice and procedure, Air pollution control, Hazardous substances.

**40 CFR Part 241**

Environmental protection, air pollution control, waste treatment and disposal.

---

Dated:

---

Lisa P. Jackson,  
Administrator.



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

**PART 60—[AMENDED]**

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

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

2. Section 60.17 is amended by:

a. Adding paragraph (a) (93).

b. Revising paragraph (h) (4).

c. Adding paragraph (o).

§60.17 Incorporations by reference.

\* \* \* \* \*

(a) \* \* \*

(93) ASTM D6784-02 (Reapproved 2008) Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method), approved April 1, 2008, IBR approved for §§60.2165(j), 60.2730(j), tables 1, 5, 6 and 8 to subpart CCCC, and tables 2, 6, 7, and 9 to subpart DDDD, §§60.4900(b) (4) (v), 60.5220(b) (4) (v), tables 1 and 2 to subpart LLLL, and tables 2 and 3 to subpart MMMM.

\* \* \* \* \*

(h) \* \* \*

(4) ANSI/ASME PTC 19.10-1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus], IBR approved for §60.56c(b)(4), §60.63(f)(2) and (f)(4), §60.106(e)(2), §§60.104a(d)(3), (d)(5), (d)(6), (h)(3), (h)(4), (h)(5), (i)(3), (i)(4), (i)(5), (j)(3), and (j)(4), §60.105a(d)(4), (f)(2), (f)(4), (g)(2), and (g)(4), §60.106a(a)(1)(iii), (a)(2)(iii), (a)(2)(v), (a)(2)(viii), (a)(3)(ii), and (a)(3)(v), and §60.107a(a)(1)(ii), (a)(1)(iv), (a)(2)(ii), (c)(2), (c)(4), and (d)(2), tables 1 and 3 of subpart EEEE, tables 2 and 4 of subpart FFFF, table 2 of subpart JJJJ, §§60.4415(a)(2) and (a)(3), 60.2145(s)(1)(i) and (ii), 60.2145(t)(1)(ii), 60.2145(t)(5)(i), 60.2710(s)(1)(i) and (ii), 60.2710(t)(1)(ii), 60.2710(t)(5)(i), 60.2710(w)(3), 60.2730(q)(3), 60.4900(b)(4)(vii) and (viii), 60.4900(b)(5)(i), 60.5220(b)(4)(vii) and (viii), 60.5220(b)(5)(i), tables 1 and 2 to subpart LLLL, and tables 2 and 3 to subpart MMMM.

\* \* \* \* \*

(o) The following material is available from the U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, (202) 272-0167, <http://www.epa.gov>.

(1) Office of Air Quality Planning and Standards (OAQPS) Fabric Filter Bag Leak Detection Guidance, EPA-454/R-98-015, September 1997, IBR approved for §§60.2145(r)(2), 60.2710(r)(2), 60.4905(b)(3)(i)(B), and 60.5225(b)(3)(i)(B).

(2) [Reserved]

3. Revise the heading for subpart CCCC to read as follows:

**Subpart CCCC-Standards of Performance for Commercial and Industrial Solid Waste Incineration Units**

\* \* \* \* \*

4. Section 60.2005 is revised to read as follows:

§60.2005 When does this subpart become effective?

This subpart takes effect on [THE DATE 6 MONTHS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]. Some of the requirements in this subpart apply to planning 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.

5. Section 60.2015 is revised to read as follows:

§60.2015 What is a new incineration unit?

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

(1) A CISWI unit that commenced construction after [THE DATE OF 60 DAYS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

(2) A CISWI unit that commenced reconstruction or modification after [THE DATE 6 MONTHS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

(b) This subpart does not affect your CISWI unit if you make physical or operational changes to your incineration unit to comply with 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.

6. Section 60.2020 is amended by:

§60.2020 What combustion units are exempt from this subpart?

- a. Revising the introductory text.
- b. Removing and reserving paragraph (b).
- c. Revising paragraph (c).
- d. Revising paragraphs (e) (3), (f) (3), (g), (m) and (n).
- e. Removing and reserving paragraphs (j), (k), and (l).
- f. Removing paragraph (o).

§60.2020 What combustion units are exempt from this subpart?

This subpart exempts the types of units described in paragraphs (a), (c) through (i) and (n) of this section, but some units are required to provide notifications. Air curtain incinerators are exempt from the requirements in this subpart except for the provisions in §§60.2242, 60.2250, and 60.2260.

\* \* \* \* \*

(b) [Reserved]

(c) Municipal waste combustion units. Incineration units that are subject to subpart Ea of this part (Standards of Performance for Municipal Waste Combustors); subpart Eb of this part (Standards of Performance for Large Municipal Waste Combustors); subpart Cb of this part (Emission Guidelines and Compliance Time for Large Municipal Combustors); subpart AAAA of this part (Standards of Performance for Small Municipal Waste Combustion Units); or subpart BBBB of this part (Emission Guidelines for Small Municipal Waste Combustion Units).

\* \* \* \* \*

(e) \* \* \*

(3) You submit a request to the Administrator for a determination that the qualifying cogeneration facility is combusting homogenous waste as that term is defined in §60.2265. The request must include information sufficient to document that the unit meets the criteria of the definition of a small power production facility and that the waste material the unit is proposed to burn is homogeneous.

\* \* \* \* \*

(f) \* \* \*

(3) You submit a request to the Administrator for a determination that the qualifying cogeneration facility is combusting homogenous waste as that term is defined in §60.2265.

The request must include information sufficient to document that the unit meets the criteria of the definition of a cogeneration facility and that the waste material the unit is combusting is homogeneous.

(g) Hazardous waste combustion units. Units for which you are required to get a permit under section 3005 of the Solid Waste Disposal Act.

\* \* \* \* \*

(j) [Reserved]

(k) [Reserved]

(l) [Reserved]

(m) Sewage treatment plants. Incineration units regulated under subpart O of this part (Standards of Performance for Sewage Treatment Plants).

(n) Sewage sludge incineration units. Incineration units combusting sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter that are subject to subpart LLLL of this part (Standards of Performance for Sewage Sludge Incineration Units) or subpart MMMM of this part (Emission Guidelines for Sewage Sludge Incineration Units).

7. Section 60.2025 is removed.

8. Section 60.2030 is amended by:

a. Revising paragraph (c) introductory text.

b. Removing and reserving paragraph (c) (5).

c. Adding paragraphs (c) (8) through (c) (10).

§60.2030 Who implements and enforces this subpart?

\* \* \* \* \*

(c) The authorities that will not be delegated to state, local, or tribal agencies are specified in paragraphs (c) (1) through (4) and (c) (6) through (10) of this section.

\* \* \* \* \*

(5) [Reserved]

\* \* \* \* \*

(8) Approval of alternative opacity emission limits in §60.2105 under §60.11(e) (6) through (e) (8).

(9) Performance test and data reduction waivers under §60.2125(j), 60.8(b) (4) and (5).

(10) Determination of whether a qualifying small power production facility or cogeneration facility under §60.2020(e) or (f) is combusting homogenous waste as that term is defined in §60.2265.

9. Section 60.2045 is revised to read as follows:

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

(b) You must prepare a siting analysis for CISWI units that commenced construction after June 4, 2010, or that commenced reconstruction or modification after [THE DATE 6 MONTHS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

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

\* \* \* \* \*

10. Section 60.2070 is amended by revising paragraph (c) (1) (vii) to read as follows:

§60.2070 What are the operator training and qualification requirements?

\* \* \* \* \*

(c) \* \* \*

(1) \* \* \*

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

\* \* \* \* \*

11. Section 60.2085 is amended by revising paragraph (d) to read as follows:

§60.2085 How do I maintain my operator qualification?

\* \* \* \* \*

(d) Prevention and correction of malfunctions or conditions that may lead to malfunction.

\* \* \* \* \*

12. Section 60.2105 is revised to read as follows:

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



(a) You must meet the emission limitations for each CISWI unit, including bypass stack or vent, specified in table 1 of this subpart or tables 5 through 8 of this subpart by the applicable date in §60.2140. You must be in compliance with the emission limitations of this subpart that apply to you at all times.

(b) An incinerator unit that commenced construction after November 30, 1999, but no later than June 4, 2010, or that commenced reconstruction or modification on or after June 1, 2001, but no later than [THE DATE 6 MONTHS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER] must meet the more stringent emission limit for the respective pollutant in table 1 of this subpart or table 6 of subpart DDDD.

13. Section 60.2110 is amended by:

- a. Revising paragraph (a) introductory text.
- b. Revising paragraphs (a)(2) through (a)(4).
- c. Adding paragraphs (d) through (g).

§60.2110 What operating limits must I meet and by when?

(a) If you use a wet scrubber(s) to comply with the emission limitations, you must establish operating limits for up to 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.

\* \* \* \* \*

(2) Minimum pressure drop across the wet particulate matter scrubber, which is calculated as the lowest 1-hour 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 fan for the wet scrubber, which is calculated as the lowest 1-hour average amperage to the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.

(3) Minimum scrubber liquid flow rate, which is calculated as the lowest 1-hour average liquid flow rate at the inlet to the wet acid gas or particulate matter scrubber measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(4) Minimum scrubber liquor pH, which is calculated as the lowest 1-hour average liquor pH at the inlet to the wet acid gas scrubber measured during the most recent performance test demonstrating compliance with the hydrogen chloride emission limitation.

\* \* \* \* \*

(d) If you use an electrostatic precipitator to comply with the emission limitations, you must measure the (secondary) voltage and amperage of the electrostatic precipitator

collection plates during the particulate matter performance test. Calculate the average electric power value (secondary voltage x secondary current = secondary electric power) for each test run. The operating limit for the electrostatic precipitator is calculated as the lowest 1-hour average secondary electric power measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.

(e) If you use activated carbon sorbent injection to comply with the emission limitations, you must measure the sorbent flow rate during the performance testing. The operating limit for the carbon sorbent injection is calculated as the lowest 1-hour average sorbent flow rate measured during the most recent performance test demonstrating compliance with the mercury emission limitations.

(f) If you use selective noncatalytic reduction to comply with the emission limitations, you must measure the charge rate, the secondary chamber temperature (if applicable to your CISWI unit), and the reagent flow rate during the nitrogen oxides performance testing. The operating limits for the selective noncatalytic reduction are calculated as the lowest 1-hour average charge rate, secondary chamber temperature, and reagent flow rate measured during the most recent performance test

demonstrating compliance with the nitrogen oxides emission limitations.

(g) If you do not use a wet scrubber, electrostatic precipitator, or fabric filter to comply with the emission limitations, and if you do not determine compliance with your particulate matter emission limitation with a particulate matter CEMS, you must maintain opacity to less than or equal to 10 percent opacity (1-hour block average).

14. Section 60.2115 is revised to read as follows:

§60.2115 What if I do not use a wet scrubber, fabric filter, activated carbon injection, selective noncatalytic reduction, or an electrostatic precipitator to comply with the emission limitations?

If you use an air pollution control device other than a wet scrubber, activated carbon injection, selective noncatalytic reduction, fabric filter, or an electrostatic precipitator or limit emissions in some other manner, including material balances, to comply with the emission limitations under §60.2105, you must petition the EPA 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.

15. Section 60.2120 is revised to read as follows:

§60.2120 Affirmative Defense for Exceedance of an Emission Limit During Malfunction.

In response to an action to enforce the standards set forth in paragraph §60.2105, you may assert an affirmative defense to

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.  
We have taken steps to ensure the accuracy of this version, but it is not the official version.

a claim for civil penalties for exceedances of such standards that are caused by malfunction, as defined at 40 CFR 60.2. Appropriate penalties may be assessed, however, if you fail to meet your burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(a) To establish the affirmative defense in any action to enforce such a limit, you must timely meet the notification requirements in paragraph (b) of this section, and must prove by a preponderance of evidence that:

(1) The excess emissions:

(i) Were caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner; and

(ii) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and

(iii) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and

(iv) Were not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(2) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded. Off-shift

and overtime labor were used, to the extent practicable to make these repairs; and

(3) The frequency, amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions; and

(4) If the excess emissions resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(5) All possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment and human health; and

(6) All emissions and/or parameter monitoring and systems, as well as control systems, were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

(7) All of the actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs; and

(8) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions; and

(9) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the excess emissions

resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of excess emissions that were the result of the malfunction.

(b) Notification. The owner or operator of the facility experiencing an exceedance of its emission limit(s) during a malfunction shall notify the Administrator by telephone or facsimile (FAX) transmission as soon as possible, but no later than two business days after the initial occurrence of the malfunction, if it wishes to avail itself of an affirmative defense to civil penalties for that malfunction. The owner or operator seeking to assert an affirmative defense shall also submit a written report to the Administrator within 45 days of the initial occurrence of the exceedance of the standard in §60.2105 to demonstrate, with all necessary supporting documentation, that it has met the requirements set forth in paragraph (a) of this section. The owner or operator may seek an extension of this deadline for up to 30 additional days by submitting a written request to the Administrator before the expiration of the 45 day period. Until a request for an extension has been approved by the Administrator, the owner or operator is subject to the requirement to submit such report within 45 days of the initial occurrence of the exceedance.

16. Section 60.2125 is amended by:

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.



a. Revising paragraph (c).

b. Revising paragraphs (g) (1) and (g) (2).

c. Adding paragraphs (h) and (i) to read as follows:

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

\* \* \* \* \*

(c) All performance tests must be conducted using the minimum run duration specified in table 1 of this subpart or tables 5 through 8 of this subpart.

\* \* \* \* \*

(g) \* \* \*

(1) Measure the concentration of each dioxin/furan tetra-through octa-chlorinated isomer emitted using EPA Method 23 at 40 CFR part 60, appendix A-7.

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

\* \* \* \* \*

(h) Method 22 at 40 CFR part 60, appendix A-7 of this part must be used to determine compliance with the fugitive ash emission limit in table 1 of this subpart or tables 5 through 8 of this subpart.

(i) If you have an applicable opacity operating limit, you must determine compliance with the opacity limit using Method 9 at 40 CFR part 60, appendix A-4 of this part, based on three 1-hour blocks consisting of ten 6-minute average opacity values, unless you are required to install a continuous opacity monitoring system, consistent with §§60.2145 and 60.2165.

17. Section 60.2130 is revised to read as follows:

§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 or tables 5 through 8 of this subpart.

18. Section 60.2135 is revised to read as follows:

§60.2135 How do I demonstrate initial compliance with the emission limitations and establish the operating limits?

You must conduct a performance test, as required under §§60.2125 and 60.2105 to determine compliance with the emission limitations in table 1 of this subpart or tables 5 through 8 of this subpart, to establish compliance with any opacity operating limit in §60.2110, and to establish operating limits using the procedures in §§60.2110 or 60.2115. The performance test must be conducted using the test methods listed in table 1 of this subpart or tables 5 through 8 of this subpart and the procedures in §60.2125. The use of the bypass stack during a performance test shall invalidate the performance test. You must conduct a

performance evaluation of each continuous monitoring system within 60 days of installation of the monitoring system.

19. Section 60.2140 is revised to read as follows:

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

(a) 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.

(b) If you commence or recommence combusting a solid waste at an existing combustion unit at any commercial or industrial facility, and you conducted a test consistent with the provisions of this subpart while combusting the solid waste within the 6 months preceding the reintroduction of that solid waste in the combustion chamber, you do not need to retest until 6 months from the date you reintroduce that solid waste.

(c) If you commence combusting or recommence combusting a solid waste at an existing combustion unit at any commercial or industrial facility and you have not conducted a performance test consistent with the provisions of this subpart while combusting the given solid waste within the 6 months preceding the reintroduction of that solid waste in the combustion chamber, you must conduct a performance test within 60 days commencing or recommencing solid waste combustion.

20. Section 60.2141 is added to read as follows:

§60.2141 By what date must I conduct the initial air pollution control device inspection?

(a) The initial air pollution control device inspection must be conducted within 60 days after installation of the control device and the associated CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after the device's initial startup.

(b) Within 10 operating days following an air pollution control device inspection, all necessary repairs must be completed unless the owner or operator obtains written approval from the state agency establishing a date whereby all necessary repairs of the designated facility must be completed.

21. Section 60.2145 is revised to read as follows:

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

(a) Compliance with standards.

(1) The emission standards and operating requirements set forth in this subpart apply at all times.

(2) If you cease combusting solid waste, you may opt to remain subject to the provisions of this subpart. Consistent with the definition of CISWI unit, you are subject to the requirements of this subpart at least 6 months following the last date of solid waste combustion. Solid waste combustion is

ceased when solid waste is not in the combustion chamber (i.e., the solid waste feed to the combustor has been cut off for a period of time not less than the solid waste residence time).

(3) If you cease combusting solid waste, you must be in compliance with any newly applicable standards on the effective date of the waste-to-fuel switch. The effective date of the waste-to-fuel switch is a date selected by you, that must be at least 6 months from the date that you ceased combusting solid waste, consistent with §60.2145(a)(2). Your source must remain in compliance with this subpart until the effective date of the waste-to-fuel switch.

(4) If you own or operate an existing commercial or industrial combustion unit that combusted a fuel or non-waste material, and you commence or recommence combustion of solid waste, you are subject to the provisions of this subpart as of the first day you introduce or reintroduce solid waste to the combustion chamber, and this date constitutes the effective date of the fuel-to-waste switch. You must complete all initial compliance demonstrations for any section 112 standards that are applicable to your facility before you commence or recommence combustion of solid waste. You must provide 30 days prior notice of the effective date of the waste-to-fuel switch. The notification must identify:

(i) The name of the owner or operator of the CISWI unit, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

(ii) The currently applicable subcategory under this subpart, and any 40 CFR part 63 subpart and subcategory that will be applicable after you cease combusting solid waste;

(iii) The fuel(s), non-waste material(s) and solid waste(s) the CISWI unit is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting;

(iv) The date on which you became subject to the currently applicable emission limits;

(v) The date upon which you will cease combusting solid waste, and the date (if different) that you intend for any new requirements to become applicable (i.e., the effective date of the waste-to-fuel switch), consistent with (2) and (3) above.

(5) All air pollution control equipment necessary for compliance with any newly applicable emissions limits which apply as a result of the cessation or commencement or recommencement of combusting solid waste must be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch.

(6) All monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a

result of the cessation or commencement or recommencement of combusting solid waste must be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch. All calibration and drift checks must be performed as of the effective date of the waste-to-fuel, or fuel-to-waste switch. Relative accuracy tests must be performed as of the performance test deadline for PM CEMS. Relative accuracy testing for other CEMS need not be repeated if that testing was previously performed consistent with Clean Air Act section 112 monitoring requirements or monitoring requirements under this subpart.

(b) You must conduct an annual performance test for the pollutants listed in table 1 of this subpart or tables 5 through 8 of this subpart and opacity for each CISWI unit as required under §60.2125. The annual performance test must be conducted using the test methods listed in table 1 of this subpart or tables 5 through 8 of this subpart and the procedures in §60.2125. Annual performance tests are not required if you use CEMS or continuous opacity monitoring systems to determine compliance.

(c) You must continuously monitor the operating parameters specified in §60.2110 or established under §60.2115 and as specified in §60.2170. Use 3-hour block average values to determine compliance (except for baghouse leak detection system

alarms) unless a different averaging period is established under §60.2115. Operation above the established maximum, below the established minimum, or outside the allowable range of the operating limits specified in paragraph (a) of this section constitutes a deviation from your operating limits established under this subpart, except during performance tests conducted to determine compliance with the emission and operating limits or to establish new operating limits . Operating limits are confirmed or reestablished during performance tests.

(d) You must burn only the same types of waste and fuels used to establish subcategory applicability (for energy recovery units) and operating limits during the performance test.

(e) For energy recovery units, incinerators, and small remote units, you must perform an annual visual emissions test for ash handling.

(f) For energy recovery units, you must conduct an annual performance test for opacity using EPA Reference Method 9 at 40 CFR part 60 (except where particulate matter CEMS or continuous parameter monitoring system are used) and the pollutants listed in table 6 of this subpart.

(g) You may elect to demonstrate continuous compliance with the carbon monoxide emission limit using a carbon monoxide CEMS according to the following requirements:



(1) You must measure emissions according to §60.13 to calculate 1-hour arithmetic averages, corrected to 7 percent oxygen. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. You must demonstrate initial compliance with the carbon monoxide emissions limit using a 30-day rolling average of these 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, calculated using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7 of this part.

(2) Operate the carbon monoxide CEMS in accordance with the requirements of performance specification 4A of appendix B of this part and quality assurance procedure 1 of appendix F of this part.

(h) For waste-burning kilns, demonstrate continuous compliance with the particulate matter emissions limit using a particulate matter CEMS according to the procedures in §60.2165(n). Energy recovery units with design heat input capacities greater than or equal to 250 MMBtu/hr may elect to demonstrate continuous compliance with the particulate matter emissions limit using a particulate matter CEMS according to the procedures in §60.2165(n) instead of the particulate matter

continuous parameter monitoring system (CPMS) specified in §60.2145.

(i) For energy recovery units with design heat input capacities greater than or equal to 10 MMBtu/hour and less than 250 MMBtu/hr, you must install, operate, certify and maintain a continuous opacity monitoring system (COMS) according to the procedures in §60.2165.

(j) For waste-burning kilns, you must conduct an annual performance test for cadmium, lead, dioxins/furans and hydrogen chloride as listed in table 7 of this subpart. You must determine compliance with hydrogen chloride using a hydrogen chloride CEMS if you do not use an acid gas wet scrubber. You must determine compliance with nitrogen oxides, sulfur dioxide, carbon monoxide, and particulate matter using CEMS. You must determine compliance with the mercury emissions limit using a mercury CEMS according to the following requirements:

(1) Operate a CEMS system in accordance with performance specification 12A of 40 CFR part 60, appendix B or a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR part 60, appendix B. The duration of the performance test must be a calendar month. For each calendar month in which the waste-burning kiln operates, hourly mercury concentration data, and stack gas volumetric flow rate data must be obtained.

(2) Owners or operators using a mercury CEMS must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A of 40 CFR part 60, appendix B, and quality assurance procedure 6 of 40 CFR part 60, appendix F.

(3) The owner or operator of a waste-burning kiln must demonstrate initial compliance by operating a mercury CEMS while the raw mill of the in-line kiln/raw mill is operating under normal conditions and while the raw mill of the in-line kiln/raw mill is not operating.

(k) If you use an air pollution control device to meet the emission limitations in this subpart, you must conduct an initial and annual inspection of the air pollution control device. The inspection must include, at a minimum, the following:

(1) Inspect air pollution control device(s) for proper operation.

(2) Develop a site-specific monitoring plan according to the requirements in paragraph (1) of this section. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under §60.13(i).

(1) For each continuous monitoring system required in this section, you must develop and submit to the EPA Administrator for approval a site-specific monitoring plan according to the requirements of this paragraph (1) that addresses paragraphs (1)(1)(i) through (vi) of this section.

(1) You must submit this site-specific monitoring plan at least 60 days before your initial performance evaluation of your continuous monitoring system.

(i) Installation of the continuous monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device).

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer and the data collection and reduction systems.

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations).

(iv) Ongoing operation and maintenance procedures in accordance with the general requirements of §60.11(d).

(v) Ongoing data quality assurance procedures in accordance with the general requirements of §60.13.

(vi) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §60.7(b), (c), (c)(1), (c)(4), (d), (e), (f), and (g).

(2) You must conduct a performance evaluation of each continuous monitoring system in accordance with your site-specific monitoring plan.

(3) You must operate and maintain the continuous monitoring system in continuous operation according to the site-specific monitoring plan.

(m) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (1) and (m)(1) through (4) of this section.

(1) Install the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) Use a flow sensor with a measurement sensitivity of no greater than 2 percent of the expected process flow rate.

(3) Minimize the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) Conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(n) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (1) and (n)(1) through (6) of this section.

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., PM scrubber pressure drop).

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.

(4) Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (e.g., check for pressure tap pluggage daily).

(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance

requirements in your monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(o) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (1) and (o) (1) through (4) of this section.

(1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH.

(2) Ensure the sample is properly mixed and representative of the fluid to be measured.

(3) Conduct a performance evaluation of the pH monitoring system in accordance with your monitoring plan at least once each process operating day.

(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than quarterly.

(p) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator, you must meet the requirements in paragraphs (1) and (p) (1) through (2) of this section.

(1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates.

(2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(q) If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (1) and (q)(1) and (2) of this section.

(1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate.

(2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(r) If you elect to use a fabric filter bag leak detection system 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(1) and (r)(1) through (5) of this section.

(1) Install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute particulate matter loadings for each exhaust stack, roof vent,



or compartment (e.g., for a positive pressure fabric filter) of the fabric filter.

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

(3) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see §60.17).

(4) Use a bag leak detection system equipped with a device to continuously record the output signal from the sensor.

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

(s) For facilities using a CEMS to demonstrate compliance with the sulfur dioxide emission limit, compliance with the sulfur dioxide emission limit may be demonstrated by using the CEMS specified in §60.2165 to measure sulfur dioxide and calculating a 30-day rolling average emission concentration using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, Appendix A-7 of this part. The sulfur

dioxide CEMS must be operated according to performance specification 2 in appendix B of this part and must follow the procedures and methods specified in this paragraph (s). For sources that have actual inlet emissions less than 100 parts per million dry volume, the relative accuracy criterion for inlet sulfur dioxide CEMS should be no greater than 20 percent of the mean value of the reference method test data in terms of the units of the emission standard, or 5 parts per million dry volume absolute value of the mean difference between the reference method and the CEMS, whichever is greater.

(1) During each relative accuracy test run of the CEMS required by performance specification 2 in appendix B of this part, collect sulfur dioxide and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the continuous emissions monitors and the test methods specified in paragraphs (s)(1)(i) and (s)(1)(ii) of this section.

(i) For sulfur dioxide, EPA Reference Method 6 or 6C, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17) must be used.

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17), must be used.

(2) The span value of the CEMS at the inlet to the sulfur dioxide control device must be 125 percent of the maximum

estimated hourly potential sulfur dioxide emissions of the unit subject to this rule. The span value of the CEMS at the outlet of the sulfur dioxide control device must be 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the unit subject to this rule.

(3) Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with procedure 1 in appendix F of this part.

(t) For facilities using a CEMS to demonstrate continuous compliance with the nitrogen oxides emission limit, compliance with the nitrogen oxides emission limit may be demonstrated by using the CEMS specified in §60.2165 to measure nitrogen oxides and calculating a 30-day rolling average emission concentration using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7 of this part. The nitrogen oxides CEMS must be operated according to performance specification 2 in appendix B of this part and must follow the procedures and methods specified in paragraphs (t)(1) through (t)(5) of this section.

(1) During each relative accuracy test run of the CEMS required by performance specification 2 of appendix B of this part, collect nitrogen oxides and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with

both the CEMS and the test methods specified in paragraphs

(t)(1)(i) and (t)(1)(ii) of this section.

(i) For nitrogen oxides, EPA Reference Method 7 or 7E at 40 CFR part 60, appendix A-4 must be used.

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B at 40 CFR part 60, appendix A-3, or as an alternative ANSI/ASME PTC 19-10.1981 (incorporated by reference, see §60.17), as applicable, must be used.

(2) The span value of the CEMS must be 125 percent of the maximum estimated hourly potential nitrogen oxide emissions of the unit.

(3) Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with procedure 1 in appendix F of this part.

(4) The owner or operator of an affected facility may request that compliance with the nitrogen oxides emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. If carbon dioxide is selected for use in diluent corrections, the relationship between oxygen and carbon dioxide levels must be established during the initial performance test according to the procedures and methods specified in paragraphs (t)(4)(i) through (t)(4)(iv) of this section. This relationship may be re-established during performance compliance tests.

(i) The fuel factor equation in Method 3B must be used to determine the relationship between oxygen and carbon dioxide at a sampling location. Method 3A or 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17), as applicable, must be used to determine the oxygen concentration at the same location as the carbon dioxide monitor.

(ii) Samples must be taken for at least 30 minutes in each hour.

(iii) Each sample must represent a 1-hour average.

(iv) A minimum of three runs must be performed.

(u) For facilities using a CEMS to demonstrate continuous compliance with any of the emission limits of this subpart, you must complete the following:

(1) Demonstrate compliance with the appropriate emission limit(s) using a 30-day rolling average, calculated using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7 of this part.

(2) Operate all CEMS in accordance with the applicable procedures under appendices B and F of this part.

(v) Use of the bypass stack at any time is an emissions standards deviation for particulate matter, HCl, Pb, Cd, Hg, NO<sub>x</sub>, SO<sub>2</sub>, and dioxin/furans.

(w) For energy recovery units with a design heat input capacity of 100 MMBtu per hour or greater that do not use a carbon monoxide CEMS, you must install, operate, and maintain a oxygen analyzer system as defined in §60.2265 according to the procedures in paragraphs (w) (1) through (4) of this section.

(1) The oxygen analyzer system must be installed by the initial performance test date specified in §60.2675.

(2) You must operate the oxygen trim system with the oxygen level set at the minimum percent oxygen by volume that is established as the operating limit for oxygen according to paragraph (w) (3) of this section.

(3) You must maintain the oxygen level such that it is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test.

(4) You must calculate and record a 30-day rolling average oxygen concentration using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 of Appendix A-7 of this part.

(x) For energy recovery units with design heat input capacities greater than or equal to 250 MMBtu/hour, you must install, certify, maintain, and operate a PM CPMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (x) (1) through (5) of this section. For other energy recovery units, you may elect to use PM CPMS operated in accordance with this section in lieu of

using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure)

(1) Install, certify, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with §60.2145(l) and (x)(1)(i) through (iii) of this section.

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, or beta attenuation of the exhaust gas or representative exhaust gas sample. The reportable measurement output from the PM CPMS may be expressed as milliamps, stack concentration, or other raw data signal.

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS must be capable of detecting and responding to particulate matter concentrations of no greater than 0.5 mg/actual cubic meter.

(3) Collect PM CPMS hourly average output data for all energy recovery unit operating hours. Express the PM CPMS output as millamps, PM concentration, or other raw data signal value.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy

recovery unit operating hours data (e.g., milliamps, PM concentration, raw data signal).

22. Section 60.2150 is revised to read as follows:

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

You must conduct annual performance tests between 11 and 13 months of the previous performance test.

23. Section 60.2151 is added to read as follows:

§60.2151 By what date must I conduct the annual air pollution control device inspection?

On an annual basis (no more than 12 months following the previous annual air pollution control device inspection), you must complete the air pollution control device inspection as described in §60.2141.

24. Section 60.2155 is revised to read as follows:

§60.2155 May I conduct performance testing less often?

(a) You must conduct annual performance tests according to the schedule specified in §60.2150, with the following exceptions:

(1) You may conduct a repeat performance test at any time to establish new values for the operating limits to apply from that point forward, as specified in §60.2160. The Administrator may request a repeat performance test at any time.



(2) You must repeat the performance test within 60 days of a process change, as defined in §60.2265.

(3) If the initial or any subsequent performance test for any pollutant in table 1 or tables 5 through 8 of this subpart, as applicable, demonstrates that the emission level for the pollutant is no greater than the emission level specified in paragraph (a)(3)(i) or (a)(3)(ii) of this section, as applicable, and you are not required to conduct a performance test for the pollutant in response to a request by the Administrator in paragraph (a)(1) of this section or a process change in paragraph (a)(2) of this section, you may elect to skip conducting a performance test for the pollutant for the next 2 years. You must conduct a performance test for the pollutant during the third year and no more than 37 months following the previous performance test for the pollutant. For cadmium and lead, both cadmium and lead must be emitted at emission levels no greater than their respective emission levels specified in paragraph (a)(3)(i) of this section for you to qualify for less frequent testing under this paragraph.

(i) For particulate matter, hydrogen chloride, mercury, nitrogen oxides, sulfur dioxide, cadmium, lead and dioxins/furans, the emission level equal to 75 percent of the applicable emission limit in table 1 or tables 5 through 8 of this subpart, as applicable, to this subpart.

(ii) For fugitive emissions, visible emissions (of combustion ash from the ash conveying system) for 2 percent of the time during each of the three 1-hour observations periods.

(4) If you are conducting less frequent testing for a pollutant as provided in paragraph (a) (3) of this section and a subsequent performance test for the pollutant indicates that your CISWI unit does not meet the emission level specified in paragraph (a) (3) (i) or (a) (3) (ii) of this section, as applicable, you must conduct annual performance tests for the pollutant according to the schedule specified in paragraph (a) of this section until you qualify for less frequent testing for the pollutant as specified in paragraph (a) (3) of this section.

(b) [Reserved]

25. Section 60.2165 is amended by:

a. Revising paragraph (b) (6).

b. Revising paragraph (c).

c. Adding paragraphs (d) through (r) to read as follows:

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

\* \* \* \* \*

(b) \* \* \*

(6) The bag leak detection system must be equipped with an alarm system that will alert automatically an operator when an increase in relative particulate matter emissions over a preset

level is detected. The alarm must be located where it is observed easily by plant operating personnel.

\* \* \* \* \*

(c) If you are using something other than a wet scrubber, activated carbon, selective non-catalytic reduction, or an electrostatic precipitator 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.

(d) If you use activated carbon injection to comply with the emission limitations in this subpart, you must measure the minimum mercury sorbent flow rate once per hour.

(e) If you use selective noncatalytic reduction to comply with the emission limitations, you must complete the following:

(1) Following the date on which the initial performance test is completed or is required to be completed under §60.2125, whichever date comes first, ensure that the affected facility does not operate above the maximum charge rate, or below the minimum secondary chamber temperature (if applicable to your CISWI unit) or the minimum reagent flow rate measured as 3-hour block averages at all times.

(2) Operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature and

below the minimum reagent flow rate simultaneously constitute a violation of the nitrogen oxides emissions limit.

(f) If you use an electrostatic precipitator to comply with the emission limits of this subpart, you must monitor the secondary power to the electrostatic precipitator collection plates and maintain the 3-hour block averages at or above the operating limits established during the mercury or particulate matter performance test.

(g) For waste-burning kilns not equipped with a wet scrubber, in place of hydrogen chloride testing with EPA Method 321 at 40 CFR part 63, appendix A, an owner or operator must install, calibrate, maintain, and operate a CEMS for monitoring hydrogen chloride emissions discharged to the atmosphere and record the output of the system. To demonstrate continuous compliance with the hydrogen chloride emissions limit for units other than waste-burning kilns not equipped with a wet scrubber, a facility may substitute use of a hydrogen chloride CEMS for conducting the hydrogen chloride annual performance test, monitoring the minimum hydrogen chloride sorbent flow rate, and monitoring the minimum scrubber liquor pH.

(h) To demonstrate continuous compliance with the particulate matter emissions limit, a facility may substitute use of a particulate matter CEMS for conducting the PM annual

performance test and monitoring the minimum pressure drop across the wet scrubber, if applicable.

(i) To demonstrate continuous compliance with the dioxin/furan emissions limit, a facility may substitute use of a continuous automated sampling system for the dioxin/furan annual performance test. You must record the output of the system and analyze the sample according to EPA Method 23 at 40 CFR part 60, appendix A-7 of this part. This option to use a continuous automated sampling system takes effect on the date a final performance specification applicable to dioxin/furan from continuous monitors is published in the Federal Register. The owner or operator who elects to continuously sample dioxin/furan emissions instead of sampling and testing using EPA Method 23 at 40 CFR part 60, appendix A-7 must install, calibrate, maintain, and operate a continuous automated sampling system and must comply with the requirements specified in §60.58b(p) and (q).

(j) To demonstrate continuous compliance with the mercury emissions limit, a facility may substitute use of a continuous automated sampling system for the mercury annual performance test. You must record the output of the system and analyze the sample at set intervals using any suitable determinative technique that can meet performance specification 12B. The owner or operator who elects to continuously sample mercury emissions instead of sampling and testing using EPA Reference Method 29 or

30B at 40 CFR part 60, appendix A-8 of this part, ASTM D6784-02 (Reapproved 2008) (incorporated by reference, see §60.17), or an approved alternative method for measuring mercury emissions, must install, calibrate, maintain, and operate a continuous automated sampling system and must comply with performance specification 12A and quality assurance procedure 5, as well as the requirements specified in §60.58b(p) and (q).

(k) To demonstrate continuous compliance with the nitrogen oxides emissions limit, a facility may substitute use of a CEMS for the nitrogen oxides annual performance test to demonstrate compliance with the nitrogen oxides emissions limits.

(1) Install, calibrate, maintain, and operate a CEMS for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 2 of appendix B of this part, the quality assurance procedure one of appendix F of this part and the procedures under §60.13 must be followed for installation, evaluation, and operation of the CEMS.

(2) Following the date that the initial performance test for nitrogen oxides is completed or is required to be completed under §60.2125, compliance with the emission limit for nitrogen oxides required under §60.52b(d) must be determined based on the 30-day rolling average of the hourly emission concentrations using CEMS outlet data. The 1-hour arithmetic averages must be

expressed in parts per million by volume (dry basis) and used to calculate the 30-day rolling average concentrations. The 1-hour arithmetic averages must be calculated using the data points required under §60.13(e) (2).

(1) To demonstrate continuous compliance with the sulfur dioxide emissions limit, a facility may substitute use of a continuous automated sampling system for the sulfur dioxide annual performance test to demonstrate compliance with the sulfur dioxide emissions limits.

(1) Install, calibrate, maintain, and operate a CEMS for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 2 of appendix B of this part, the quality assurance requirements of procedure one of appendix F of this part and procedures under §60.13 must be followed for installation, evaluation, and operation of the CEMS.

(2) Following the date that the initial performance test for sulfur dioxide is completed or is required to be completed under §60.2125, compliance with the sulfur dioxide emission limit may be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations using CEMS outlet data. The 1-hour arithmetic averages must be expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 30-day rolling average emission

concentrations and daily geometric average emission percent reductions. The 1-hour arithmetic averages must be calculated using the data points required under §60.13(e) (2).

(m) For energy recovery units over 10 MMBtu/hr but less than 250 MMBtu/hr design heat input that do not use a wet scrubber, fabric filter with bag leak detection system, or particulate matter CEMS, you must install, operate, certify, and maintain a continuous opacity monitoring system according to the procedures in paragraphs (m) (1) through (5) of this section by the compliance date specified in §60.2105. Energy recovery units that use a CEMS to demonstrate initial and continuing compliance according to the procedures in §60.2165(n) are not required to install a continuous opacity monitoring system and must perform the annual performance tests for the opacity consistent with §60.2145(f).

(1) Install, operate, and maintain each continuous opacity monitoring system according to performance specification 1 of 40 CFR part 60, appendix B.

(2) Conduct a performance evaluation of each continuous opacity monitoring system according to the requirements in §60.13 and according to PS-1 of 40 CFR part 60, appendix B.

(3) As specified in §60.13(e) (1), each continuous opacity monitoring system must complete a minimum of one cycle of



sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) Reduce the continuous opacity monitoring system data as specified in §60.13(h)(1).

(5) Determine and record all the 6-minute averages (and 1-hour block averages as applicable) collected.

(n) For energy recovery units with design capacities greater than 250 MMBtu/hr, in place of particulate matter testing with EPA Method 5 at 40 CFR part 60, appendix A-3, an owner or operator may install, calibrate, maintain, and operate a CEMS for monitoring particulate matter emissions discharged to the atmosphere and record the output of the system. For waste-burning kilns, a CEMS for monitoring particulate matter emissions is required. The owner or operator of an affected facility who continuously monitors particulate matter emissions instead of conducting performance testing using EPA Method 5 at 40 CFR part 60, appendix A-3 must install, calibrate, maintain and operate a CEMS and must comply with the requirements specified in paragraphs (n)(1) through (n)(14) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

(3) The monitor must be installed, evaluated, and operated in accordance with the requirements of performance specification 11 of appendix B of this part and quality assurance requirements of procedure two of appendix F of this part and §60.13. Use Method 5 or Method 5I of Appendix A of this part for the PM CEMS correlation testing.

(4) The initial performance evaluation must be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.2125 or within 180 days of notification to the Administrator of use of the continuous monitoring system if the owner or operator was previously determining compliance by Method 5 performance tests, whichever is later.

(5) The owner or operator of an affected facility may request that compliance with the particulate matter emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility must be established according to the procedures and methods specified in §60.2145(s)(5)(i) through (s)(5)(iv).

(6) The owner or operator of an affected facility must conduct an initial performance test for particulate matter emissions as required under §60.2125. Compliance with the particulate matter emission limit must be determined by using

the CEMS specified in paragraph (n) of this section to measure particulate matter and calculating a 30-day rolling average emission concentration using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7.

(7) Compliance with the particulate matter emission limit must be determined based on the 30-day rolling average calculated using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7 from the 1-hour arithmetic average CEMS outlet data.

(8) At a minimum, valid continuous monitoring system hourly averages must be obtained as specified in §60.2170(e).

(9) The 1-hour arithmetic averages required under paragraph (n)(7) of this section must be expressed in milligrams per dry standard cubic meter corrected to 7 percent oxygen (dry basis) and must be used to calculate the 30-day rolling average emission concentrations. The 1-hour arithmetic averages must be calculated using the data points required under §60.13(e)(2).

(10) All valid CEMS data must be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (n)(8) of this section are not met.

(11) The CEMS must be operated according to performance specification 11 in appendix B of this part.

(12) During each relative accuracy test run of the CEMS required by performance specification 11 in appendix B of this

part, particulate matter and oxygen (or carbon dioxide) data must be collected concurrently (or within a 30- to 60-minute period) by both the continuous emissions monitors and the following test methods.

(i) For particulate matter, EPA Reference Method 5 must be used.

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B, as applicable, must be used.

(13) Quarterly accuracy determinations and daily calibration drift tests must be performed in accordance with procedure 2 in appendix F of this part.

(14) When particulate matter emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data must be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 at 40 CFR part 60, appendix A-7 to provide, as necessary, valid emissions data for a minimum of 85 percent of the hours per day, 90 percent of the hours per calendar quarter, and 95 percent of the hours per calendar year that the affected facility is operated and combusting waste.

(o) To demonstrate continuous compliance with the carbon monoxide emissions limit, you may elect to use a continuous automated sampling system.

(1) Install, calibrate, maintain, and operate a CEMS for measuring carbon monoxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 4B of appendix B of this part, the quality assurance procedure 1 of appendix F of this part and the procedures under §60.13 must be followed for installation, evaluation, and operation of the CEMS.

(2) Following the date that the initial performance test for carbon monoxide is completed or is required to be completed under §60.2140, compliance with the carbon monoxide emission limit may be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, using CEMS outlet data. Except for CEMS data during startup and shutdown, as defined in this subpart, the 1-hour arithmetic averages must be expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages must be calculated using the data points required under §60.13(e) (2).

(p) The owner/operator of an affected source with a bypass stack shall install, calibrate (to manufacturers'

specifications), maintain, and operate a device or method for measuring the use of the bypass stack including date, time and duration.

(q) For energy recovery units with a design heat input capacity of 100 MMBtu per hour or greater that do not use a carbon monoxide CEMS, you must install, operate, and maintain a oxygen analyzer system as defined in §60.2265 according to the procedures in paragraphs (q) (1) through (4) of this section.

(1) The oxygen analyzer system must be installed by the initial performance test date specified in §60.2675.

(2) You must operate the oxygen trim system with the oxygen level set at the minimum percent oxygen by volume that is established as the operating limit for oxygen according to paragraph (q) (3) of this section.

(3) You must maintain the oxygen level such that it is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test.

(4) You must calculate and record a 30-day rolling average oxygen concentration using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 of Appendix A-7 of this part.

(r) For energy recovery units with design heat input capacities greater than or equal to 250 MMBtu/hour, you must install, certify, maintain, and operate a PM CPMS monitoring emissions discharged to the atmosphere and record the output of

the system as specified in paragraphs (r)(1) through (5) of this section. If you elect to use a particulate matter CEMS as specified in paragraph (n) of this section, you are not required to use a PM CPMS to monitor particulate matter emissions. For other energy recovery units, you may elect to use PM CPMS operated in accordance with this section in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure)

(1) Install, certify, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with §60.2145(1) and (r)(1)(i) through (iii) of this section.

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, or beta attenuation of the exhaust gas or representative exhaust gas sample. The reportable measurement output from the PM CPMS may be expressed as milliamps, stack concentration, or other raw data signal.

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS must be capable of detecting and responding to particulate matter concentrations of no greater than 0.5 mg/actual cubic meter.

(3) Collect PM CPMS hourly average output data for all energy recovery unit operating hours. Express the PM CPMS output as millamps, PM concentration, or other raw data signal value.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit operating hours data (e.g., milliamps, PM concentration, raw data signal).

26. Section 60.2170 is revised to read as follows:

§60.2170 Is there a minimum amount of monitoring data I must obtain?

For each continuous monitoring system required or optionally allowed under §60.2165, you must collect data according to this section:

(a) You must operate the monitoring system and collect data at all required intervals at all times compliance is required except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods (as specified in 60.2210(o) of this part), and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that



are caused in part by poor maintenance or careless operation are not malfunctions. You are required to effect monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

(b) You may not use data recorded during monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

(c) Except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments, failure to collect required data is a deviation of the monitoring requirements.

27. Section 60.2175 is amended by:

- a. Revising the introductory text.
- b. Revising paragraphs (b) (5) and (e).
- c. Removing and reserving paragraphs (c) and (d).

d. Adding paragraphs (o) through (v).

§60.2175 What records must I keep?

You must maintain the items (as applicable) as specified in paragraphs (a), (b), and (e) through (u) of this section for a period of at least 5 years:

\* \* \* \* \*

(b) \* \* \*

(5) For affected CISWI units that establish operating limits for controls other than wet scrubbers under §60.2110(d) through (f) or §60.2115, you must maintain data collected for all operating parameters used to determine compliance with the operating limits.

\* \* \* \* \*

(c) [Reserved]

(d) [Reserved]

(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 §60.2110(d) through (f) or §60.2115 with a description of the deviations, reasons for such deviations, and a description of corrective actions taken.

\* \* \* \* \*

(o) Maintain records of the annual air pollution control device inspections that are required for each CISWI unit subject

to the emissions limits in table 1 of this subpart or tables 5 through 8 of this subpart, any required maintenance, and any repairs not completed within 10 days of an inspection or the timeframe established by the state regulatory agency.

(p) For continuously monitored pollutants or parameters, you must document and keep a record of the following parameters measured using continuous monitoring systems.

(1) All 6-minute average levels of opacity.

(2) All 1-hour average concentrations of sulfur dioxide emissions.

(3) All 1-hour average concentrations of nitrogen oxides emissions.

(4) All 1-hour average concentrations of carbon monoxide emissions. You must indicate which data are CEMS data during startup and shutdown.

(5) All 1-hour average concentrations of particulate matter emissions.

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

(7) All 1-hour average concentrations of hydrogen chloride emissions.

(8) All 1-hour average percent oxygen concentrations.

(9) All 1-hour average PM CPMS readings or particulate matter continuous emissions monitor outputs.

(q) Records indicating use of the bypass stack, including dates, times, and durations.

(r) If you choose to stack test less frequently than annually, consistent with §60.2155(a) through (c), you must keep annual records that document that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(s) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

(t) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(u) Records of actions taken during periods of malfunction to minimize emissions in accordance with §60.11(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(v) For operating units that combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to §241.3(b)(1) of this chapter, you must keep a record which documents how the secondary material meets each of

the legitimacy criteria. If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to §241.3(b) (4) of this chapter, you must keep records as to how the operations that produced the fuel satisfies the definition of processing in §241.2 of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under §241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process.

\* \* \* \* \*

28. Section 60.2210 is amended by revising paragraph (e) and adding paragraphs (k) through (p) to read as follows:

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

\* \* \* \* \*

(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.

\* \* \* \* \*

(k) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction that occurred during the reporting period and that caused or may have caused any applicable emission limitation to be exceeded. The report

must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §60.11(d), including actions taken to correct a malfunction.

(1) For each deviation from an emission or operating limitation that occurs for a CISWI unit for which you are not using a continuous monitoring system to comply with the emission or operating limitations in this subpart, the annual report must contain the following information.

(1) The total operating time of the CISWI unit at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(m) If there were periods during which the continuous monitoring system, including the CEMS, was out of control as specified in paragraph (o) of this section, the annual report must contain the following information for each deviation from an emission or operating limitation occurring for a CISWI unit for which you are using a continuous monitoring system to comply with the emission and operating limitations in this subpart.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each continuous monitoring system was out-of-control, including start and end dates and hours and descriptions of corrective actions taken.

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of continuous monitoring system downtime during the reporting period, and the total duration of continuous monitoring system downtime as a percent of the total operating time of the CISWI unit at which the continuous monitoring system downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant that was monitored at the CISWI unit.

(9) A brief description of the CISWI unit.

(10) A brief description of the continuous monitoring system.

(11) The date of the latest continuous monitoring system certification or audit.

(12) A description of any changes in continuous monitoring system, processes, or controls since the last reporting period.

(n) If there were periods during which the continuous monitoring system, including the CEMS, was not out of control as specified in paragraph (o) of this section, a statement that there were not periods during which the continuous monitoring system was out of control during the reporting period.

(o) A continuous monitoring system is out of control in accordance with the procedure in 40 CFR part 60, appendix F of this part, as if any of the following occur.

(1) The zero (low-level), mid-level (if applicable), or high-level calibration drift exceeds two times the applicable calibration drift specification in the applicable performance specification or in the relevant standard.

(2) The continuous monitoring system fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit.

(3) The continuous opacity monitoring system calibration drift exceeds two times the limit in the applicable performance specification in the relevant standard.



(p) For energy recovery units, include the annual heat input and average annual heat input rate of all fuels being burned in the unit to verify which subcategory of energy recovery unit applies.

29. Section 60.2220 is amended by revising paragraph (c) and removing paragraphs (e) and (f) to read as follows:

§60.2220 What must I include in the deviation report?

\* \* \* \* \*

(c) Durations and causes of the following:

(1) Each deviation from emission limitations or operating limits and your corrective actions.

(2) Bypass events and your corrective actions.

\* \* \* \* \*

30. Section 60.2230 is revised to read as follows:

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

(a) Yes. You must submit notifications as provided by §60.7.

(b) If you cease combusting solid waste but continue to operate, you must provide 30 days prior notice of the effective date of the waste-to-fuel switch, consistent with §60.2145(a).

The notification must identify:

(1) The name of the owner or operator of the CISWI unit, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

(2) The currently applicable subcategory under this subpart, and any 40 CFR part 63 subpart and subcategory that will be applicable after you cease combusting solid waste;

(3) The fuel(s), non-waste material(s) and solid waste(s) the CISWI unit is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting;

(4) The date on which you became subject to the currently applicable emission limits;

(5) The date upon which you will cease combusting solid waste, and the date (if different) that you intend for any new requirements to become applicable (i.e., the effective date of the waste-to-fuel switch), consistent with paragraphs (2) and (3) of this section.

31. Section 60.2235 is revised to read as follows:

§60.2235 In what form can I submit my reports?

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

(b) As of January 1, 2012, and within 60 days after the date of completing each performance test, as defined in §63.2,

conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit (i.e., reference method) data and performance test (i.e., compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see [http://www.epa.gov/ttn/chief/ert/ert\\_tool.html/](http://www.epa.gov/ttn/chief/ert/ert_tool.html/)) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

\* \* \* \* \*

32. Section 60.2242 is revised to read as follows:

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

Yes. Each CISWI unit and air curtain incinerator subject to standards under this subpart must operate pursuant to a permit issued under section 129(e) and Title V of the Clean Air Act.

\* \* \* \* \*

33. Section 60.2250 is revised to read as follows:

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

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) and (b) of this section.

(a) Maintain opacity to less than or equal to 10 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values), except as described in paragraph (b) of this section.

(b) Maintain opacity to less than or equal to 35 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) during the startup period that is within the first 30 minutes of operation.

34. Section 60.2260 is amended by revising paragraph (d) to read as follows:

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

\* \* \* \* \*

(d) You must submit the results (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) 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.

\* \* \* \* \*

35. Section 60.2265 is amended by:

a. Adding definitions for "Affirmative defense", "Annual heat input", "Average annual heat input rate", "Burn-off oven", "Bypass stack", "CEMS data during startup and shutdown", "Chemical recovery unit", "Continuous monitoring system",

"Energy recovery unit", "Energy recovery unit designed to burn biomass (Biomass)", "Energy recovery unit designed to burn coal (Coal)", "Energy recovery unit designed to burn solid materials (Solids)", "Foundry sand thermal reclamation unit", "Homogeneous wastes" "Incinerator", "Kiln", "Laboratory analysis unit", "Minimum voltage or amperage", "Opacity", "Operating day", "Oxygen analyzer system", "Oxygen trim system", "Performance evaluation", "Performance test", "Process change", "Raw mill", "Small remote incinerator", "Soil treatment unit", "Solid waste incineration unit," "Space heater" and "Waste-burning kiln", in alphabetical order.

b. Revising the definition for "Commercial and industrial solid waste incineration (CISWI) unit", "Cyclonic burn barrel", "dioxin/furans", "Modification or modified CISWI unit", and "Wet scrubber".

c. Removing paragraph (3) of the definition for "Deviation."

d. Removing the definition for "Agricultural waste", "Commercial or industrial waste", and "Solid waste".

§60.2265 What definitions must I know?

\* \* \* \* \*

Affirmative defense means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the

merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

Annual heat input means the heat input for the 12 months preceding the compliance demonstration.

Average annual heat input rate means annual heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

\* \* \* \* \*

Burn-off oven means any rack reclamation unit, part reclamation unit, or drum reclamation unit. A burn-off oven is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

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

\* \* \* \* \*

CEMS data during startup and shutdown means carbon monoxide CEMS data collected during the first 4 hours of operation of energy recovery unit startup from a cold start and the hour of operation following the cessation of waste material being fed to the energy recovery unit during a unit shutdown.

Chemical recovery unit means 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. A chemical recovery unit is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart. The following seven types of units 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/residue 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.

\* \* \* \* \*

Commercial and industrial solid waste incineration (CISWI)

unit means any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding 6 months, any solid waste as that term is defined in 40 CFR part 241. If the operating unit burns materials other than traditional fuels as defined in §241.2 that have been discarded, and you do not keep and produce records as required by §60.2175(v), the material is a solid waste and the operating unit is a CISWI unit. While not all CISWI units will include all of the following components, a CISWI unit includes, but is not limited to, the solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The CISWI unit does not include air pollution control equipment or the stack. The CISWI unit boundary starts at the solid waste hopper (if applicable) and extends through two areas: The combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and the combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. The CISWI unit includes all ash handling systems connected to the bottom ash handling system.

\* \* \* \* \*



Continuous monitoring system (CMS) means the total equipment, required under the emission monitoring sections in applicable subparts, used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters. A particulate matter continuous parameter monitoring system (PM CPMS) is a type of CMS.

\* \* \* \* \*

Cyclonic burn barrel means a combustion device for waste materials that is attached to a 55 gallon, openhead 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. A cyclonic burn barrel is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

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.

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

\* \* \* \* \*

Energy recovery unit means a combustion unit combusting solid waste (as that term is defined by the Administrator under the Resource Conservation and Recovery Act in 40 CFR part 241) for energy recovery. Energy recovery units include units that would be considered boilers and process heaters if they did not combust solid waste.

Energy recovery unit designed to burn biomass (Biomass) means an energy recovery unit that burns solid waste, biomass, and non-coal solid materials but less than 10 percent coal, on a heat input basis on an annual average, either alone or in combination with liquid waste, liquid fuel or gaseous fuels.

Energy recovery unit designed to burn coal (Coal) means an energy recovery unit that burns solid waste and at least 10 percent coal on a heat input basis on an annual average, either alone or in combination with liquid waste, liquid fuel or gaseous fuels.

Energy recovery unit designed to burn liquid waste materials and gas (Liquid/gas) means an energy recovery unit

that burns a liquid waste with liquid or gaseous fuels not combined with any solid fuel or waste materials.

Energy recovery unit designed to burn solid materials (Solids) includes energy recovery units designed to burn coal and energy recovery units designed to burn biomass.

\* \* \* \* \*

Foundry sand thermal reclamation unit means a type of part reclamation unit that removes coatings that are on foundry sand. A foundry sand thermal reclamation unit is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

\* \* \* \* \*

Homogeneous wastes are stable, consistent in formulation, have known fuel properties, have a defined origin, have predictable chemical and physical attributes, and result in consistent combustion characteristics and have a consistent emissions profile.

Incinerator means any furnace used in the process of combusting solid waste (as that term is defined by the Administrator under 40 CFR part 241) for the purpose of reducing the volume of the waste by removing combustible matter. Incinerator designs include single chamber and two-chamber.

Kiln means an oven or furnace, including any associated preheater or precalciner devices, used for processing a

substance by burning, firing or drying. Kilns include cement kilns that produce clinker by heating limestone and other materials for subsequent production of Portland Cement.

Laboratory analysis unit means units that burn samples of materials for the purpose of chemical or physical analysis. A laboratory analysis unit is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

\* \* \* \* \*

Minimum voltage or amperage means 90 percent of the lowest test-run average voltage or amperage to the electrostatic precipitator measured during the most recent particulate matter or mercury performance test demonstrating compliance with the applicable emission limits.

Modification or modified CISWI unit means a CISWI unit that has been 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.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Operating day means a 24-hour period between 12:00 midnight and the following midnight during which any amount of solid waste is combusted at any time in the CISWI unit.

Oxygen analyzer system means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler flue gas or firebox. This definition includes oxygen trim systems. The source owner or operator is responsible to install, calibrate, maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.

Oxygen trim system means a system of monitors that is used to maintain excess air at the desired level in a combustion device. A typical system consists of a flue gas oxygen and/or carbon monoxide monitor that automatically provides a feedback signal to the combustion air controller.

\* \* \* \* \*

Performance evaluation means the conduct of relative accuracy testing, calibration error testing, and other measurements used in validating the continuous monitoring system data.

Performance test means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission standard as specified in the performance test section of the relevant standard.

Process change means a significant permit revision, but only with respect to those pollutant-specific emission units for which the proposed permit revision is applicable, including but not limited to a change in the air pollution control devices used to comply with the emission limits for the affected CISWI unit (e.g., change in the sorbent used for activated carbon injection).

\* \* \* \* \*

Raw mill means a ball and tube mill, vertical roller mill or other size reduction equipment, that is not part of an in-line kiln/raw mill, used to grind feed to the appropriate size. Moisture may be added or removed from the feed during the grinding operation. If the raw mill is used to remove moisture from feed materials, it is also, by definition, a raw material

dryer. The raw mill also includes the air separator associated with the raw mill.

\* \* \* \* \*

Small, remote incinerator means an incinerator that combusts solid waste (as that term is defined by the Administrator in 40 CFR part 241) and combusts 3 tons per day or less solid waste and is more than 25 miles driving distance to the nearest municipal solid waste landfill.

Soil treatment unit means a unit that thermally treats petroleum contaminated soils for the sole purpose of site remediation. A soil treatment unit may be direct-fired or indirect fired. A soil treatment unit is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

Solid waste incineration unit means a distinct operating unit of any facility which combusts any solid waste (as that term is defined by the Administrator in 40 CFR part 241) material from commercial or industrial establishments or the general public (including single and multiple residences, hotels and motels). Such term does not include incinerators or other units required to have a permit under section 3005 of the Solid Waste Disposal Act. The term "solid waste incineration unit" does not include: (A) materials recovery facilities (including primary or secondary smelters) which combust waste for the

primary purpose of recovering metals; (B) qualifying small power production facilities, as defined in section 3(17)(C) of the Federal Power Act (16 U.S.C. 769(17)(C)), or qualifying cogeneration facilities, as defined in section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)), which burn homogeneous waste (such as units which burn tires or used oil, but not including refuse-derived fuel) for the production of electric energy or in the case of qualifying cogeneration facilities which burn homogeneous waste for the production of electric energy and steam or forms of useful energy (such as heat) which are used for industrial, commercial, heating or cooling purposes; or (C) air curtain incinerators provided that such incinerators only burn wood wastes, yard wastes, and clean lumber and that such air curtain incinerators comply with opacity limitations to be established by the Administrator by rule.

Space heater means a usually portable appliance for heating a relatively small area. A space heater is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

\* \* \* \* \*

Waste-burning kiln means a kiln that is heated, in whole or in part, by combusting solid waste (as that term is defined by the Administrator in 40 CFR part 241). A waste-burning kiln does



not include a kiln that is feeding non-hazardous secondary ingredients exclusively into the cold end of the kiln.

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

\* \* \* \* \*

36. Table 1 of subpart CCCC is revised to read as follows:

**Table 1 to Subpart CCCC of Part 60—Emission Limitations for CISWI Units for Which Construction Is Commenced After November 30, 1999, but no later than June 4, 2010, or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001, but no later than [THE DATE 6 MONTHS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].**

For the air pollutant	You must meet this emission limitation <sup>a</sup>	Using this averaging time	And determining compliance using this method
Cadmium	0.004 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8).
Carbon Monoxide	157 parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxin/Furan (toxic equivalency basis)	0.41 nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters per run)	Performance test (Method 23 of appendix A-7 of this part).
Hydrogen Chloride	62 parts per million by	3-run average (For Method 26, collect a	Performance test (Method 26

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

For the air pollutant	You must meet this emission limitation <sup>a</sup>	Using this averaging time	And determining compliance using this method
	dry volume	minimum volume of 120 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run)	or 26A at 40 CFR part 60, appendix A-8).
Lead	0.04 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8).
Mercury	0.47 milligrams per dry standard cubic meter	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008) <sup>b</sup> , collect a minimum volume of 1 dry standard cubic meter per run. For Method 30B, collect a minimum sample as specified in Method 30B at 40 CFR part 60, appendix A)	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A-8) or ASTM D6784-02 (Reapproved 2008) <sup>b</sup> .
Opacity	10 percent	Three 1-hour blocks consisting of ten 6-minute averages opacity values	Performance test (Method 9 at 40 CFR part 60, appendix A-4).
Nitrogen Oxides	388 parts per million by dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).
Particulate matter	70 milligrams per dry standard	3-run average (collect a minimum volume of 1 dry standard cubic meter	Performance test (Method 5 or 29 at 40 CFR part 60,

For the air pollutant	You must meet this emission limitation <sup>a</sup>	Using this averaging time	And determining compliance using this method
	cubic meter	per run)	appendix A-3 or A-8).
Sulfur Dioxide	20 parts per million by dry volume	3-run average (For Method 6, collect a minimum volume of 20 liters per run. For Method 6C, collect sample for a minimum duration of 1 hour per run)	Performance test (Method 6 or 6C at 40 CFR part 60, appendix A-4.

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

<sup>b</sup> Incorporated by reference, see §60.17.

37. Table 4 of subpart CCCC is amended by revising the entry for "Annual Report" and "Emission limitation or operating limit deviation report."

Table 4 to Subpart CCCC of Part 60—Summary of Reporting Requirements<sup>a</sup>

Report	Due date	Contents	Reference
* * *	* * *	* * *	* * *
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"> <li>• Name and address</li> <li>• Statement and signature by responsible official</li> <li>• Date of report</li> <li>• Values for the operating limits</li> <li>• Highest recorded 3-hour average and the lowest 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported</li> <li>• If a performance test</li> </ul>	§§60.2205 and 60.2210

Report	Due date	Contents	Reference
		<p>was conducted during the reporting period, the results of the test</p> <ul style="list-style-type: none"> <li>• If a performance test was not conducted during the reporting period, a statement that the requirements of §60.2155(a) were met</li> <li>• Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours but less than 2 weeks</li> <li>• If you are conducting performance tests once every 3 years consistent with §60.2155(a), the date of the last 2 performance tests, a comparison of the emission level you achieved in the last 2 performance tests to the 75 percent emission limit threshold required in §60.2155(a) and a statement as to whether there have been any operational changes since the last performance test that could increase emissions.</li> </ul>	
* * * * *			
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"> <li>• Dates and times of deviation</li> <li>• Averaged and recorded data for those dates</li> <li>• Duration and causes of each deviation and the corrective actions taken</li> <li>• Copy of operating limit monitoring data and any test reports</li> <li>• Dates, times and causes</li> </ul>	§60.2215 and 60.2220

Report	Due date	Contents	Reference
		for monitor downtime incidents	
* * * * *			

<sup>a</sup> This table is only a summary, see the referenced sections of the rule for the complete requirements.

38. Table 5 to Subpart CCCC is added to read as follows:

Table 5 to Subpart CCCC of Part 60—Emission Limitations for Incinerators That Commenced Construction After June 4, 2010, Or That Commenced Reconstruction or Modification After [THE DATE 6 MONTHS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]

For the air pollutant	You must meet this emission limitation <sup>a</sup>	Using this averaging time	And determining compliance using this method
Cadmium	0.0023 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 4 dry standard cubic meter per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8 of this part). Use ICPMS for the analytical finish.
Carbon Monoxide	12 parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxin/furan (Total Mass Basis)	0.58 nanograms per dry standard cubic meter <sup>c</sup>	3-run average (collect a minimum volume of 4 dry standard cubic meter per run)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Dioxin/furan (toxic equivalency basis)	0.13 nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 4 dry standard cubic meter per run)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Hydrogen Chloride	0.091 part per million by dry	3-run average (For Method 26, collect	Performance test (Method 26 or

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

For the air pollutant	You must meet this emission limitation <sup>a</sup>	Using this averaging time	And determining compliance using this method
	volume	a minimum volume of 360 liters per run. For Method 26A, collect a minimum volume of 3 dry standard cubic meter per run)	26A at 40 CFR part 60, appendix A-8).
Lead	0.0019 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 4 dry standard cubic meter per run)	Performance test (Method 29 of appendix A-8 at 40 CFR part 60). Use ICPMS for the analytical finish.
Mercury	0.00084 milligrams per dry standard cubic meter <sup>c</sup>	3-run average (collect enough volume to meet a detection limit data quality objective of 0.03 ug/dry standard cubic meter)	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A-8) or ASTM D6784-02 (Reapproved 2008) <sup>b</sup> .
Nitrogen Oxides	23 parts per million dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).
Particulate matter (filterable)	18 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters per run)	Performance test (Method 5 or 29 at 40 CFR part 60, appendix A-3 or appendix A-8 at 40 CFR part 60).
Sulfur dioxide	11 parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 6 or 6C at 40 CFR part 60, appendix A-4).

<b>For the air pollutant</b>	<b>You must meet this emission limitation<sup>a</sup></b>	<b>Using this averaging time</b>	<b>And determining compliance using this method</b>
Fugitive ash	Visible emissions for no more than 5 percent of the hourly observation period	Three 1-hour observation periods	Visible emission test (Method 22 at 40 CFR part 60, appendix A-7).

<sup>a</sup> All emission limitations are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the Total Mass Limit or the toxic equivalency basis limit.

<sup>b</sup> Incorporated by reference, see §60.17.

<sup>c</sup> If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §60.2155 if all of the other provision of §60.2155 are met. For all other pollutants that do not contain a footnote "c", your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or 75 percent of this limit in order to qualify for skip testing.

39. Table 6 to Subpart CCCC is added to read as follows:

Table 6 to Subpart CCCC of Part 60—Emission Limitations for Energy Recovery Units That Commenced Construction After June 4, 2010, Or That Commenced Reconstruction or Modification After [THE DATE 6 MONTHS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]

<b>For the air pollutant</b>	<b>You must meet this emission limitation<sup>a</sup></b>		<b>Using this averaging time</b>	<b>And determining compliance using this method</b>
	Liquid/Gas	Solids		
Cadmium	0.023 milligrams per dry standard cubic meter	Biomass - 0.00014 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 4 dry standard cubic meters	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical

For the air pollutant	You must meet this emission limitation <sup>a</sup>		Using this averaging time	And determining compliance using this method
		Coal - 0.058 milligrams per dry standard cubic meter	per run)	finish.
Carbon monoxide	36 parts per million dry volume	Biomass - 160 parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
		Coal - 46 parts per million dry volume		
Dioxins/furans (Total Mass Basis)	No Total Mass Basis limit, must meet the toxic equivalency basis limit below	Biomass - 0.52 nanograms per dry standard cubic meter <sup>c</sup>	3-run average (collect a minimum volume of 4 dry standard cubic meters)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
		Coal - 0.51 nanograms per dry standard cubic meter <sup>c</sup>		
Dioxins/furans (toxic equivalency basis)	0.093 nanograms per dry standard cubic meter <sup>c</sup>	Biomass - 0.076 nanograms per dry standard cubic meter <sup>c</sup>	3-run average (collect a minimum volume of 4 dry standard cubic meters per run)	Performance test (Method 23 of appendix A-7 of this part).
		Coal - 0.075 nanograms per dry standard cubic meter <sup>c</sup>		
Hydrogen chloride	14 parts per million	0.50 parts per million	3-run average (For Method	Performance test (Method 26 or



For the air pollutant	You must meet this emission limitation <sup>a</sup>		Using this averaging time	And determining compliance using this method
	dry volume	dry volume	26, collect a minimum volume of 360 liters per run. For Method 26A, collect a minimum volume of 3 dry standard cubic meters per run)	26A at 40 CFR part 60, appendix A-8).
Lead	0.096 milligrams per dry standard cubic meter	Biomass - 0.0019 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 4 dry standard cubic meters per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical finish.
Coal - 0.0031 milligrams per dry standard cubic meter				
Mercury	0.00091 milligrams per dry standard cubic meter <sup>c</sup>	0.0020 milligrams per dry standard cubic meter	3-run average (collect enough volume to meet an in-stack detection limit data quality objective of 0.03 ug/dscm)	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A-8) or ASTM D6784-02 (Reapproved 2008) <sup>b</sup> .
Oxides of nitrogen	76 parts per million dry volume	Biomass - 290 parts per million dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).
Coal - 340 parts per				

For the air pollutant	You must meet this emission limitation <sup>a</sup>		Using this averaging time	And determining compliance using this method
		million dry volume		
Particulate matter (filterable)	110 milligrams per dry standard cubic meter	Biomass - 5.1 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter per run)	Performance test (Method 5 or 29 at 40 CFR part 60, appendix A-3 or appendix A-8) if the unit has a design capacity less than 250 MMBtu/hr; or PM CEMS (performance specification 11 of appendix B and procedure 2 of appendix F of this part) if the unit has a design capacity equal to or greater than 250 MMBtu/hr. Use Method 5 or 5I of Appendix A of this part and collect a minimum sample volume of 1 dscm per test run for the PM CEMS correlation testing.
		Coal - 86 milligrams per dry standard cubic meter		
Sulfur dioxide	720 parts per million dry volume	Biomass - 7.3 parts per million dry volume	3-run average (for Method 6, collect a minimum of 60 liters, for Method 6C, 1	Performance test (Method 6 or 6C at 40 CFR part 60, appendix A-4.
		Coal - 650 parts per		

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

For the air pollutant	You must meet this emission limitation <sup>a</sup>		Using this averaging time	And determining compliance using this method
		million dry volume		
Fugitive ash	Visible emissions for no more than 5 percent of the hourly observation period	Visible emissions for no more than 5 percent of the hourly observation period	Three 1-hour observation periods	Visible emission test (Method 22 at 40 CFR part 60, appendix A-7).

<sup>a</sup> All emission limitations are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the Total Mass Basis limit or the toxic equivalency basis limit.

<sup>b</sup> Incorporated by reference, see §60.17.

<sup>c</sup> If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §60.2155 if all of the other provision of §60.2155 are met. For all other pollutants that do not contain a footnote "c", your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or 75 percent of this limit in order to qualify for skip testing.

40. Table 7 to Subpart CCCC is added to read as follows:

**Table 7 to Subpart CCCC of Part 60—Emission Limitations for Waste-burning Kilns That Commenced Construction After June 4, 2010, or Reconstruction or Modification After [THE DATE 6 MONTHS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]**

For the air pollutant	You must meet this emission limitation <sup>a</sup>	Using this averaging time	And determining compliance using this method
Cadmium	0.00082 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 4	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

For the air pollutant	You must meet this emission limitation <sup>a</sup>	Using this averaging time	And determining compliance using this method
		dry standard cubic meters per run)	the analytical finish.
Carbon monoxide	90 (long kilns) / 320 (preheater / precalciner) parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxins/furans (total mass basis)	0.51 nanograms per dry standard cubic meter <sup>b</sup>	3-run average (collect a minimum volume of 4 dry standard cubic meters per run)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Dioxins/furans (toxic equivalency basis)	0.075 nanograms per dry standard cubic meter <sup>b</sup>	3-run average (collect a minimum volume of 4 dry standard cubic meters)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Hydrogen chloride	3.0 parts per million dry volume <sup>b</sup>	3-run average (1 hour minimum sample time per run) or 30-day rolling average if HCl CEMS are used	Performance test (Method 321 at 40 CFR part 63, appendix A) or HCl CEMS if a wet scrubber is not used.
Lead	0.0043 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 4 dry standard cubic meters)	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical finish.

For the air pollutant	You must meet this emission limitation <sup>a</sup>	Using this averaging time	And determining compliance using this method
Mercury	0.0037 milligrams per dry standard cubic meter	30-day rolling average	Mercury CEMS or sorbent trap monitoring system (performance specification 12A or 12B, respectively, of appendix B of this part.)
Oxides of nitrogen	200 parts per million dry volume	30-day rolling average	NO <sub>x</sub> Continuous Emissions Monitoring System (performance specification 2 of appendix B and procedure 1 of appendix F of this part). Use a span value of 400 ppm.
Particulate matter (filterable)	8.9 milligrams per dry standard cubic meter	30-day rolling average	PM Continuous Emissions Monitoring System (performance specification 11 of appendix B and procedure 2 of appendix F of this part)
Sulfur dioxide	130 parts per million dry volume	30-day rolling average	Sulfur dioxide Continuous Emissions Monitoring System (performance specification 2 of appendix B and procedure 1 of appendix F of this part). Use a span value of 260 ppm.

<sup>a</sup> All emission limitations are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the total mass basis limit or the toxic equivalency basis limit.

<sup>b</sup> If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011.  
We have taken steps to ensure the accuracy of this version, but it is not the official version.

consecutive years show that your emissions are at or below this limit, you can skip testing according to §60.2155 if all of the other provision of §60.2155 are met. For all other pollutants that do not contain a footnote "b", your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or 75 percent of this limit in order to qualify for skip testing.

41. Table 8 to Subpart CCCC is added to read as follows:

**Table 8 to Subpart CCCC of Part 60—Emission Limitations for Small, Remote Incinerators That Commenced Construction After June 4, 2010, Or That Commenced Reconstruction or Modification After [THE DATE 6 MONTHS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]**

For the air pollutant	You must meet this emission limitation <sup>a</sup>	Using this averaging time	And determining compliance using this method
Cadmium	0.61 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8).
Carbon monoxide	12 parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxins/furans (total mass basis)	1,200 nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter per run)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Dioxins/furans (toxic equivalency basis)	31 nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter per run)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Hydrogen chloride	200 parts per million by dry volume	3-run average (For Method 26, collect a minimum volume of 60 liters per run. For	Performance test (Method 26 or 26A at 40 CFR part 60,

For the air pollutant	You must meet this emission limitation <sup>a</sup>	Using this averaging time	And determining compliance using this method
		Method 26A, collect a minimum volume of 1 dry standard cubic meter per run)	appendix A-8).
Lead	0.26 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic)	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical finish.
Mercury	0.0035 milligrams per dry standard cubic meter	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008) <sup>b</sup> , collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum volume as specified in Method 30B at 40 CFR part 60, appendix A)	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A-8) or ASTM D6784-02 (Reapproved 2008) <sup>b</sup> .
Oxides of nitrogen	78 parts per million dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).
Particulate matter (filterable)	230 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter)	Performance test (Method 5 or 29 at 40 CFR part 60, appendix A-3 or appendix A-8).
Sulfur dioxide	1.2 parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 6 or 6c at 40 CFR part 60,

For the air pollutant	You must meet this emission limitation <sup>a</sup>	Using this averaging time	And determining compliance using this method
			appendix A-4.
Fugitive ash	Visible emissions for no more than 5 percent of the hourly observation period	Three 1-hour observation periods	Visible emission test (Method 22 at 40 CFR part 60, appendix A-7).

<sup>a</sup> All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the total mass basis limit or the toxic equivalency basis limit.

<sup>b</sup> Incorporated by reference, see §60.17.

42. Revise the heading for subpart DDDD to read as follows:

Subpart DDDD-Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units

43. Section 60.2500 is revised to read as follows:

§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 and tables 6 through 9 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.



44. Section 60.2505 is revised to read as follows:

§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 meets the criteria in paragraphs (b) through (d) of this section, you must submit a state plan to EPA that implements the emission guidelines contained in this subpart.

(b) You must submit a state plan to EPA by December 3, 2001 for incinerator units that commenced construction on or before November 30, 1999 and that were not modified or reconstructed after June 1, 2001.

(c) You must submit a state plan that meets the requirements of this subpart and contains the more stringent emission limit for the respective pollutant in table 6 of this subpart or table 1 of subpart CCCC of this part to EPA by [THE DATE 1 YEAR AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER] for incinerators that commenced construction after November 30, 1999, but no later than June 4, 2010, or commenced modification or reconstruction after June 1, 2001 but no later than [THE DATE 6 MONTHS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

(d) You must submit a state plan to EPA that meets the requirements of this subpart and contains the emission limits in

tables 7 through 9 of this subpart by [INSERT THE DATE 1 YEAR AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER] for CISWI units other than incinerator units that commenced construction on or before June 4, 2010.

45. Section 60.2525 is revised to read as follows:

§60.2525 What if my state plan is not approvable?

(a) 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.

(b) If you do not submit an approvable state plan (or a negative declaration letter) to EPA that meets the requirements of this subpart and contains the emission limits in tables 6 through 9 of this subpart for CISWI units that commenced construction on or before June 4, 2010, then 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.

46. Section 60.2535 is amended by:

- a. Revising paragraph (a) introductory text.
- b. Redesignating paragraph (b) as paragraph (d).
- c. Adding paragraphs (b) and (c).

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

(a) For CISWI units in the incinerator subcategory that commenced construction on or before November 30, 1999, 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.

\* \* \* \* \*

(b) For CISWI units in the incinerator subcategory that commenced construction after November 30, 1999, but on or before June 4, 2010, and for CISWI units in the energy recovery units and waste-burning kilns subcategories that commenced construction before June 4, 2010, 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 (b) (1) and (b) (2) of this section.

(1) [INSERT THE DATE 5 YEARS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

(2) 3 years after the effective date of state plan approval.

(c) For CISWI units in the small remote incinerator subcategory that commenced construction after November 30, 1999, but on or before June 4, 2010, your state plan must include compliance schedules that require small remote incinerator 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 (b) (1) and (b) (2) of this section.

(1) March 21, 2016.

(2) 3 years after the effective date of state plan approval.

\* \* \* \* \*

47. Section 60.2540 is amended by revising paragraph (a) to read as follows:

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

\* \* \* \* \*

(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 the dates specified in §60.2535. This applies instead of the option for case-by-case less stringent emission standards and longer compliance schedules in §60.24(f).

\* \* \* \* \*

48. Section 60.2541 is added to read as follows:

§60.2541 In lieu of a state plan submittal, are there other acceptable option(s) for a state to meet its Clean Air Act section 111(d)/129(b)(2) obligations?

Yes, a state may meet its Clean Air Act section 111(d)/129 obligations by submitting an acceptable written request for delegation of the federal plan that meets the requirements of this section. This is the only other option for a state to meet its Clean Air Act section 111(d)/129 obligations.

(a) An acceptable federal plan delegation request must include the following:

(1) A demonstration of adequate resources and legal authority to administer and enforce the federal plan.

(2) The items under §60.2515(a)(1), (2) and (7).

(3) Certification that the hearing on the state delegation request, similar to the hearing for a state plan submittal, 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.

(4) A commitment to enter into a Memorandum of Agreement with the Regional Administrator who sets forth the terms, conditions, and effective date of the delegation and that serves as the mechanism for the transfer of authority. Additional guidance and information is given in EPA's Delegation Manual, Item 7-139, Implementation and Enforcement of 111(d)(2) and 111(d)/(2)/129(b)(3) federal plans.

(b) A state with an already approved CISWI Clean Air Act section 111(d)/129 state plan is not precluded from receiving EPA approval of a delegation request for the revised federal plan, providing the requirements of paragraph (a) of this section are met, and at the time of the delegation request, the state also requests withdrawal of EPA's previous state plan approval.

(c) A state's Clean Air Act section 111(d)/129 obligations are separate from its obligations under Title V of the Clean Air Act .

49. Section 60.2542 is added to read as follows:

§60.2542 What authorities will not be delegated to state, local, or tribal agencies?

The authorities listed under §60.2030(c) will not be delegated to state, local, or tribal agencies.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

50. Section 60.2545 is amended by revising paragraph (b) and adding paragraph (c) to read as follows:

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

\* \* \* \* \*

(b) If you do not submit an approvable plan to implement and enforce the guidelines contained in this subpart for CISWI units that commenced construction on or before November 30, 1999 by December 2, 2002, 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.

(c) If you do not submit an approvable plan to implement and enforce the guidelines contained in this subpart by [INSERT THE DATE 1 YEAR AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER] for CISWI units that commenced construction on or before June 4, 2010, EPA will implement and enforce a federal plan, as provided in §60.2525, to ensure that each unit within your state that commenced construction on or before June 4, 2010, reaches compliance with all the provisions of this subpart by [INSERT THE DATE 5 YEARS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

51. Section §60.2550 is amended by revising paragraph (a) (1) to read as follows:

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

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

(a) \* \* \*

(1) Incineration units in your state that commenced construction on or before June 4, 2010.

\* \* \* \* \*

52. Section §60.2555 is amended by:

- a. Revising the introductory text.
- b. Removing and reserving paragraph (b).
- c. Revising paragraphs (c), (e) (3), (f) (3), and (g).
- d. Removing and reserving paragraphs (j), (k) and (l).
- e. Revising paragraphs (m) and (n).
- f. Removing paragraph (o).

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

This subpart exempts the types of units described in paragraphs (a), (c) through (i), (m), and (n) of this section, but some units are required to provide notifications. Air curtain incinerators are exempt from the requirements in this subpart except for the provisions in §§60.2805, 60.2860, and 60.2870.

\* \* \* \* \*

(b) [Reserved]

(c) Municipal waste combustion units. Incineration units that are subject to subpart Ea of this part (Standards of Performance for Municipal Waste Combustors); subpart Eb of this



part (Standards of Performance for Large Municipal Waste Combustors); subpart Cb of this part (Emission Guidelines and Compliance Time for Large Municipal Combustors); subpart AAAA of this part (Standards of Performance for Small Municipal Waste Combustion Units); or subpart BBBB of this part (Emission Guidelines for Small Municipal Waste Combustion Units).

\* \* \* \* \*

(e) \* \* \*

(3) You submit a request to the Administrator for a determination that the qualifying cogeneration facility is combusting homogenous waste as that term is defined in §60.2875. The request must include information sufficient to document that the unit meets the criteria of the definition of a small power production facility and that the waste material the unit is proposed to burn is homogeneous.

\* \* \* \* \*

(f) \* \* \*

(3) You submit a request to the Administrator for a determination that the qualifying cogeneration facility is combusting homogenous waste as that term is defined §60.2875. The request must include information sufficient to document that the unit meets the criteria of the definition of a cogeneration facility and that the waste material the unit is proposed to burn is homogeneous.

(g) Hazardous waste combustion units. Units for which you are required to get a permit under section 3005 of the Solid Waste Disposal Act.

\* \* \* \* \*

(j) [Reserved]

(k) [Reserved]

(l) [Reserved]

(m) Sewage treatment plants. Incineration units regulated under subpart O of this part (Standards of Performance for Sewage Treatment Plants).

(n) Sewage sludge incineration units. Incineration units combusting sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter that are subject to subpart LLLL of this part (Standards of Performance for Sewage Sludge Incineration Units) or subpart MMMM of this part (Emission Guidelines for Sewage Sludge Incineration Units).

§60.2558 [Removed]

53. Section 60.2558 is removed.

54. Section 60.2635 is amended by revising paragraph

(c) (1) (vii) to read as follows:

§60.2635 What are the operator training and qualification requirements?

\* \* \* \* \*

(c) \* \* \*

(1) \* \* \*

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

\* \* \* \* \*

55. Section 60.2650 is amended by revising paragraph (d) to read as follows:

§60.2650 How do I maintain my operator qualification?

\* \* \* \* \*

(d) Prevention and correction of malfunctions or conditions that may lead to malfunction.

\* \* \* \* \*

56. Section 60.2670 is revised to read as follows:

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

(a) You must meet the emission limitations for each CISWI unit, including bypass stack or vent, specified in table 2 of this subpart or tables 6 through 9 of this subpart by the final compliance date under the approved state plan, federal plan, or delegation, as applicable. The emission limitations apply at all times the unit is operating including and not limited to startup, shutdown, or malfunction.

(b) Units that do not use wet scrubbers must maintain opacity to less than or equal to the percent opacity (three 1-hour blocks consisting of ten 6-minute average opacity values) specified in table 2 of this subpart, as applicable.

57. Section 60.2675 is amended by:

a. Revising paragraphs (a) introductory text and paragraphs (a) (2), (a) (3), and (a) (4).

b. Revising paragraph (b).

c. Adding paragraphs (d), (e), (f), and (g) to read as follows:

§60.2675 What operating limits must I meet and by when?

(a) If you use a wet scrubber(s) to comply with the emission limitations, you must establish operating limits for up to 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.

\* \* \* \* \*

(2) Minimum pressure drop across the wet particulate matter scrubber, which is calculated as the lowest 1-hour 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 fan for the wet scrubber, which is calculated as the lowest 1-hour average amperage to the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.

(3) Minimum scrubber liquid flow rate, which is calculated as the lowest 1-hour average liquid flow rate at the inlet to

the wet acid gas or particulate matter scrubber measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(4) Minimum scrubber liquor pH, which is calculated as the lowest 1-hour average liquor pH at the inlet to the wet acid gas 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). You must conduct an initial performance evaluation of each continuous monitoring system and continuous parameter monitoring system within 60 days of installation of the monitoring system.

\* \* \* \* \*

(d) If you use an electrostatic precipitator to comply with the emission limitations, you must measure the (secondary) voltage and amperage of the electrostatic precipitator collection plates during the particulate matter performance test. Calculate the average electric power value (secondary voltage x secondary current = secondary electric power) for each test run. The operating limit for the electrostatic precipitator is calculated as the lowest 1-hour average secondary electric power measured during the most recent performance test

demonstrating compliance with the particulate matter emission limitations.

(e) If you use activated carbon sorbent injection to comply with the emission limitations, you must measure the sorbent flow rate during the performance testing. The operating limit for the carbon sorbent injection is calculated as the lowest 1-hour average sorbent flow rate measured during the most recent performance test demonstrating compliance with the mercury emission limitations.

(f) If you use selective noncatalytic reduction to comply with the emission limitations, you must measure the charge rate, the secondary chamber temperature (if applicable to your CISWI unit), and the reagent flow rate during the nitrogen oxides performance testing. The operating limits for the selective noncatalytic reduction are calculated as the lowest 1-hour average charge rate, secondary chamber temperature, and reagent flow rate measured during the most recent performance test demonstrating compliance with the nitrogen oxides emission limitations.

(g) If you do not use a wet scrubber, electrostatic precipitator, or fabric filter to comply with the emission limitations, and if you do not determine compliance with your particulate matter emission limitation with a particulate matter continuous emissions monitoring system, you must maintain

opacity to less than or equal to ten percent opacity (1-hour block average).

58. Section 60.2680 is revised to read as follows:

§60.2680 What if I do not use a wet scrubber, fabric filter, activated carbon injection, selective noncatalytic reduction, or an electrostatic precipitator to comply with the emission limitations?

(a) If you use an air pollution control device other than a wet scrubber, activated carbon injection, selective noncatalytic reduction, fabric filter, or an electrostatic precipitator or limit emissions in some other manner, including mass balances, to comply with the emission limitations under §60.2670, you must petition the EPA 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)(1) through (5) of this section.

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

(2) 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.

(3) 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.

(4) 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.

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

(b) [Reserved]

59. Section 60.2685 is revised to read as follows:

§60.2685 Affirmative Defense for Exceedance of an Emission Limit During Malfunction

In response to an action to enforce the standards set forth in paragraph §60.2670 you may assert an affirmative defense to a claim for civil penalties for exceedances of such standards that are caused by malfunction, as defined at §60.2. Appropriate penalties may be assessed, however, if you fail to meet your burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.



(a) To establish the affirmative defense in any action to enforce such a limit, you must timely meet the notification requirements in paragraph (b) of this section, and must prove by a preponderance of evidence that:

(1) The excess emissions:

(i) Were caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner; and

(ii) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and

(iii) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and

(iv) Were not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(2) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and

(3) The frequency, amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions; and

(4) If the excess emissions resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(5) All possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment and human health; and

(6) All emissions and/or parameter monitoring and systems, as well as control systems, were kept in operation if at all possible, consistent with safety and good air pollution control practices;

(7) All of the actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs; and

(8) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions; and

(9) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the excess emissions resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of excess emissions that were the result of the malfunction.

(b) Notification. The owner or operator of the facility experiencing an exceedance of its emission limit(s) during a malfunction shall notify the Administrator by telephone or facsimile (FAX) transmission as soon as possible, but no later than two business days after the initial occurrence of the malfunction, if it wishes to avail itself of an affirmative defense to civil penalties for that malfunction. The owner or operator seeking to assert an affirmative defense shall also submit a written report to the Administrator within 45 days of the initial occurrence of the exceedance of the standard in §60.2670 to demonstrate, with all necessary supporting documentation, that it has met the requirements set forth in paragraph (a) of this section. The owner or operator may seek an extension of this deadline for up to 30 additional days by submitting a written request to the Administrator before the expiration of the 45 day period. Until a request for an extension has been approved by the Administrator, the owner or operator is subject to the requirement to submit such report within 45 days of the initial occurrence of the exceedances.

60. Section 60.2690 is amended by revising paragraphs (c) and (g) (1) and (2) and adding paragraphs (h) and (i) to read as follows:

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

\* \* \* \* \*

(c) All performance tests must be conducted using the minimum run duration specified in tables 2 and 6 through 9 of this subpart.

\* \* \* \* \*

(g) \* \* \*

(1) Measure the concentration of each dioxin/furan tetra-through octa-isomer emitted using EPA Method 23 at 40 CFR part 60, appendix A.

(2) For each dioxin/furan (tetra-through octa-chlorinated) isomer measured in accordance with paragraph (g)(1) of this section, multiply the isomer concentration by its corresponding toxic equivalency factor specified in table 4 of this subpart.

\* \* \* \* \*

(h) Method 22 at 40 CFR part 60, appendix A-7 must be used to determine compliance with the fugitive ash emission limit in table 2 of this subpart or tables 6 through 9 of this subpart.

(i) If you have an applicable opacity operating limit, you must determine compliance with the opacity limit using Method 9 at 40 CFR part 60, appendix A-4, based on three 1-hour blocks consisting of ten 6-minute average opacity values, unless you are required to install a continuous opacity monitoring system, consistent with §60.2710 and §60.2730.

61. Section 60.2695 is revised to read as follows:

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

§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 or tables 6 through 9 of this subpart.

62. Section 60.2700 is revised to read as follows:

§60.2700 How do I demonstrate initial compliance with the amended emission limitations and establish the operating limits?

You must conduct a performance test, as required under §§60.2690 and 60.2670, to determine compliance with the emission limitations in table 2 of this subpart and tables 6 through 9 of this subpart, to establish compliance with any opacity operating limits in §60.2675, and to establish operating limits using the procedures in §60.2675 or §60.2680. The performance test must be conducted using the test methods listed in table 2 of this subpart and tables 6 through 9 of this subpart and the procedures in §60.2690. The use of the bypass stack during a performance test shall invalidate the performance test. You must conduct a performance evaluation of each continuous monitoring system within 60 days of installation of the monitoring system.

63. Section 60.2705 is revised to read as follows:

§60.2705 By what date must I conduct the initial performance test?

(a) 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.

(b) If you commence or recommence combusting a solid waste at an existing combustion unit at any commercial or industrial facility and you conducted a test consistent with the provisions of this subpart while combusting the given solid waste within the 6 months preceding the reintroduction of that solid waste in the combustion chamber, you do not need to retest until 6 months from the date you reintroduce that solid waste.

(c) If you commence combusting or recommence combusting a solid waste at an existing combustion unit at any commercial or industrial facility and you have not conducted a performance test consistent with the provisions of this subpart while combusting the given solid waste within the 6 months preceding the reintroduction of that solid waste in the combustion chamber, you must conduct a performance test within 60 days commencing or recommencing solid waste combustion.

64. Section 60.2706 is added to read as follows:

§60.2706 By what date must I conduct the initial air pollution control device inspection?

(a) The initial air pollution control device inspection must be conducted within 60 days after installation of the control device and the associated CISWI unit reaches the charge

rate at which it will operate, but no later than 180 days after the final compliance date for meeting the amended emission limitations.

(b) Within 10 operating days following an air pollution control device inspection, all necessary repairs must be completed unless the owner or operator obtains written approval from the state agency establishing a date whereby all necessary repairs of the designated facility must be completed.

65. Section 60.2710 is revised to read as follows:

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

(a) Compliance with standards.

(1) The emission standards and operating requirements set forth in this subpart apply at all times.

(2) If you cease combusting solid waste you may opt to remain subject to the provisions of this subpart. Consistent with the definition of CISWI unit, you are subject to the requirements of this subpart at least 6 months following the last date of solid waste combustion. Solid waste combustion is ceased when solid waste is not in the combustion chamber (i.e., the solid waste feed to the combustor has been cut off for a period of time not less than the solid waste residence time).

(3) If you cease combusting solid waste you must be in compliance with any newly applicable standards on the effective

date of the waste-to-fuel switch. The effective date of the waste-to-fuel switch is a date selected by you, that must be at least 6 months from the date that you ceased combusting solid waste, consistent with §60.2710(a)(2). Your source must remain in compliance with this subpart until the effective date of the waste-to-fuel switch.

(4) If you own or operate an existing commercial or industrial combustion unit that combusted a fuel or non-waste material, and you commence or recommence combustion of solid waste, you are subject to the provisions of this subpart as of the first day you introduce or reintroduce solid waste to the combustion chamber, and this date constitutes the effective date of the fuel-to-waste switch. You must complete all initial compliance demonstrations for any section 112 standards that are applicable to your facility before you commence or recommence combustion of solid waste. You must provide 30 days prior notice of the effective date of the waste-to-fuel switch. The notification must identify:

(i) The name of the owner or operator of the CISWI unit, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

(ii) The currently applicable subcategory under this subpart, and any 40 CFR part 63 subpart and subcategory that will be applicable after you cease combusting solid waste;



(iii) The fuel(s), non-waste material(s) and solid waste(s) the CISWI unit is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting;

(iv) The date on which you became subject to the currently applicable emission limits;

(v) The date upon which you will cease combusting solid waste, and the date (if different) that you intend for any new requirements to become applicable (i.e., the effective date of the waste-to-fuel switch), consistent with (2) and (3)) above.

(5) All air pollution control equipment necessary for compliance with any newly applicable emissions limits which apply as a result of the cessation or commencement or recommencement of combusting solid waste must be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch.

(6) All monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of combusting solid waste must be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch. All calibration and drift checks must be performed as of the effective date of the waste-to-fuel, or fuel-to-waste switch. Relative accuracy tests must be performed as of the

performance test deadline for PM CEMS. Relative accuracy testing for other CEMS need not be repeated if that testing was previously performed consistent with section 112 monitoring requirements or monitoring requirements under this subpart.

(b) You must conduct an annual performance test for the pollutants listed in table 2 of this subpart or tables 6 through 9 of this subpart and opacity for each CISWI unit as required under §60.2690. The annual performance test must be conducted using the test methods listed in table 2 of this subpart or tables 6 through 9 of this subpart and the procedures in §60.2690. Opacity must be measured using EPA Reference Method 9 at 40 CFR part 60. Annual performance tests are not required if you use CEMS or continuous opacity monitoring systems to determine compliance.

(c) You must continuously monitor the operating parameters specified in §60.2675 or established under §60.2680 and as specified in §60.2735. Operation above the established maximum or below the established minimum operating limits constitutes a deviation from the established operating limits. Three-hour block 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 are confirmed or reestablished during performance tests.

(d) You must burn only the same types of waste and fuels used to establish subcategory applicability (for ERUs) and operating limits during the performance test.

(e) For energy recovery units, incinerators, and small remote units, you must perform annual visual emissions test for ash handling.

(f) For energy recovery units, you must conduct an annual performance test for opacity using EPA Reference Method 9 at 40 CFR part 60 (except where particulate matter continuous monitoring system or continuous parameter monitoring systems are used) and the pollutants listed in table 7 of this subpart.

(g) For facilities using a CEMS to demonstrate compliance with the carbon monoxide emission limit, compliance with the carbon monoxide emission limit may be demonstrated by using the CEMS according to the following requirements:

(1) You must measure emissions according to §60.13 to calculate 1-hour arithmetic averages, corrected to 7 percent oxygen. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. You must demonstrate initial compliance with the carbon monoxide emissions limit using a 30-day rolling average of the 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, calculated using Equation 19-19 in

section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7.

(2) Operate the carbon monoxide continuous emissions monitoring system in accordance with the applicable requirements of performance specification 4A of appendix B and the quality assurance procedures of appendix F of this part.

(h) For waste-burning kilns, demonstrate continuous compliance with the particulate matter emissions limit using a particulate matter continuous emissions monitoring system according to the procedures in §60.2730(n). Energy recovery units with design heat input capacities greater than 250 MMBtu/hr may elect to demonstrate continuous compliance with the particulate matter emissions limit using a particulate matter CEMS according to the procedures in §60.2730(n) instead of the continuous parameter monitoring system specified in §60.2710(i).

(i) For energy recovery units with design capacities greater than or equal to 10 MMBTU/hour but less than 250 MMBtu/hr you must install, operate, certify and maintain a continuous opacity monitoring system (COMS) according to the procedures in §60.2730.

(j) For waste-burning kilns, you must conduct an annual performance test for the pollutants (except mercury and particulate matter, and hydrogen chloride if no acid gas wet scrubber is used) listed in table 8 of this subpart. If your

waste-burning kiln is not equipped with a wet scrubber, you must determine compliance with the hydrogen chloride emission limit using a CEMS as specified in §60.2730. You must determine compliance with the mercury emissions limit using a mercury CEMS according to the following requirements:

(1) Operate a CEMS in accordance with performance specification 12A at 40 CFR part 60, appendix B or a sorbent trap based integrated monitor in accordance with performance specification 12B at 40 CFR part 60, appendix B. The duration of the performance test must be a calendar month. For each calendar month in which the waste-burning kiln operates, hourly mercury concentration data and stack gas volumetric flow rate data must be obtained.

(2) Owners or operators using a mercury continuous emissions monitoring systems must install, operate, calibrate and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A at 40 CFR part 60, appendix B and quality assurance procedure 5 at 40 CFR part 60, appendix F.

(3) The owner or operator of a waste-burning kiln must demonstrate initial compliance by operating a mercury continuous emissions monitor while the raw mill of the in-line kiln/raw

mill is operating under normal conditions and while the raw mill of the in-line kiln/raw mill is not operating.

(k) If you use an air pollution control device to meet the emission limitations in this subpart, you must conduct an initial and annual inspection of the air pollution control device. The inspection must include, at a minimum, the following:

(1) Inspect air pollution control device(s) for proper operation.

(2) Develop a site-specific monitoring plan according to the requirements in paragraph (1) of this section. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under §60.13(i).

(1) For each CMS required in this section, you must develop and submit to the EPA Administrator for approval a site-specific monitoring plan according to the requirements of this paragraph (1) that addresses paragraphs (1)(1)(i) through (vi) of this section.

(1) You must submit this site-specific monitoring plan at least 60 days before your initial performance evaluation of your continuous monitoring system.

(i) Installation of the continuous monitoring system sampling probe or other interface at a measurement location

relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device).

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer and the data collection and reduction systems.

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations).

(iv) Ongoing operation and maintenance procedures in accordance with the general requirements of §60.11(d).

(v) Ongoing data quality assurance procedures in accordance with the general requirements of §60.13.

(vi) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §60.7(b), (c), (c)(1), (c)(4), (d), (e), (f) and (g).

(2) You must conduct a performance evaluation of each continuous monitoring system in accordance with your site-specific monitoring plan.

(3) You must operate and maintain the continuous monitoring system in continuous operation according to the site-specific monitoring plan.

(m) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (l) and (m)(1) through (4) of this section.

(1) Install the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) Use a flow sensor with a measurement sensitivity of no greater than 2 percent of the expected process flow rate.

(3) Minimize the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) Conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(n) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (1) and (n)(1) through (6) of this section.

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., PM scrubber pressure drop).

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.

(4) Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (e.g., check for pressure tap pluggage daily).



(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in your monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(o) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (l) and (n)(1) through (6) of this section.

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., PM scrubber pressure drop).

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.

(4) Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (e.g., check for pressure tap pluggage daily).

(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in your monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(p) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator, you must meet the requirements in paragraphs (1) and (p) (1) through (2) of this section.

(1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates.

(2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(q) If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (l) and (q)(1) through (3) of this section.

(1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate.

(2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(r) If you elect to use a fabric filter bag leak detection system 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 (l) and (r)(1) through (5) of this section.

(1) Install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute particulate matter loadings for each exhaust stack, roof vent, or compartment (e.g., for a positive pressure fabric filter) of the fabric filter.

(2) Use a bag leak detection system certified by the manufacturer to be capable of detecting particulate matter

emissions at concentrations of 10 milligrams per actual cubic meter or less.

(3) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see §60.17).

(4) Use a bag leak detection system equipped with a device to continuously record the output signal from the sensor.

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

(s) For facilities using a CEMS to demonstrate compliance with the sulfur dioxide emission limit, compliance with the sulfur dioxide emission limit may be demonstrated by using the CEMS specified in §60.2730 to measure sulfur dioxide and calculating a 30-day rolling average emission concentration using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7. The sulfur dioxide CEMS must be operated according to performance specification 2 in appendix B of this part and must follow the procedures and methods specified in this paragraph (s). For sources that have actual inlet emissions less than 100 parts per million dry volume, the

relative accuracy criterion for inlet sulfur dioxide CEMS should be no greater than 20 percent of the mean value of the reference method test data in terms of the units of the emission standard, or 5 parts per million dry volume absolute value of the mean difference between the reference method and the CEMS, whichever is greater.

(1) During each relative accuracy test run of the CEMS required by performance specification 2 in appendix B of this part, collect sulfur dioxide and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the continuous emissions monitors and the test methods specified in paragraphs (s) (1) (i) and (s) (1) (ii) of this section.

(i) For sulfur dioxide, EPA Reference Method 6 or 6C, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17) must be used.

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17), as applicable, must be used.

(2) The span value of the continuous emissions monitoring system at the inlet to the sulfur dioxide control device must be 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the unit subject to this rule. The span value of the CEMS at the outlet of the sulfur dioxide control

device must be 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the unit subject to this rule.

(3) Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with procedure 1 in appendix F of this part.

(t) For facilities using a CEMS to demonstrate continuous compliance with the nitrogen oxides emission limit, compliance with the nitrogen oxides emission limit may be demonstrated by using the CEMS specified in §60.2730 to measure nitrogen oxides and calculating a 30-day rolling average emission concentration using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7. The nitrogen oxides CEMS must be operated according to performance specification 2 in appendix B of this part and must follow the procedures and methods specified in paragraphs (t)(1) through (t)(5) of this section.

(1) During each relative accuracy test run of the CEMS required by performance specification 2 of appendix B of this part, collect nitrogen oxides and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the CEMS and the test methods specified in paragraphs (t)(1)(i) and (t)(1)(ii) of this section.

(i) For nitrogen oxides, EPA Reference Method 7 or 7E at 40 CFR part 60, appendix A-4 must be used.

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17), as applicable, must be used.

(2) The span value of the CEMS must be 125 percent of the maximum estimated hourly potential nitrogen oxide emissions of unit.

(3) Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with procedure 1 in appendix F of this part.

(4) The owner or operator of an affected facility may request that compliance with the nitrogen oxides emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. If carbon dioxide is selected for use in diluent corrections, the relationship between oxygen and carbon dioxide levels must be established during the initial performance test according to the procedures and methods specified in paragraphs (t)(4)(i) through (t)(4)(iv) of this section. This relationship may be reestablished during performance compliance tests.

(i) The fuel factor equation in Method 3B must be used to determine the relationship between oxygen and carbon dioxide at

a sampling location. Method 3A, 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17), as applicable, must be used to determine the oxygen concentration at the same location as the carbon dioxide monitor.

(ii) Samples must be taken for at least 30 minutes in each hour.

(iii) Each sample must represent a 1-hour average.

(iv) A minimum of 3 runs must be performed.

(u) For facilities using a continuous emissions monitoring system to demonstrate continuous compliance with any of the emission limits of this subpart, you must complete the following:

(1) Demonstrate compliance with the appropriate emission limit(s) using a 30-day rolling average, calculated using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7.

(2) Operate all continuous emissions monitoring system in accordance with the applicable procedures under appendices B and F of this part.

(v) Use of the bypass stack at any time is an emissions standards deviation for particulate matter, HCl, Pb, Cd, Hg, NO<sup>x</sup>, SO<sub>2</sub>, and dioxin/furans.



(w) For energy recovery units with a design heat input capacity of 100 MMBtu per hour or greater that do not use a carbon monoxide CEMS, you must install, operate, and maintain a oxygen analyzer system as defined in §60.2875 according to the procedures in paragraphs (w) (1) through (4) of this section.

(1) The oxygen analyzer system must be installed by the initial performance test date specified in §60.2675.

(2) You must operate the oxygen trim system with the oxygen level set at the minimum percent oxygen by volume that is established as the operating limit for oxygen according to paragraph (w) (3) of this section.

(3) You must maintain the oxygen level such that it is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test.

(4) You must calculate and record a 30-day rolling average oxygen concentration using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 of Appendix A-7 of this part.

(x) For energy recovery units with design heat input capacities greater than or equal to 250 MMBtu/hour, you must install, certify, maintain, and operate a PM CPMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (x) (1) through (5) of this section. For other energy recovery units, you may elect to use PM CPMS operated in accordance with this section in lieu of

using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure)

(1) Install, certify, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with §60.2710(l) and (x)(1)(i) through (iii) of this section.

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, or beta attenuation of the exhaust gas or representative exhaust gas sample. The reportable measurement output from the PM CPMS may be expressed as milliamps, stack concentration, or other raw data signal.

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS must be capable of detecting and responding to particulate matter concentrations of no greater than 0.5 mg/actual cubic meter.

(3) Collect PM CPMS hourly average output data for all energy recovery unit operating hours. Express the PM CPMS output as millamps, PM concentration, or other raw data signal value.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy

recovery unit operating hours data (e.g., milliamps, PM concentration, raw data signal).

66. Section 60.2715 is revised to read as follows:

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

You must conduct annual performance tests between 11 and 13 months of the previous performance test.

67. Section 60.2716 is added to read as follows:

§60.2716 By what date must I conduct the annual air pollution control device inspection?

On an annual basis (no more than 12 months following the previous annual air pollution control device inspection), you must complete the air pollution control device inspection as described in §60.2706.

68. Section 60.2720 is revised to read as follows:

§60.2720 May I conduct performance testing less often?

(a) You must conduct annual performance tests according to the schedule specified in §60.2715, with the following exceptions:

(1) You may conduct a repeat performance test at any time to establish new values for the operating limits to apply from that point forward, as specified in §60.2725. The Administrator may request a repeat performance test at any time.

(2) You must repeat the performance test within 60 days of a process change, as defined in §60.2875.

(3) If the initial or any subsequent performance test for any pollutant in table 2 or tables 6 through 9 of this subpart, as applicable, demonstrates that the emission level for the pollutant is no greater than the emission level specified in paragraph (a)(3)(i) or (a)(3)(ii) of this section, as applicable, and you are not required to conduct a performance test for the pollutant in response to a request by the Administrator in paragraph (a)(1) of this section or a process change in paragraph (a)(2) of this section, you may elect to skip conducting a performance test for the pollutant for the next 2 years. You must conduct a performance test for the pollutant during the third year and no more than 37 months following the previous performance test for the pollutant. For cadmium and lead, both cadmium and lead must be emitted at emission levels no greater than their respective emission levels specified in paragraph (a)(3)(i) of this section for you to qualify for less frequent testing under this paragraph.

(i) For particulate matter, hydrogen chloride, mercury, carbon monoxide, nitrogen oxides, sulfur dioxide, cadmium, lead, and dioxins/furans, the emission level equal to 75 percent of the applicable emission limit in table 2 or tables 6 through 9 of this subpart, as applicable, to this subpart.

(ii) For fugitive emissions, visible emissions (of combustion ash from the ash conveying system) for 2 percent of the time during each of the three 1-hour observations periods.

(4) If you are conducting less frequent testing for a pollutant as provided in paragraph (a) (3) of this section and a subsequent performance test for the pollutant indicates that your CISWI unit does not meet the emission level specified in paragraph (a) (3) (i) or (a) (3) (ii) of this section, as applicable, you must conduct annual performance tests for the pollutant according to the schedule specified in paragraph (a) of this section until you qualify for less frequent testing for the pollutant as specified in paragraph (a) (3) of this section.

69. Section 60.2730 is amended by revising paragraphs (b) (6) and (c) and adding paragraphs (d) through (r) to read as follows:

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

\* \* \* \* \*

(b) \* \* \*

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

\* \* \* \* \*

(c) If you are using something other than a wet scrubber, activated carbon, selective non-catalytic reduction, or an electrostatic precipitator 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.

(d) If you use activated carbon injection to comply with the emission limitations in this subpart, you must measure the minimum sorbent flow rate once per hour.

(e) If you use selective noncatalytic reduction to comply with the emission limitations, you must complete the following:

(1) Following the date on which the initial performance test is completed or is required to be completed under §60.2690, whichever date comes first, ensure that the affected facility does not operate above the maximum charge rate, or below the minimum secondary chamber temperature (if applicable to your CISWI unit) or the minimum reagent flow rate measured as 3-hour block averages at all times.

(2) Operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature and below the minimum reagent flow rate simultaneously constitute a violation of the nitrogen oxides emissions limit.

(f) If you use an electrostatic precipitator to comply with the emission limits of this subpart, you must monitor the secondary power to the electrostatic precipitator collection plates and maintain the 3-hour block averages at or above the operating limits established during the mercury or particulate matter performance test.

(g) For waste-burning kilns not equipped with a wet scrubber, in place of hydrogen chloride testing with EPA Method 321 at 40 CFR part 63, appendix A, an owner or operator must install, calibrate, maintain, and operate a CEMS for monitoring hydrogen chloride emissions discharged to the atmosphere and record the output of the system. To demonstrate continuous compliance with the hydrogen chloride emissions limit for units other than waste-burning kilns not equipped with a wet scrubber, a facility may substitute use of a hydrogen chloride continuous emissions monitoring system for conducting the hydrogen chloride annual performance test, monitoring the minimum hydrogen chloride sorbent flow rate and monitoring the minimum scrubber liquor pH.

(h) To demonstrate continuous compliance with the particulate matter emissions limit, a facility may substitute use of a particulate matter continuous emissions monitoring system for conducting the particulate matter annual performance

test and monitoring the minimum pressure drop across the wet scrubber, if applicable.

(i) To demonstrate continuous compliance with the dioxin/furan emissions limit, a facility may substitute use of a continuous automated sampling system for the dioxin/furan annual performance test. You must record the output of the system and analyze the sample according to EPA Method 23 at 40 CFR part 60, appendix A-7. This option to use a continuous automated sampling system takes effect on the date a final performance specification applicable to dioxin/furan from continuous monitors is published in the Federal Register. The owner or operator who elects to continuously sample dioxin/furan emissions instead of sampling and testing using EPA Method 23 at 40 CFR part 60, appendix A-7 must install, calibrate, maintain and operate a continuous automated sampling system and must comply with the requirements specified in §60.58b(p) and (q).

(j) To demonstrate continuous compliance with the mercury emissions limit, a facility may substitute use of a continuous automated sampling system for the mercury annual performance test. You must record the output of the system and analyze the sample at set intervals using any suitable determinative technique that can meet performance specification 12B criteria. This option to use a continuous automated sampling system takes effect on the date a final performance specification applicable



to mercury from monitors is published in the Federal Register. The owner or operator who elects to continuously sample mercury emissions instead of sampling and testing using EPA Method 29 or 30B at 40 CFR part 60, appendix A-8, ASTM D6784-02 (Reapproved 2008) (incorporated by reference, see §60.17), or an approved alternative method for measuring mercury emissions, must install, calibrate, maintain and operate a continuous automated sampling system and must comply with the requirements specified in §60.58b(p) and (q).

(k) To demonstrate continuous compliance with the nitrogen oxides emissions limit, a facility may substitute use of a continuous emissions monitoring system for the nitrogen oxides annual performance test to demonstrate compliance with the nitrogen oxides emissions limits.

(1) Install, calibrate, maintain and operate a CEMS for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 2 of appendix B of this part, the quality assurance procedure 1 of appendix F of this part and the procedures under §60.13 must be followed for installation, evaluation and operation of the CEMS.

(2) Following the date that the initial performance test for nitrogen oxides is completed or is required to be completed under §60.2690, compliance with the emission limit for nitrogen

oxides required under §60.52b(d) must be determined based on the 30-day rolling average of the hourly emission concentrations using CEMS outlet data. The 1-hour arithmetic averages must be expressed in parts per million by volume (dry basis) and used to calculate the 30-day rolling average concentrations. The 1-hour arithmetic averages must be calculated using the data points required under §60.13(e)(2).

(1) To demonstrate continuous compliance with the sulfur dioxide emissions limit, a facility may substitute use of a continuous automated sampling system for the sulfur dioxide annual performance test to demonstrate compliance with the sulfur dioxide emissions limits.

(1) Install, calibrate, maintain and operate a CEMS for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 2 of appendix B of this part, the quality assurance requirements of procedure 1 of appendix F of this part and the procedures under §60.13 must be followed for installation, evaluation and operation of the CEMS.

(2) Following the date that the initial performance test for sulfur dioxide is completed or is required to be completed under §60.2690, compliance with the sulfur dioxide emission limit may be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations using CEMS

outlet data. The 1-hour arithmetic averages must be expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 30-day rolling average emission concentrations. The 1-hour arithmetic averages must be calculated using the data points required under §60.13(e)(2).

(m) For energy recovery units that do not use a wet scrubber, fabric filter with bag leak detection system, or particulate matter CEMS, you must install, operate, certify and maintain a continuous opacity monitoring system according to the procedures in paragraphs (m)(1) through (5) of this section by the compliance date specified in §60.2670. Energy recovery units that use a particulate matter continuous emissions monitoring system to demonstrate initial and continuing compliance according to the procedures in §60.2730(n) are not required to install a continuous opacity monitoring system and must perform the annual performance tests for opacity consistent with §60.2710(f).

(1) Install, operate and maintain each continuous opacity monitoring system according to performance specification 1 at 40 CFR part 60, appendix B.

(2) Conduct a performance evaluation of each continuous opacity monitoring system according to the requirements in §60.13 and according to performance specification 1 at 40 CFR part 60, appendix B.

(3) As specified in §60.13(e) (1), each continuous opacity monitoring system must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) Reduce the continuous opacity monitoring system data as specified in §60.13(h) (1).

(5) Determine and record all the 6-minute averages (and 1-hour block averages as applicable) collected.

(n) For energy recovery units with design capacities greater than 250 MMBtu/hr and waste-burning kilns, in place of particulate matter testing with EPA Method 5 at 40 CFR part 60, appendix A-3, an owner or operator must install, calibrate, maintain and operate a CEMS for monitoring particulate matter emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who continuously monitors particulate matter emissions instead of conducting performance testing using EPA Method 5 at 40 CFR part 60, appendix A-3 must install, calibrate, maintain and operate a CEMS and must comply with the requirements specified in paragraphs (n) (1) through (n) (14) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

(3) The monitor must be installed, evaluated and operated in accordance with the requirements of performance specification 11 of appendix B of this part and quality assurance requirements of procedure 2 of appendix F of this part and §60.13.

(4) The initial performance evaluation must be completed no later than 180 days after the final compliance date for meeting the amended emission limitations, as specified under §60.2690 or within 180 days of notification to the Administrator of use of the continuous monitoring system if the owner or operator was previously determining compliance by Method 5 at 40 CFR part 60, appendix A-3 performance tests, whichever is later.

(5) The owner or operator of an affected facility may request that compliance with the particulate matter emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility must be established according to the procedures and methods specified in §60.2710(s)(5)(i) through (s)(5)(iv).

(6) The owner or operator of an affected facility must conduct an initial performance test for particulate matter emissions as required under §60.2690. Compliance with the particulate matter emission limit must be determined by using the CEMS specified in paragraph (n) of this section to measure particulate matter and calculating a 30-day rolling average

emission concentration using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7 of this part.

(7) Compliance with the particulate matter emission limit must be determined based on the 30-day rolling average calculated using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, Appendix A-7 of the part from the 1-hour arithmetic average of the CEMS outlet data.

(8) At a minimum, valid continuous monitoring system hourly averages must be obtained as specified §60.2735.

(9) The 1-hour arithmetic averages required under paragraph (n) (7) of this section must be expressed in milligrams per dry standard cubic meter corrected to 7 percent oxygen (or carbon dioxide) (dry basis) and must be used to calculate the 30-day rolling average emission concentrations. The 1-hour arithmetic averages must be calculated using the data points required under §60.13(e) (2) .

(10) All valid CEMS data must be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (n) (8) of this section are not met.

(11) The CEMS must be operated according to performance specification 11 in appendix B of this part.

(12) During each relative accuracy test run of the CEMS required by performance specification 11 in appendix B of this

part, particulate matter and oxygen (or carbon dioxide) data must be collected concurrently (or within a 30-to 60-minute period) by both the continuous emissions monitors and the following test methods.

(i) For particulate matter, EPA Reference Method 5 at 40 CFR part 60, appendix A-3 must be used.

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B at 40 CFR part 60, appendix A-2, as applicable, must be used.

(13) Quarterly accuracy determinations and daily calibration drift tests must be performed in accordance with procedure 2 in appendix F of this part.

(14) When particulate matter emissions data are missing because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, you must collect emissions data by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 at 40 CFR part 60, appendix A-7 to provide, as necessary, valid emissions data for a minimum of 85 percent of the hours per day, 90 percent of the hours per calendar quarter, and 95 percent of the hours per calendar year that the affected facility is operated and combusting waste.

(o) To demonstrate continuous compliance with the carbon monoxide emissions limit, a facility may substitute use of a continuous automated sampling system for the carbon monoxide

annual performance test to demonstrate compliance with the carbon monoxide emissions limits.

(1) Install, calibrate, maintain, and operate a CEMS for measuring carbon monoxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 4B of appendix B of this part, the quality assurance procedure 1 of appendix F of this part and the procedures under §60.13 must be followed for installation, evaluation, and operation of the CEMS.

(2) Following the date that the initial performance test for carbon monoxide is completed or is required to be completed under §60.2690, compliance with the carbon monoxide emission limit may be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, using CEMS outlet data. Except for CEMS data during startup and shutdown, as defined in this subpart, the 1-hour arithmetic averages must be expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages must be calculated using the data points required under §60.13(e)(2).



(p) The owner/operator of an affected source with a bypass stack shall install, calibrate (to manufacturers' specifications), maintain and operate a device or method for measuring the use of the bypass stack including date, time and duration.

(q) For energy recovery units with a design heat input capacity of 100 MMBtu per hour or greater that do not use a carbon monoxide CEMS, you must install, operate, and maintain a oxygen analyzer system as defined in §60.2875 according to the procedures in paragraphs (q) (1) through (4) of this section.

(1) The oxygen analyzer system must be installed by the initial performance test date specified in §60.2675.

(2) You must operate the oxygen trim system with the oxygen level set at the minimum percent oxygen by volume that is established as the operating limit for oxygen according to paragraph (q) (3) of this section.

(3) You must maintain the oxygen level such that it is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test.

(4) You must calculate and record a 30-day rolling average oxygen concentration using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 of Appendix A-7 of this part.

(r) For energy recovery units with design heat input capacities greater than or equal to 250 MMBtu/hour, you must

install, certify, maintain, and operate a PM CPMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (r)(1) through (5) of this section. For other energy recovery units, you may elect to use PM CPMS operated in accordance with this section in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure)

(1) Install, certify, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with §60.2710(1) and (r)(1)(i) through (iii) of this section.

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, or beta attenuation of the exhaust gas or representative exhaust gas sample. The reportable measurement output from the PM CPMS may be expressed as milliamps, stack concentration, or other raw data signal.

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS must be capable of detecting and responding to particulate matter concentrations of no greater than 0.5 mg/actual cubic meter.

(2) Collect PM CPMS hourly average output data for all energy recovery unit operating hours. Express the PM CPMS output as millamps, PM concentration, or other raw data signal value.

(3) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit operating hours data (e.g., milliamps, PM concentration, raw data signal).

70. Section 60.2735 is revised to read as follows:

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

For each continuous monitoring system required or optionally allowed under §60.2730, you must monitor and collect data according to this section:

(a) You must operate the monitoring system and collect data at all required intervals at all times compliance is required except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods (as specified in §60.2770(o) of this part), and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that

are caused in part by poor maintenance or careless operation are not malfunctions. You are required to effect monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

(b) You may not use data recorded during the monitoring system malfunctions, repairs associated with monitoring system malfunctions or out-of control periods, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

(c) Except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments, failure to collect required data is a deviation of the monitoring requirements.

71. Section 60.2740 is amended by:

- a. Revising the introductory text.
- b. Revising paragraphs (b) (5) and (e).
- c. Removing and reserving paragraphs (c) and (d).
- d. Adding paragraphs (n) through (u).

§60.2740 What records must I keep?

You must maintain the items (as applicable) as specified in paragraphs (a), (b), and (e) through (u) of this section for a period of at least 5 years:

\* \* \* \* \*

(b) \* \* \*

(5) For affected CISWI units that establish operating limits for controls other than wet scrubbers under §60.2675(d) through (f) or §60.2680, you must maintain data collected for all operating parameters used to determine compliance with the operating limits.

\* \* \* \* \*

(c) [Reserved]

(d) [Reserved]

(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 §60.2675(d) through (f) or §60.2680 with a description of the deviations, reasons for such deviations, and a description of corrective actions taken.

\* \* \* \* \*

(n) Maintain records of the annual air pollution control device inspections that are required for each CISWI unit subject to the emissions limits in table 2 of this subpart or tables 6

through 9 of this subpart, any required maintenance and any repairs not completed within 10 days of an inspection or the timeframe established by the state regulatory agency.

(o) For continuously monitored pollutants or parameters, you must document and keep a record of the following parameters measured using continuous monitoring systems.

(1) All 6-minute average levels of opacity.

(2) All 1-hour average concentrations of sulfur dioxide emissions.

(3) All 1-hour average concentrations of nitrogen oxides emissions.

(4) All 1-hour average concentrations of carbon monoxide emissions. You must indicate which data are CEMS data during startup and shutdown.

(5) All 1-hour average concentrations of particulate matter emissions.

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

(7) All 1-hour average concentrations of hydrogen chloride emissions.

(8) All 1-hour average percent oxygen concentrations.

(9) All 1-hour average PM CPMS readings or particulate matter continuous emissions monitor outputs.

(p) Records indicating use of the bypass stack, including dates, times and durations.

(q) If you choose to stack test less frequently than annually, consistent with §60.2720(a) through (c), you must keep annual records that document that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(r) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

(s) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(t) Records of actions taken during periods of malfunction to minimize emissions in accordance with §60.11(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(u) For operating units that combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to §241.3(b)(1), you must keep a record which documents how the secondary material meets each of the legitimacy criteria. If you combust a fuel that has been processed from a discarded non-hazardous secondary material

pursuant to §241.3(b) (4), you must keep records as to how the operations that produced the fuel satisfies the definition of processing in §241.2. If the fuel received a non-waste determination pursuant to the petition process submitted under §241.3(c), you must keep a record that documents how the fuel satisfies the requirements of the petition process.

72. Section 60.2770 is amended by revising paragraph (e) and adding paragraphs (k) through (p) to read as follows:

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

\* \* \* \* \*

(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.

\* \* \* \* \*

(k) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction that occurred during the reporting period and that caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §60.11(d), including actions taken to correct a malfunction.



(1) For each deviation from an emission or operating limitation that occurs for a CISWI unit for which you are not using a CMS to comply with the emission or operating limitations in this subpart, the annual report must contain the following information.

(1) The total operating time of the CISWI unit at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(m) If there were periods during which the continuous monitoring system, including the CEMS, was out of control as specified in paragraph (o) of this section, the annual report must contain the following information for each deviation from an emission or operating limitation occurring for a CISWI unit for which you are using a continuous monitoring system to comply with the emission and operating limitations in this subpart.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each continuous monitoring system was out-of-control, including start and end dates and hours and descriptions of corrective actions taken.

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of continuous monitoring system downtime during the reporting period, and the total duration of continuous monitoring system downtime as a percent of the total operating time of the CISWI unit at which the continuous monitoring system downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant that was monitored at the CISWI unit.

(9) A brief description of the CISWI unit.

(10) A brief description of the continuous monitoring system.

(11) The date of the latest continuous monitoring system certification or audit.

(12) A description of any changes in continuous monitoring system, processes, or controls since the last reporting period.

(n) If there were periods during which the continuous monitoring system, including the CEMS, was not out of control as specified in paragraph (o) of this section, a statement that there were not periods during which the continuous monitoring system was out of control during the reporting period.

(o) A continuous monitoring system is out of control if any of the following occur.

(1) The zero (low-level), mid-level (if applicable), or high-level calibration drift exceeds two times the applicable calibration drift specification in the applicable performance specification or in the relevant standard.

(2) The continuous monitoring system fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit.

(3) The continuous opacity monitoring system calibration drift exceeds two times the limit in the applicable performance specification in the relevant standard.

(p) For energy recovery units, include the annual heat input and average annual heat input rate of all fuels being burned in the unit to verify which subcategory of energy recovery unit applies.

73. Section 60.2780 is amended by revising paragraph (c) and removing paragraphs (e) and (f).

§60.2780 What must I include in the deviation report?

\* \* \* \* \*

(c) Durations and causes of the following:

(1) Each deviation from emission limitations or operating limits and your corrective actions.

(2) Bypass events and your corrective actions.

\* \* \* \* \*

74. Section 60.2790 is revised to read as follows:

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

(a) Yes. You must submit notifications as provided by §60.7.

(b) If you cease combusting solid waste but continue to operate, you must provide 30 days prior notice of the effective date of the waste-to-fuel switch, consistent with §60.2710(a).

The notification must identify:

(1) The name of the owner or operator of the CISWI unit, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

(2) The currently applicable subcategory under this subpart, and any 40 CFR part 63 subpart and subcategory that will be applicable after you cease combusting solid waste;

(3) The fuel(s), non-waste material(s) and solid waste(s) the CISWI unit is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting;

(4) The date on which you became subject to the currently applicable emission limits;

(5) The date upon which you will cease combusting solid waste, and the date (if different) that you intend for any new requirements to become applicable (i.e., the effective date of the waste-to-fuel switch), consistent with (2) and (3)) above.

75. Section 60.2795 is revised to read as follows:

§60.2795 In what form can I submit my reports?

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

(b) After December 31, 2011, within 60 days after the date of completing each performance evaluation or performance test, as they are defined in §63.2, conducted to demonstrate compliance with this subpart, the owner or operator of the affected facility must submit the relative accuracy test audit data and performance test data, except opacity data, to EPA by successfully submitting the data electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see [http://www.epa.gov/ttn/chief/ert/ert\\_tool.html](http://www.epa.gov/ttn/chief/ert/ert_tool.html)).

76. Section 60.2805 is revised to read as follows:

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

Yes. Each CISWI unit and air curtain incinerator subject to standards under this subpart must operate pursuant to a permit issued under Clean Air Act sections 129(e) and Title V.

\* \* \* \* \*

77. Section 60.2860 is revised to read as follows:

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

After the date the initial stack test is required or completed (whichever is earlier), you must meet the limitations in paragraphs (a) and (b) of this section.

(a) Maintain opacity to less than or equal to 10 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values), except as described in paragraph (b) of this section.

(b) Maintain opacity to less than or equal to 35 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) during the startup period that is within the first 30 minutes of operation.

\* \* \* \* \*

78. Section 60.2870 is amended by revising paragraph

(c) (2) to read as follows:

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

§60.2870 What are the recordkeeping and reporting requirements for air curtain incinerators?

\* \* \* \* \*

(c) \* \* \*

(2) The results (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) of the initial opacity tests.

\* \* \* \* \*

79. Section 60.2875 is amended by:

a. Adding definitions for "Affirmative defense," "Annual heat input," "Average annual heat input rate," "Burn-off oven," "Bypass stack," "CEMS data during startup and shutdown," "Chemical recovery unit," "Continuous monitoring system," "Energy recovery unit," "Energy recovery unit designed to burn biomass (Biomass)," "Energy recovery unit designed to burn coal (Coal)," "Energy recovery unit designed to burn liquid wastes material and gas (Liquid/gas)," "Energy recovery unit designed to burn solid materials (Solid)," "Foundry sand thermal reclamation unit," "Homogeneous wastes," "Incinerator," "Kiln," "Laboratory analysis unit," "Minimum voltage or amperage," "Opacity," "Operating day," "Oxygen analyzer system," "Oxygen trim system," "Performance evaluation," "Performance test," "Process change," "Raw mill," "Small remote incinerator," "Soil

treatment unit," "Solid waste incineration unit," "Space heater" and "Waste-burning kiln," in alphabetical order.

b. Revising the definition for "Commercial and industrial solid waste incineration (CISWI) unit," "Cyclonic burn barrel", "Modification," and "Wet scrubber."

c. Removing paragraph (3) of the definition for "Deviation."

d. Removing the definition for "Agricultural waste," "Commercial or industrial waste," and "Solid waste."

§60.2875 What definitions must I know?

\* \* \*

Affirmative defense means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

Annual heat input means the heat input for the 12 months preceding the compliance demonstration.

Average annual heat input rate means annual heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

\* \* \*

Burn-off oven means any rack reclamation unit, part reclamation unit, or drum reclamation unit. A burn-off oven is



not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

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

\* \* \*

CEMS data during startup and shutdown means carbon monoxide CEMS data collected during the first 4 hours of operation of energy recovery unit startup from a cold start and the hour of operation following the cessation of waste material being fed to the energy recovery unit during a unit shutdown.

Chemical recovery unit means 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. A chemical recovery unit is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart. The following seven types of units 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/residue containing catalyst metals that 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.

\* \* \* \* \*

Commercial and industrial solid waste incineration (CISWI)  
unit means any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding 6 months, any solid waste as that term is defined in 40 CFR part 241. If the operating unit burns materials other than traditional fuels as defined in §241.2 that have been discarded, and you do not keep and produce records as required by §60.2740(u), the material is a solid waste and the operating unit is a CISWI unit. While not all CISWI units will include all of the following components, a CISWI unit includes, but is not

limited to, the solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The CISWI unit does not include air pollution control equipment or the stack. The CISWI unit boundary starts at the solid waste hopper (if applicable) and extends through two areas: the combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and the combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. The CISWI unit includes all ash handling systems connected to the bottom ash handling system.

\* \* \* \* \*

Continuous monitoring system (CMS) means the total equipment, required under the emission monitoring sections in applicable subparts, used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters. A particulate matter continuous parameter monitoring system (PM CPMS) is a type of CMS.

\* \* \* \* \*

Cyclonic burn barrel means a combustion device for waste materials that is attached to a 55 gallon, openhead 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. A cyclonic burn barrel is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

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.

\* \* \* \* \*

Energy recovery unit means a combustion unit combusting solid waste (as that term is defined by the Administrator in 40 CFR part 241) for energy recovery. Energy recovery units include units that would be considered boilers and process heaters if they did not combust solid waste.

Energy recovery unit designed to burn biomass (Biomass) means an energy recovery unit that burns solid waste, biomass, and non-coal solid materials but less than 10 percent coal, on a

heat input basis on an annual average, either alone or in combination with liquid waste, liquid fuel or gaseous fuels.

Energy recovery unit designed to burn coal (Coal) means an energy recovery unit that burns solid waste and at least 10 percent coal on a heat input basis on an annual average, either alone or in combination with liquid waste, liquid fuel or gaseous fuels.

Energy recovery unit designed to burn liquid waste material and gas (Liquid/gas) means an energy recovery unit that burns a liquid waste with liquid or gaseous fuels not combined with any solid fuel or waste materials.

Energy recovery unit designed to burn solid materials (Solid) includes energy recovery units designed to burn coal and energy recovery units designed to burn biomass.

\* \* \* \* \*

Foundry sand thermal reclamation unit means a type of part reclamation unit that removes coatings that are on foundry sand. A foundry sand thermal reclamation unit is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

\* \* \* \* \*

Homogeneous wastes are stable, consistent in formulation, have known fuel properties, have a defined origin, have predictable chemical and physical attributes, and result in

consistent combustion characteristics and have a consistent emissions profile.

Incinerator means any furnace used in the process of combusting solid waste (as the term is defined by the Administrator in 40 CFR part 241) for the purpose of reducing the volume of the waste by removing combustible matter.

Incinerator designs include single chamber and two-chamber.

Kiln means an oven or furnace, including any associated preheater or precalciner devices, used for processing a substance by burning, firing or drying. Kilns include cement kilns that produce clinker by heating limestone and other materials for subsequent production of Portland Cement.

Laboratory analysis unit means units that burn samples of materials for the purpose of chemical or physical analysis. A laboratory analysis unit is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

\* \* \* \* \*

Minimum voltage or amperage means 90 percent of the lowest test-run average voltage or amperage to the electrostatic precipitator measured during the most recent particulate matter or mercury performance test demonstrating compliance with the applicable emission limits.

Modification or modified CISWI unit means a CISWI unit that has been 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 Clean Air Act section 129 or section 111 has established standards.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Operating day means a 24-hour period between 12:00 midnight and the following midnight during which any amount of solid waste is combusted at any time in the CISWI unit.

Oxygen analyzer system means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler flue gas or firebox. This definition includes oxygen trim systems. The source owner or operator is responsible to install, calibrate, maintain, and operate the

oxygen analyzer system in accordance with the manufacturer's recommendations.

Oxygen trim system means a system of monitors that is used to maintain excess air at the desired level in a combustion device. A typical system consists of a flue gas oxygen and/or carbon monoxide monitor that automatically provides a feedback signal to the combustion air controller.

\* \* \* \* \*

Performance evaluation means the conduct of relative accuracy testing, calibration error testing, and other measurements used in validating the continuous monitoring system data.

Performance test means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission standard as specified in the performance test section of the relevant standard.

Process change means a significant permit revision, but only with respect to those pollutant-specific emission units for which the proposed permit revision is applicable, including but not limited to a change in the air pollution control devices used to comply with the emission limits for the affected CISWI unit (e.g., change in the sorbent used for activated carbon injection).



\* \* \* \* \*

Raw mill means a ball and tube mill, vertical roller mill or other size reduction equipment, that is not part of an in-line kiln/raw mill, used to grind feed to the appropriate size. Moisture may be added or removed from the feed during the grinding operation. If the raw mill is used to remove moisture from feed materials, it is also, by definition, a raw material dryer. The raw mill also includes the air separator associated with the raw mill.

\* \* \* \* \*

Small, remote incinerator means an incinerator that combusts solid waste (as that term is defined by the Administrator in 40 CFR part 241) and combusts 3 tons per day or less solid waste and is more than 25 miles driving distance to the nearest municipal solid waste landfill.

Soil treatment unit means a unit that thermally treats petroleum-contaminated soils for the sole purpose of site remediation. A soil treatment unit may be direct-fired or indirect fired. A soil treatment unit is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

Solid waste incineration unit means a distinct operating unit of any facility which combusts any solid (as that term is defined by the Administrator in 40 CFR part 241) waste material

from commercial or industrial establishments or the general public (including single and multiple residences, hotels and motels). Such term does not include incinerators or other units required to have a permit under section 3005 of the Solid Waste Disposal Act. The term "solid waste incineration unit" does not include (A) materials recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals, (B) qualifying small power production facilities, as defined in section 3(17)(C) of the Federal Power Act (16 U.S.C. 769(17)(C)), or qualifying cogeneration facilities, as defined in section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)), which burn homogeneous waste (such as units which burn tires or used oil, but not including refuse-derived fuel) for the production of electric energy or in the case of qualifying cogeneration facilities which burn homogeneous waste for the production of electric energy and steam or forms of useful energy (such as heat) which are used for industrial, commercial, heating or cooling purposes, or (C) air curtain incinerators provided that such incinerators only burn wood wastes, yard wastes and clean lumber and that such air curtain incinerators comply with opacity limitations to be established by the Administrator by rule.

Space heater means a usually portable appliance for heating a relatively small area. A space heater is not an incinerator,

waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

\* \* \* \* \*

Waste-burning kiln means a kiln that is heated, in whole or in part, by combusting solid waste (as that term is defined by the Administrator in 40 CFR part 241). A waste-burning kiln does not include a kiln that is feeding non-hazardous secondary ingredients exclusively into the cold end of the kiln.

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

\* \* \* \* \*

80. Table 1 to Subpart DDDD of Part 60 is revised to read as follows:

Table 1 to Subpart DDDD of Part 60—Model Rule—Increments of Progress and Compliance Schedules

<b>Comply with these increments of progress</b>	<b>By these dates<sup>a</sup></b>
Increment 1—Submit final control plan	(Dates to be specified in state plan)
Increment 2—Final compliance	(Dates to be specified in state plan) <sup>b</sup>

<sup>a</sup> Site-specific schedules can be used at the discretion of the state.

<sup>b</sup> The date can be no later than 3 years after the effective date of state plan approval or December 1, 2005 for CISWI units that commenced construction on or before November 30, 1999. The date can be no later than 3 years after the effective date of

approval of a revised state plan or [THE DATE 5 YEARS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER] for CISWI units that commenced construction on or before June 4, 2010. For small remote incinerators, the date can be no later than 3 years after the effective date of approval of a revised state plan or March 21, 2016 for small remote incinerator CISWI units that commenced construction on or before June 4, 2010.

81. Table 2 to subpart DDDD is amended by:

a. Revising the title to read "Table 2 to Subpart DDDD of Part 60—Model Rule—Emission Limitations That Apply Before [Date to be specified in state plan]."

b. Revising the entries for "Hydrogen chloride," "Mercury," "Opacity" and "Oxides of nitrogen."

c. Adding footnotes b and c.

**Table 2 to Subpart DDDD of Part 60—Model Rule—Emission Limitations That Apply Before [Date to be specified in state plan]<sup>b</sup>**

For the air pollutant	You must meet this emission limitation <sup>a</sup>	Using this averaging time	And determining compliance using this method
* * *	* * *	* *	
Hydrogen chloride	62 parts per million by dry volume	3-run average (For Method 26, collect a minimum volume of 120 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run)	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A-8)
* * *	* * *	* *	
Mercury	0.47 milligrams per dry standard cubic meter	3-run average (1 hour minimum sample time per run)	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A-8) or ASTM D6784-02

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

For the air pollutant	You must meet this emission limitation <sup>a</sup>	Using this averaging time	And determining compliance using this method
			(Reapproved 2008) <sup>c</sup> .
Opacity	10 percent	Three 1-hour blocks consisting of ten 6-minute average opacity values	Performance test (Method 9 at 40 CFR part 60, appendix A-4)
* * * * *			
Oxides of nitrogen	388 parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Methods 7 or 7E at 40 CFR part 60, appendix A-4).
* * * * *			

<sup>b</sup> The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or [THE DATE 5 YEARS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

<sup>c</sup> Incorporated by reference, see §60.17.

82. Table 4 of subpart DDDD is amended by revising the column headings to read as follows:

**Table 4 to Subpart DDDD of Part 60—Model Rule—Toxic Equivalency Factors**

Dioxin/furan isomer	Toxic equivalency factor
* * * * *	

83. Table 5 of subpart DDDD is amended by:

a. Revising the entry for "Annual Report".

b. Revising the entry for "Emission limitation or operating limit deviation report".

**Table 5 to Subpart DDDD of Part 60—Summary of Reporting Requirements<sup>a</sup>**

Report	Due date	Contents	Reference
* * *	* * *	* * *	* * *
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"> <li>• Name and address</li> <li>• Statement and signature by responsible official</li> <li>• Date of report</li> <li>• Values for the operating limits</li> <li>• Highest recorded 3-hour average and the lowest 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported</li> <li>• If a performance test was conducted during the reporting period, the results of the test</li> <li>• If a performance test was not conducted during the reporting period, a statement that the requirements of §60.2720(a) were met</li> <li>• Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours but less than 2 weeks</li> <li>• If you are conducting performance tests once every 3 years consistent with §60.2720(a), the date of the last 2 performance tests, a comparison of the emission level you achieved in the last 2 performance tests to the 75 percent emission limit threshold required in §60.2720(a) and a statement as to whether there have been any operational changes since</li> </ul>	§§60.2765 and 60.2770

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

Report	Due date	Contents	Reference
		the last performance test that could increase emissions.	
* * * * *			
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"> <li>• Dates and times of deviation</li> <li>• Averaged and recorded data for those dates</li> <li>• Duration and causes of each deviation and the corrective actions taken</li> <li>• Copy of operating limit monitoring data and any test reports</li> <li>• Dates, times and causes for monitor downtime incidents</li> </ul>	\$60.2775 and 60.2780
* * * * *			

<sup>a</sup> This table is only a summary, see the referenced sections of the rule for the complete requirements.

84. Table 6 to Subpart DDDD is added as follows:

**Table 6 to Subpart DDDD of Part 60—Model Rule—Emission Limitations That Apply To Incinerators On and After [Date to be specified in state plan]<sup>a</sup>**

For the air pollutant	You must meet this emission limitation <sup>b</sup>	Using this averaging time	And determining compliance using this method
Cadmium	0.0026 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical finish.
Carbon monoxide	36 parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxins/furans	4.6 nanograms	3-run average (collect	Performance test

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 12/02/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

<b>For the air pollutant</b>	<b>You must meet this emission limitation<sup>b</sup></b>	<b>Using this averaging time</b>	<b>And determining compliance using this method</b>
(total mass basis)	per dry standard cubic meter	a minimum volume of 2 dry standard cubic meters)	(Method 23 at 40 CFR part 60, appendix A-7).
Dioxins/furans (toxic equivalency basis)	0.13 nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Hydrogen chloride	29 parts per million dry volume	3-run average (For Method 26, collect a minimum volume of 60 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run)	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A-8).
Lead	0.0036 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical finish.
Mercury	0.0054 milligrams per dry standard cubic meter	3-run average (For Method 29 an ASTM D6784-02 (Reapproved 2008) <sup>b</sup> , collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum sample as specified in Method 30B at 40 CFR part 60, appendix A)	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A-8) or ASTM D6784-02 (Reapproved 2008) <sup>c</sup> .
Oxides of nitrogen	53 parts per million dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).
Particulate matter filterable	34 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter)	Performance test (Method 5 or 29 at 40 CFR part 60, appendix A-3)



For the air pollutant	You must meet this emission limitation <sup>b</sup>	Using this averaging time	And determining compliance using this method
			or appendix A-8).
Sulfur dioxide	11 parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 6 or 6c at 40 CFR part 60, appendix A-4).
Fugitive ash	Visible emissions for no more than 5% of the hourly observation period	Three 1-hour observation periods	Visible emission test (Method 22 at 40 CFR part 60, appendix A-7).

<sup>a</sup> The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or [THE DATE 5 YEARS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

<sup>b</sup> All emission limitations are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the total mass basis limit or the toxic equivalency basis limit.

<sup>c</sup> Incorporated by reference, see §60.17.

85. Table 7 of Subpart DDDD is added as follows:

**Table 7 to Subpart DDDD of Part 60—Model Rule—Emission Limitations That Apply To Energy Recovery Units After [Date to be specified in state plan]<sup>a</sup>**

For the air pollutant	You must meet this emission limitation <sup>b</sup>		Using this averaging time	And determining compliance using this method
	Liquid/Gas	Solids		
Cadmium	0.023 milligrams per dry standard cubic meter	Biomass - 0.00078 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for

For the air pollutant	You must meet this emission limitation <sup>b</sup>		Using this averaging time	And determining compliance using this method
	Liquid/Gas	Solids		
Carbon monoxide	36 parts per million dry volume	Biomass - 490 parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
		Coal - 46 parts per million dry volume		
Dioxins/furans (total mass basis)	2.9 nanograms per dry standard cubic meter	Biomass - 0.52 nanograms per dry standard cubic meter <sup>c</sup>	3-run average (collect a minimum volume of 1 dry standard cubic meter)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
		Coal - 0.51 nanograms per dry standard cubic meter <sup>c</sup>		
Dioxins/furans (toxic equivalency basis)	0.32 nanograms per dry standard cubic meter	Biomass - 0.12 nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 4 dry standard cubic meters)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
		Coal - 0.075 nanograms per dry standard cubic meter <sup>c</sup>		

For the air pollutant	You must meet this emission limitation <sup>b</sup>		Using this averaging time	And determining compliance using this method
	Liquid/Gas	Solids		
Hydrogen chloride	14 parts per million dry volume	0.50 parts per million dry volume	3-run average (for Method 26, collect a minimum of 120 liters; for Method 26A, collect a minimum volume of 1 dry standard cubic meter)	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A-8).
Lead	0.096 milligrams per dry standard cubic meter	Biomass - 0.0019 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical finish.
		Coal - 0.0031 milligrams per dry standard cubic meter		
Mercury	0.031 milligrams per dry standard cubic meter	0.0020 milligrams per dry standard cubic meter	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008) <sup>b</sup> , collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A-8) or ASTM D6784-02 (Reapproved 2008) <sup>d</sup> .

For the air pollutant	You must meet this emission limitation <sup>b</sup>		Using this averaging time	And determining compliance using this method
	Liquid/Gas	Solids		
			minimum sample as specified in Method 30B at 40 CFR part 60, appendix A)	
Oxides of nitrogen	76 parts per million dry volume	Biomass - 290 parts per million dry volume Coal - 340 parts per million dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).
Particulate matter filterable	110 milligrams per dry standard cubic meter	Biomass - 11 milligrams per dry standard cubic meter or 30-day rolling average if PM CEMS is required or being used	3-run average (collect a minimum volume of 1 dry standard cubic meter)	Performance test (Method 5 or 29 at 40 CFR part 60, appendix A-3 or appendix A-8) if the unit has a design capacity less than or equal to 250 MMBtu/hr; or PM CEMS (performance specification 11 of appendix B and

For the air pollutant	You must meet this emission limitation <sup>b</sup>		Using this averaging time	And determining compliance using this method
	Liquid/Gas	Solids		
		Coal - 86 milligrams per dry standard cubic meter or 30-day rolling average if PM CEMS is required or being used		procedure 2 of appendix F of this part) if the unit has a design capacity greater than 250 MMBtu/hr. Use Method 5 or 5I of Appendix A of this part and collect a minimum sample volume of 1 dscm for the PM CEMS correlation testing.
Sulfur dioxide	720 parts per million dry volume	Biomass - 7.3 parts per million dry volume Coal - 650 parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 6 or 6c at 40 CFR part 60, appendix A-4).
Fugitive ash	Visible emissions for no more than 5 percent of the hourly observation period	Visible emissions for no more than 5 percent of the hourly observation period	Three 1-hour observation periods	Visible emission test (Method 22 at 40 CFR part 60, appendix A-7).

a The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or [THE DATE 5 YEARS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]

b All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the total mass basis limit or the toxic equivalency basis limit.

c If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §60.2720 if all of the other provision of §60.2720 are met. For all other pollutants that do not contain a footnote "c", your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or 75 percent of this limit in order to qualify for skip testing.

d Incorporated by reference, see §60.17.

86. Table 8 of Subpart DDDD is added as follows:

Table 8 to Subpart DDDD of Part 60—Model Rule—Emission Limitations That Apply to Waste-burning Kilns After [Date to be specified in state plan]<sup>a</sup>

<b>For the air pollutant</b>	<b>You must meet this emission limitation<sup>b</sup></b>	<b>Using this averaging time</b>	<b>And determining compliance using this method</b>
Cadmium	0.00082 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Performance test (Method 29 at 40 CFR part 60, appendix A-8).
Carbon monoxide	120 (long kilns) / 410 (preheater / precalciner) parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxins/furans (total mass basis)	3.6 nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Dioxins/furans	0.075	3-run average	Performance test

For the air pollutant	You must meet this emission limitation <sup>b</sup>	Using this averaging time	And determining compliance using this method
(toxic equivalency basis)	nanograms per dry standard cubic meter <sup>c</sup>	(collect a minimum volume of 1 dry standard cubic meter)	(Method 23 at 40 CFR part 60, appendix A-7).
Hydrogen chloride	3.0 parts per million dry volume <sup>c</sup>	3-run average (collect a minimum volume of 1 dry standard cubic meter) or 30-day rolling average if HCl CEMS is being used	Performance test (Method 321 at 40 CFR part 63, appendix A of this part) or HCl CEMS if a wet scrubber is not used.
Lead	0.0043 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Performance test (Method 29 at 40 CFR part 60, appendix A-8).
Mercury	0.011 milligrams per dry standard cubic meter	30-day rolling average	Mercury CEMS or sorbent trap monitoring system (performance specification 12A or 12B, respectively, of appendix B of this part.)
Oxides of nitrogen	630 parts per million dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4). Use a span gas with a concentration of 1000 ppm or less.
Particulate matter filterable	9.2 milligrams per dry standard cubic meter	30-day rolling average	PM CEMS (performance specification 11 of appendix B and procedure 2 of

For the air pollutant	You must meet this emission limitation <sup>b</sup>	Using this averaging time	And determining compliance using this method
			appendix F of this part; Use Method 5 or 5I of Appendix A of this part and collect a minimum sample volume of 2 dscm for the PM CEMS correlation testing.).
Sulfur dioxide	830 parts per million dry volume	3-run average (for Method 6, collect a minimum of 20 liters; for Method 6C, 1 hour minimum sample time per run)	Performance test (Method 6 or 6c at 40 CFR part 60, appendix A-4).

a The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or [THE DATE 5 YEARS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]

<sup>b</sup> All emission limitations are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the total mass basis limit or the toxic equivalency basis limit.

<sup>c</sup> If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §60.2720 if all of the other provision of §60.2720 are met. For all other pollutants that do not contain a footnote "c", your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or 75 percent of this limit in order to qualify for skip testing.

87. Table 9 of Subpart DDDD is added as follows:



Table 9 to Subpart DDDD of Part 60—Model Rule—Emission Limitations That Apply to Small, Remote Incinerators After [Date to be specified in state plan]<sup>a</sup>

<b>For the air pollutant</b>	<b>You must meet this emission limitation<sup>b</sup></b>	<b>Using this averaging time</b>	<b>And determining compliance using this method</b>
Cadmium	0.61 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter)	Performance test (Method 29 at 40 CFR part 60, appendix A-8).
Carbon monoxide	20 parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxins/furans (total mass basis)	1,200 nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Dioxins/furans (toxic equivalency basis)	57 nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Hydrogen chloride	220 parts per million dry volume	3-run average (For Method 26, collect a minimum volume of 120 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run)	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A-8).
Lead	2.7 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter)	Performance test (Method 29 at 40 CFR part 60, appendix A-8).
Mercury	0.0057	3-run average (For	Performance

For the air pollutant	You must meet this emission limitation <sup>b</sup>	Using this averaging time	And determining compliance using this method
	milligrams per dry standard cubic meter	Method 29 and ASTM D6784-02 (Reapproved 2008) <sup>b</sup> , collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum sample as specified in Method 30B at 40 CFR part 60, appendix A)	test (Method 29 or 30B at 40 CFR part 60, appendix A-8) or ASTM D6784-02 (Reapproved 2008) <sup>c</sup> .
Oxides of nitrogen	240 parts per million dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).
Particulate matter filterable	230 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter)	Performance test (Method 5 or 29 at 40 CFR part 60, appendix A-3 or appendix A-8).
Sulfur dioxide	420 parts per million dry volume	3-run average (for Method 6, collect a minimum of 20 liters per run; for Method 6C, 1 hour minimum sample time per run)	Performance test (Method 6 or 6c at 40 CFR part 60, appendix A-4).
Fugitive ash	Visible emissions for no more than 5 percent of the hourly observation period	Three 1-hour observation periods	Visible emission test (Method 22 at 40 CFR part 60, appendix A-7).

a The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or [THE DATE 5 YEARS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

b All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the total mass basis limit or the toxic equivalency basis limit.

c Incorporated by reference, see §60.17.

**PART 241—SOLID WASTES USED AS FUELS OR INGREDIENTS IN COMBUSTION UNITS**

88. The authority citation for part 241 continues to read as follows:

**Authority:** 42 U.S.C. 6903, 6912, 7429.

**SUBPART A -- General**

89. Section 241.2 is amended by:

- a. Revising the definition of "clean cellulosic biomass."
- b. Revising the definition of "contaminants."
- c. Revising the definition of "established tire collection programs."

**§241.2 Definitions.**

\* \* \* \* \*

Clean cellulosic biomass means those residuals that are akin to traditional cellulosic biomass, including, but not limited to: agricultural and forest-derived biomass (e.g., green wood, forest thinnings, clean and unadulterated bark, sawdust, trim, tree harvesting residuals from logging and sawmill materials, hogged fuel, wood pellets, untreated wood pallets);

urban wood (e.g., tree trimmings, stumps, and related forest-derived biomass from urban settings); corn stover and other biomass crops used specifically for the production of cellulosic biofuels (e.g., energy cane, other fast growing grasses, byproducts of ethanol natural fermentation processes); bagasse and other crop residues (e.g., peanut shells, vines, orchard trees, hulls, seeds, spent grains, cotton byproducts, corn and peanut production residues, rice milling and grain elevator operation residues); wood collected from forest fire clearance activities, trees and clean wood found in disaster debris, clean biomass from land clearing operations, and clean construction and demolition wood. These fuels are not secondary materials or solid wastes unless discarded. Clean biomass is biomass that does not contain contaminants at concentrations not normally associated with virgin biomass materials.

\* \* \* \* \*

Contaminants means all pollutants listed in Clean Air Act sections 112(b) and 129(a)(4), with modifications outlined in this definition to reflect constituents found in non-hazardous secondary materials prior to combustion. The definition includes the following elemental contaminants that commonly form Clean Air Act section 112(b) and 129(a)(4) pollutants: antimony, arsenic, beryllium, cadmium, chlorine, chromium, cobalt, fluorine, lead, manganese, mercury, nickel, nitrogen, selenium,

and sulfur. The definition does not include the following Clean Air Act section 112(b) and 129(a)(4) pollutants that are either unlikely to be found in non-hazardous secondary materials prior to combustion or are adequately measured by other parts of this definition: hydrogen chloride (HCl), chlorine gas (Cl<sub>2</sub>), hydrogen fluoride (HF), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), fine mineral fibers, particulate matter, coke oven emissions, diazomethane, white phosphorus, titanium tetrachloride, m-cresol, o-cresol, p-cresol, m-xylene, o-xylene, and p-xylene.

\* \* \* \* \*

Established tire collection program means a comprehensive collection system or contractual arrangement that ensures scrap tires are not discarded and are handled as valuable commodities through arrival at the combustion facility.

\* \* \* \* \*

**SUBPART B - - Identification of Non-Hazardous Secondary Materials that are Solid Wastes When Used as Fuels or Ingredients in Combustion Units**

90. Amend 241.3 as follows:

- a. Revise paragraph (a),
- b. Revise paragraphs (b) (2) (i) and (b) (2) (ii),
- c. Revise paragraph (d) (1) (iii).

§241.3 Standards and Procedures for Identification of Non-Hazardous Secondary Materials that are Solid Wastes When Used as Fuels or Ingredients in Combustion Units.

(a) Except as provided in paragraph (b) of this section or in 241.4(a) of this subpart, non-hazardous secondary materials that are combusted are presumed to be solid wastes, unless a petition is submitted to, and a determination granted by, the Regional Administrator pursuant to paragraph (c) of this section. The criteria to be addressed in the petition, as well as the process for making the non-waste determination, are specified in paragraph (c) of this section.

(b) \* \* \*

(2) \* \* \*

(i) [Reserved]

(ii) [Reserved]

\* \* \* \* \*

(d) \* \* \*

(1) \* \* \*

(iii) The non-hazardous secondary material must contain contaminants or groups of contaminants at levels comparable in concentration to or lower than those in traditional fuel(s) which the combustion unit is designed to burn. In determining which traditional fuel(s) a unit is designed to burn, persons can choose a traditional fuel that can be or is burned in the

particular type of boiler, whether or not the combustion unit is permitted to burn that traditional fuel. In comparing contaminants between traditional fuel(s) and a non-hazardous secondary material, persons can use ranges of traditional fuel contaminant levels compiled from national surveys, as well as contaminant level data from the specific traditional fuel being replaced. Such comparisons are to be based on a direct comparison of the contaminant levels in both the non-hazardous secondary material and traditional fuel(s) prior to combustion.

\* \* \* \* \*

91. Add §241.4 to read as follows:

§241.4 Non-Waste Determinations for Specific Non-Hazardous Secondary Materials When Used as a Fuel.

(a) The following non-hazardous secondary materials are not solid wastes when used as a fuel in a combustion unit:

(1) Scrap tires that are not discarded and are managed under the oversight of established tire collection programs, including tires removed from vehicles and off-specification tires.

(2) Resinated wood.

(b) Any person may submit a rulemaking petition to the Administrator to identify additional non-hazardous secondary materials to be listed in paragraph (a) of this section.

Contents and procedures for submittal of the petitions include the following:

(1) Each petition must be submitted to the Administrator by certified mail and must include:

(i) The petitioner's name and address;

(ii) A statement of the petitioner's interest in the proposed action;

(iii) A description of the proposed action, including (where appropriate) suggested regulatory language; and

(iv) A statement of the need and justification for the proposed action, including any supporting tests, studies, or other information. Where the non-hazardous secondary material does not meet the legitimacy criteria, the applicant must explain why such non-hazardous secondary material should be considered a non-waste fuel, balancing the legitimacy criteria with other relevant factors.

(2) The Administrator will make a tentative decision to grant or deny a petition and will publish notice of such tentative decision, either in the form of an advanced notice of proposed rulemaking, a proposed rule, or a tentative determination to deny the petition, in the Federal Register for written public comment.

(3) Upon the written request of any interested person, the Administrator may, at its discretion, hold an informal public



hearing to consider oral comments on the tentative decision. A person requesting a hearing must state the issues to be raised and explain why written comments would not suffice to communicate the person's views. The Administrator may in any case decide on its own motion to hold an informal public hearing.

(4) After evaluating all public comments the Administrator will make a final decision by publishing in the Federal Register a regulatory amendment or a denial of the petition.

(5) The Administrator will grant or deny a petition based on the weight of evidence showing the following:

(i) The non-hazardous secondary material has not been discarded in the first instance and is legitimately used as a fuel in a combustion unit, or if discarded, has been sufficiently processed into a material that is legitimately used as a fuel.

(ii) Where any one of the legitimacy criteria in section 241.3(d)(1) is not met, that the use of the non-hazardous secondary material is integrally tied to the industrial production process, that the non-hazardous secondary material is functionally the same as the comparable traditional fuel, or other relevant factors as appropriate.