6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 60

[EPA-HQ-OAR-2009-0559; FRL-____-_]

RIN 2060-AP90

Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Sewage Sludge Incineration Units

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates EPA's new source performance standards and emission guidelines for sewage sludge incineration units located at wastewater treatment facilities designed to treat domestic sewage sludge. This final rule sets limits for nine pollutants under section 129 of the Clean Air Act: cadmium, carbon monoxide, hydrogen chloride, lead, mercury, nitrogen oxides, particulate matter, polychlorinated dibenzo-p-dioxins and

polychlorinated dibenzofurans, and sulfur dioxide.

DATES: The final rule is effective on [INSERT THE DATE 60 DAYS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]. The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of [INSERT THE DATE 60 DAYS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

ADDRESSES: EPA established a single docket under Docket ID No. EPA-HQ-OAR-2009-0559 for this action. This docket includes previous actions including the standards proposed on October 14, 2010 (75 FR 63260) and a supplemental notice issued on November 5, 2010 (75 FR 68296). All documents in the docket are listed on the http://www.regulations.gov website. 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, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through http://www.regulations.gov or in hard copy at EPA's Docket Center, Public Reading Room, EPA West Building, Room 3334, 1301 Constitution Avenue, NW, Washington, DC 20004. This Docket Facility is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: Ms. Amy Hambrick, Natural Resource and Commerce Group, Sector Policies and Programs Division (E143-03), Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-0964; fax number: (919) 541-3470; e-mail address: hambrick.amy@epa.gov.

SUPPLEMENTARY INFORMATION:

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

7-PAH	7-Polycyclic Aromatic Hydrocarbons
ANSI	American National Standards Institute
As	Arsenic
ASME	American Society of Mechanical Engineers
ASTM	American Society of Testing and Materials
CAA	Clean Air Act
CASS	Continuous Automated Sampling System
CBI	Confidential Business Information
Cd	Cadmium

CDX	Central Data Exchange
CEMS	Continuous Emissions Monitoring Systems
COMS	Continuous Opacity Monitoring System
The Court	U.S. Court of Appeals for the District of Columbia Circuit
CPMS	Continuous Parametric Monitoring System
CFR	Code of Federal Regulations
CISWI	Commercial and Industrial Solid Waste Incineration
CO	Carbon Monoxide
Cr	Chromium
CWA	Clean Water Act
EG	Emission Guidelines
EJ	Environmental Justice
ERT	Electronic Reporting Tool
ESP	Electrostatic Precipitators
FF	Fabric Filter
FB	Fluidized Bed
FGR	Flue Gas Recirculation
HAP	Hazardous Air Pollutants
HCl	Hydrogen Chloride
Hg	Mercury
HMIWI	Hospital, Medical and Infectious Waste Incineration
ICR	Information Collection Request
ISTDMS	Integrated Sorbent Trap Dioxin Monitoring System
ISTMMS	Integrated Sorbent Trap Mercury Monitoring System
LML	Lowest Measured Level
MACT	Maximum Achievable Control Technology
Mg/dscm	Milligrams per Dry Standard Cubic Meter
MH	Multiple Hearth
Mn	Manganese

MWC	Municipal Waste Combustion
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industrial Classification System
Ng/dscm	Nanograms per Dry Standard Cubic Meter
Ni	Nickel
NO_x	Nitrogen Oxides
NPRM	Notice of Proposed Rulemaking
NSPS	New Source Performance Standards
NTAA	National Tribal Air Association
NTTAA	National Technology Transfer and Advancement Act of 1995
OAQPS	Office of Air Quality Planning and Standards
O&M	Operation and Maintenance
OMB	Office of Management and Budget
OP	Office of Policy
OSWI	Other Solid Waste Incineration
OTM	Other Test Method
OW	Office of Water
Pb	Lead
PCB	Polychlorinated Biphenyls
PCDD/PCDF	Polychlorinated Dibenzo-P-Dioxins and Polychlorinated Dibenzofurans
PM	Particulate Matter
POM	Polycyclic Organic Matter
POTW	Publicly Owned Treatment Works
PPM	Parts per Million
PPMV	Parts per Million by Volume
PPMVD	Parts per Million of Dry Volume
PRA	Paperwork Reduction Act
PS	Performance Specifications
RCRA	Resource Conservation and Recovery Act
RFA	Regulatory Flexibility Act
RIA	Regulatory Impact Analysis

RTO	Regenerative Thermal Oxidizer
SBA	Small Business Administration
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SO_2	Sulfur Dioxide
SSI	Sewage Sludge Incineration
SSM	Startup, Shutdown, and Malfunction
TEF	Toxic Equivalency Factor
TEQ	Toxic Equivalency
THC	Total Hydrocarbons
TMB	Total Mass Basis
TPD	Tons per Day
TPY	Tons per Year
TTN	Technology Transfer Network
UL	Upper Limit
UMRA	Unfunded Mandates Reform Act of 1995
UPL	Upper Prediction Limit
VCS	Voluntary Consensus Standards
WWW	Worldwide Web

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

I. General Information

A. Does this action apply to me?

Categories and entities potentially affected by the final action are those that operate sewage sludge incinerators (SSI). Although there is no specific NAICS code for SSI, these units may be operated by wastewater treatment facilities designed to treat domestic sewage sludge. The following NAICS codes could apply:

<table>
<tr><th>Category</th><th>NAICS Code</th><th>Examples of potentially regulated entities</th></tr>
<tr><td>Solid waste combustors and incinerators</td><td>562213</td><td rowspan="2">Municipalities with SSI units</td></tr>
<tr><td>Sewage treatment facilities</td><td>221320</td></tr>
</table>

This table is not intended to be exhaustive, but rather provides a general guide for identifying entities likely to be affected by the final action. To determine whether your facility would be affected by the final action, you should examine the applicability criteria in 40 CFR 60.4770 of subpart LLLL and proposed 40 CFR 60.5005 of subpart MMMM. If you have any questions regarding the applicability of the final action to a particular entity, contact the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

B. Where can I get a copy of this document?

In addition to being available in the docket, an electronic copy of the final action will also be available on the WWW through the TTN. Following signature, a copy of the final action will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules at the following address: http://www.epa.gov/ttn/oarpg/. The TTN provides information and technology exchange in various areas of air pollution control.

C. Judicial Review

Under CAA section 307(b)(1), judicial review of this final rule is available only by filing a petition for review in the Court by [INSERT DATE 60 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]. Section 307(d)(7)(B) of the CAA further provides that "only an objection to this final rule that was raised with reasonable specificity during the period for public comment can be raised during judicial review." This section also provides a mechanism for EPA to convene a proceeding for reconsideration, "[i]f the person raising an objection can demonstrate to EPA that it was impracticable to raise such objection within [the period for public comment] or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of this rule." Any person seeking to make such a demonstration to EPA should submit a Petition for Reconsideration to the Office of the Administrator, Environmental Protection Agency, Room 3000, Ariel Rios Building, 1200 Pennsylvania Ave., NW, Washington, DC 20004, with a copy to both of the contacts listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, DC 20004. Note, under CAA section 307(b)(2), the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by EPA to enforce these requirements.

II. Background

A. What is the statutory background for this final rule?

Section 129 of the CAA, entitled, "Solid Waste Combustion," requires EPA to develop and adopt standards for solid waste incineration units pursuant to CAA sections 111 and 129. Section 129(a)(1)(A) of the CAA requires EPA to establish performance standards, including emission limitations, for “solid waste incineration units.” Section 129 of the CAA defines “solid waste incineration unit” as “a distinct operating unit of any facility which combusts any solid waste material from commercial or industrial establishments or the general public” (section 129(g)(1)). Section 129 of the CAA also provides that “solid waste” shall have the meaning established by EPA pursuant to its authority under the RCRA (section 129(g)(6)). Sections 111(b) and 129(a) of the CAA address emissions from new units (i.e., NSPS), and CAA sections 111(d) and 129(b) address emissions from existing units (i.e., EG). The NSPS are directly enforceable federal regulations, and under CAA section 129(f)(1), become effective 6 months after promulgation. Unlike the NSPS, the EG are not themselves directly enforceable. Rather, the EG are implemented and enforced through either an EPA-approved state plan or a promulgated federal plan. States are required to submit a plan to implement and enforce the EG to EPA for approval not later than 1 year after EPA promulgates the EG (CAA section 129(b)(2)). The state plan must be “at least as protective as” the EG and must ensure compliance with all applicable requirements not later than 3 years after the state plan is approved by EPA, or 5 years after promulgation of the relevant EG, whichever is sooner. EPA's procedures for submitting and approving state plans are set forth in 40 CFR part 60, subpart B. When a state plan is approved by EPA, the plan requirements become federally enforceable, but the state has primary responsibility for implementing and enforcing the plan. However, EPA is required to develop, implement, and enforce a federal plan for solid waste incineration units located in any state which has not submitted an approvable state plan within 2o years after the date of promulgation of the relevant EG (CAA section 129(b)(3)). The federal plan must assure that each solid waste incineration unit subject to the federal plan is in compliance with all provisions of the EG not later than 5 years after the date the relevant guidelines are promulgated. EPA views the federal plan as a "place-holder" that remains in effect only until such time as a state without an approved plan submits and receives EPA approval of its state plan. Once an applicable state plan has been approved, the requirements of the federal plan no longer apply to solid waste incineration units covered by that state plan.

The CAA sets forth a two-stage approach to regulating emissions from solid waste incinerator units. The statute also provides EPA with substantial discretion to distinguish among classes, types, and sizes of incineration units within a category while setting standards. In the first stage of setting standards, CAA section 129(a)(2) requires EPA to establish technology-based emission standards that reflect levels of control EPA determines are achievable for new and existing units, after considering costs, nonair quality health and environmental impacts and energy requirements associated with the implementation of the standards. Section 129(a)(5) of the CAA then directs EPA to review those standards and revise them as necessary every 5 years. In the second stage, CAA section 129(h)(3) requires EPA to determine whether further revisions of the standards are necessary in order to provide an ample margin of safety to protect public health.

In setting forth the methodology EPA must use to establish the first-stage technology-based standards for the standards, CAA section 129(a)(2) provides that standards "applicable to solid waste incineration units promulgated under section 111 and this section shall reflect the maximum degree of reduction in emissions of [certain listed air pollutants] that the Administrator, taking into consideration the cost of achieving such emission reduction and any nonair quality health and environmental impacts and energy requirements, determines is achievable for new and existing units in each category." This level of control is referred to as a MACT standard.

In promulgating a MACT standard, EPA must first calculate the minimum stringency levels for new and existing solid waste incineration units in a category, generally based on levels of emissions control achieved or required to be achieved by the subject units. The minimum level of stringency is called the MACT "floor," and CAA section 129(a)(2) sets forth differing levels of minimum stringency that EPA's standards must achieve, based on whether they regulate new and reconstructed sources, or existing sources. For new and reconstructed sources, CAA section 129(a)(2) provides that the "degree of reduction in emissions that is deemed achievable... shall not be less stringent than the emissions control that is achieved in practice by the best controlled similar unit, as determined by the Administrator." Emissions standards for existing units may be less stringent than standards for new units, but "shall not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in the category."

Maximum Achievable Control Technology analyses involve an assessment of the emissions from the best performing unit or units in a source category. The assessment can be based on actual emissions data, knowledge of the air pollution control in place in combination with actual emissions data, state regulatory requirements that may enable EPA to estimate the actual performance of the regulated units, or other emissions information. For each source category, the assessment involves a review of actual emissions data with an appropriate accounting for emissions variability. Other methods of estimating emissions can also be used, if the methods can be shown to provide reasonable estimates of the actual emissions performance of a source or sources. In addition to the MACT floor limit, EPA must examine whether more stringent "beyond-the-floor" standards should be adopted. In considering whether such standards are appropriate, EPA must consider the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements. The CAA requires that the MACT floor for new sources be no less stringent than the emissions control achieved in practice by the best-controlled similar unit. EPA is also required to consider beyond-the-floor standards for new sources, consistent with the factors described above.

Clean Air Act section 129(a)(1) identifies five categories of solid waste incineration units:

- Units that combust municipal waste at a capacity greater than 250 tpd.
- Units that combust municipal waste at a capacity equal to or less than 250 tpd.
- Units that combust hospital, medical, and infectious waste.
- Units that combust commercial or industrial waste.
- Units that combust waste and which are not specifically identified in section 129(a)(1)(A) through (D) are referred to in section 129(a)(1)(E) as "other categories" of solid waste incineration units.

A SSI unit is an incinerator located at a wastewater treatment facility designed to treat domestic sewage sludge that combusts sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter. Sewage sludge incinerators, by virtue of having not been specifically identified in section 129(a)(1)(A) through (D), have been interpreted to be part of the broader category of "other categories" of solid waste. EPA has issued emission standards for large and small MWC, HMIWI, CISWI, and OSWI units; however, as explained further below, none of those emission standards apply to SSI units.

EPA issued emission standards for OSWI units on December 16, 2005 (70 FR 74870). Based on EPA’s interpretation of the CAA at that time, the OSWI standards did not include emission standards for SSI units. EPA received a petition for reconsideration of the OSWI standards on February 14, 2006, regarding the exclusion of certain categories, including SSI[1]. While EPA granted the petition for reconsideration on June 28, 2006, EPA's final review, which became effective January 22, 2007, concluded that no additional changes were necessary to the 2005 OSWI rule (71 FR 36726). That litigation is currently being held in abeyance. EPA currently intends to revise the emission standards for OSWI units in the future, and that rulemaking will address all OSWI units except SSI units.

In the OSWI rule issued on December 16, 2005, EPA stated that it had decided not to regulate SSI units under CAA section 129 (70 FR 74870), but rather to regulate SSI units under CAA section 112, pointing to a statement in

[1] Sierra Club v. EPA; D.C. Cir. Nos. 06-1066, 07-1063.

EPA's 2000 Unified Regulatory Agenda stating that sewage sludge incinerators do not combust waste from a commercial or industrial establishment or the general public. We declined to revise that decision to regulate SSI units under 112 in the response to the petition for reconsideration on this issue for five reasons, including our position that section 129(a)(1)(E) did not require regulation of all "other" solid waste incineration units and that section 129(g)(1)'s enumerated exemptions to the definition of "solid waste incineration unit" were not exclusive, and that section 129(h)(2) gave EPA the discretion to choose whether to regulate incinerators under section 112 or section 129 of the Act. (72 FR 2620). In June 2007, in a separate decision related to EPA's December 1, 2000, emission standards for CISWI units, the Court' held that any unit combusting any solid waste must be regulated under section 129 of the CAA. The impact of this decision on EPA's regulation of SSI is explained in detail in the NPRM.[2]

EPA considers SSI units to be "other solid waste incineration units," since that category is intended to

[2] NRDC v. EPA; 489 F. 3d. at 1257-8.

encompass all solid waste incineration units that are not included in the first four categories identified in CAA section 129(a) through (d). EPA plans to re-issue emission standards for the remaining OSWI units at a later time. EPA is taking final action on emission standards for SSI units at this time because these emission standards are needed as part of EPA's fulfillment of its obligations under CAA sections 112(c)(3) and (k)(3)(B)(ii) and section 112(c)(6). Clean Air Act section 112(k)(3)(B)(ii) calls for EPA to identify at least 30 HAP which, as the result of emissions from area sources, pose the greatest threat to public health in the largest number of urban areas. EPA must then ensure that sources representing 90 percent of the aggregate area source emissions of each of the 30 identified HAP are subject to standards pursuant to section 112(d)[3]. Sewage sludge incineration units are one of the source categories identified for regulation to meet the 90 percent requirement for Cd, Cr, Pb, Mn, Hg, Ni and PCB. EPA is ordered by the Court to satisfy its obligation under CAA section 112(c)(3) and (k)(3)(B)(ii) by January 16,

[3] CAA section 112(c)(3) and section 112(k)(3)(B)(ii).

2011[4].

In a notice on April 10, 1998, EPA provided a list of source categories for regulation under CAA section 112(d)(2) or 112(d)(4). Section 112(c)(6) of the CAA requires EPA to identify categories of sources of seven specified pollutants to assure that sources counting for not less than 90 percent of the aggregate emissions of each such pollutant are subject to standards under CAA section 112(d)(2) or 112(d)(4) (63 FR 17838). Sewage sludge incineration units are one of the identified source categories for regulation to meet the 90 percent requirement for Hg. Further information can be found in the Memorandum titled, "Emission Standards for Meeting the Ninety Percent Requirement under Section 112(c)(6) of the Clean Air Act" in the SSI docket (EPA-HQ-OAR-2009-0559).Therefore, EPA is finalizing the SSI standards prior to taking action on the remaining source categories that will be regulated under CAA section 129(a)(1)(E) as OSWI units.

B. What are the primary sources of emissions and what are the emissions?

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[4] Sierra Club v. Jackson; D.D.C. No. 1:01CV01537.

Sewage sludge incineration units may be operated by municipalities or other entities. Incineration continues to be used to dispose of sewage sludge. Combustion of solid waste, and specifically sewage sludge, causes the release of a wide array of air pollutants, some of which exist in the waste feed material and are released unchanged during combustion, and some of which are generated as a result of the combustion process itself. The pollutants for which numerical limits must be established, as specified in section 129 of the CAA, include Cd, CO, HCl, Hg, NO_x, PCDD/PCDF, PM, Pb, and SO_2; and, where appropriate, numerical limits for opacity must also be established. These emissions come from the SSI unit's stack and fugitive PM emissions, as indicated by the associated visible emissions, also occur from ash handling.

C. What is the relationship of the final standards to other standards for the use or disposal of sewage sludge and associated air emissions?

Under authority of section 405(d) and (e) of the CWA, as amended 33 U.S.C.A. 1251, (et seq.), EPA promulgated regulations on February 19, 1993, at 40 CFR part 503 designed to protect public health and the environment from any reasonably anticipated adverse effects of certain pollutants that may be present in sewage sludge. The part 503 regulations establish requirements for the final use and disposal of sewage sludge when: 1) the sludge is applied to the land for a beneficial use (e.g., for use in home gardens); 2) the sludge is disposed on land by placing it on surface disposal sites; and 3) the sewage sludge is incinerated. The standards apply to POTW that generate or treat domestic sewage sludge, as well as to any person who uses or disposes of sewage sludge from such treatment works.

The part 503 requirements for firing sewage sludge in a SSI are in subpart E of the regulations. Subpart E includes general requirements; pollutant limits; operational standards; management practices; and monitoring, recordkeeping, and reporting requirements.

These part 503 regulations require that SSI meet the National Emission Standards for Beryllium and Hg in subparts C and E, respectively, of 40 CFR part 61. The regulations also require that the allowable concentration of five other inorganic pollutants be calculated using equations in the regulation. The inorganic pollutants included are Pb, As, Cd, Cr, and Ni. The terms in the equations must be determined on a case-by-case basis, except for the risk-specific concentration for the inhalation exposure pathway to protect individuals when these pollutants are inhaled. The site-specific variables for the equations (incinerator type, dispersion factor, control efficiency, feed rate, and stack height) must be used to calculate allowable daily concentrations of As, Cd, Cr, Pb and Ni in the sewage sludge fed to the incinerator.

Also included in subpart E of part 503 is an operational standard for THC. The value for THC in the final part 503 regulation cannot be exceeded in the exit gas from the SSI stack. Management practices and frequency of monitoring, recordkeeping, and reporting requirements are also included in this subpart.

Under today's final standards, EPA is establishing limits for three of the inorganic pollutants covered by the current part 503 regulations (Cd, Pb and Hg) and the following six additional pollutants: HCl, CO, NO_x, SO_2, PM, and total PCDD/PCDF. Besides the pollutants covered here, there are other differences between the part 503 regulations and these final standards. The emission limits for inorganic pollutants under part 503 are risk-based numbers rather than technology-based. Also, part 503 does not distinguish between new and existing units or between incinerator types (i.e., MH or FB incinerator) for setting emission limits since emission limits are based on risks to a highly exposed individual.

Because both part 503 and these final standards cover the same universe of facilities, there are certain issues that arise in terms of potential impacts to current SSI facilities. First, the regulation of sewage sludge under CAA section 129 will result in stricter emission standards than under the current CWA rule. Additional pollution controls will increase costs for facilities that continue to use the incineration disposal method. If the additional costs are high enough, many entities may choose to adopt alternative disposal methods (e.g., surface disposal in landfills or other beneficial land applications). Consequently, a potential impact of this rule is that some of the estimated 110 facilities that operate SSI as the primary means of disposal could discontinue this practice and would instead landfill or land apply their sewage sludge. Second, one must consider the available capacity of surface disposal sites to receive additional sewage sludge and the potential for added costs if the use of SSI is discontinued. Third, SSI will be subject to two different sets of requirements (numeric standards, operational standards, monitoring, recordkeeping, and reporting) under the two different statutes, creating an additional burden to these facilities unless alternative regulatory approaches are implemented. EPA plans to evaluate the requirements under both statutes to determine what changes, if any, should be made to the part 503 regulations.

III. Summary of the Final Standards

This preamble discusses the final standards as they apply to the owner or operator of a new or existing SSI unit. This preamble also describes the major requirements of the SSI regulations. For a full description of the final requirements and compliance times, see the SSI standards in subparts LLLL and MMMM.

A. What units are affected by the final standards?

The final standards and guidelines apply to owners or operators of SSI units (as defined in 40 CFR 60.4780 and 40 CFR 60.5065) located at wastewater treatment facilities designed to treat domestic sewage sludge. A SSI unit is an enclosed device or devices using controlled flame combustion that burns sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter. A SSI unit also includes, but is not limited to, the sewage sludge feed system, auxiliary fuel feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The SSI unit includes all ash handling systems connected to the bottom ash handling system. The combustion unit bottom ash system ends at the truck loading station or similar equipment that transfers the ash to final disposal. The SSI unit does not include air pollution control equipment or the stack. The affected facility is each individual SSI unit. The SSI standards in subparts LLLL and MMMM apply to new and existing SSI units that burn sewage sludge as defined in the subparts. The final standards define two subcategories for new and existing SSI units: MH incinerators and FB incinerators.

The combustion of sewage sludge that is not burned in a SSI unit located at a wastewater treatment facility designed to treat domestic sewage sludge is subject to other section 129 standards, such as the CISWI standards (40 CFR part 60, subparts CCCC and DDDD of this part), the OSWI standards (40 CFR part 60, subparts EEEE and FFFF), the MWC standards (40 CFR part 60, subparts Ea, Eb, Cb, AAAA, and BBBB of this part) or the Hazardous Waste Combustor rule (40 CFR part 63 subpart EEE).

B. What are the emission limits in the emission guidelines for existing sources?

The final emission limits for existing sources in the MH incinerator subcategory and FB incinerator subcategory are presented in Table 1 of this preamble. Existing sources may comply with either the PCDD/PCDF TEQ or TMB emission limits.

These standards apply at all times.

Table 1. Emission Limits for Existing SSI Units

Pollutant	Units	Emission Limit For MH Incinerators	Emission Limit For FB Incinerators
Cd	mg/dscm @ 7% O_2	0.095	0.0016
CO	ppmvd @ 7% O_2	3,800	64
HCl	ppmvd @ 7% O_2	1.2	0.51
Hg	mg/dscm @ 7% O_2	0.28	0.037
NO_x	ppmvd @ 7% O_2	220	150
Pb	mg/dscm @ 7% O_2	0.30	0.0074
PCDD/PCDF, TEQ	ng/dscm @ 7% O_2	0.32	0.10

Pollutant	Units	Emission Limit For MH Incinerators	Emission Limit For FB Incinerators
PCDD/PCDF, TMB	ng/dscm @ 7% O_2	5.0	1.2
PM	mg/dscm @ 7% O_2	80	18
SO_2	ppmvd @ 7% O_2	26	15

C. What are the emission limits in the new source performance standards for new sources?

The final emission limits for new sources in the MH incinerator subcategory and FB incinerator subcategory are presented in Table 2 of this preamble. Existing sources may comply with either the PCDD/PCDF TEQ or TMB emission limits.

These standards apply at all times.

Table 2. Emission Limits for New SSI Units

Pollutant	Units	Emission Limit For MH Incinerators	Emission Limit For FB Incinerators
Cd	mg/dscm @ 7% O_2	0.0024	0.0011
CO	ppmvd @ 7% O_2	52	27
HCl	ppmvd @ 7% O_2	1.2	0.24
Hg	mg/dscm @ 7% O_2	0.15	0.0010
NO_x	ppmvd @ 7% O_2	210	30
Pb	mg/dscm @ 7% O_2	0.0035	0.00062
PCDD/PCDF, TMB	ng/dscm @ 7% O_2	0.045	0.013
PCDD/PCDF,	ng/dscm @ 7% O_2	0.0022	0.0044

Pollutant	Units	Emission Limit For MH Incinerators	Emission Limit For FB Incinerators
TEQ			
PM	mg/dscm @ 7% O_2	60	9.6
SO_2	ppmvd @ 7% O_2	26	5.3

D. What are the testing and monitoring requirements?

These final standards require all new and existing SSI units to demonstrate initial and annual compliance with the emission limits using EPA-approved emission test methods. The final standards also provide an option for less frequent testing if sources demonstrate that their emissions of regulated pollutants are below thresholds of the emission limits.

For existing SSI units, the EG requires initial and annual emissions performance tests (or continuous emissions monitoring or continuous sampling as an alternative), bag leak detection systems for FF controlled units, continuous parameter monitoring, and annual inspections of air pollution control devices, if they are used to meet the emission limits. Additionally, existing units are required to conduct Method 22 (see 40 CFR part 60, appendix A-7) visible emissions test of the ash handling operations during each compliance test.

For new SSI units, the NSPS requires initial and annual emissions performance tests (or continuous emissions monitoring or continuous sampling as an alternative), bag leak detection systems for FF controlled units, as well as continuous parameter monitoring and annual inspections of air pollution control devices that may be used to meet the emission limits. The final rule requires all new SSI units to install a CO CEMS. Operators of new units are also required to conduct Method 22 visible emissions testing of the ash handling operations during each compliance test.

For existing SSI units, use of Cd, CO, HCl, NO_x, PM, Pb or SO_2 CEMS; ISTMMS; and ISTDMS (continuous sampling with periodic sample analysis) are approved alternatives to parametric monitoring and annual compliance testing. For new SSI units, CO CEMS are required, and use of Cd, HCl, NO_x, PM, Pb or SO_2 CEMS; ISTMMS; and ISTDMS (continuous sampling, with periodic sample analysis) are approved alternatives to parametric monitoring and annual compliance testing.

E. What are the other requirements for new and existing SSI units?

Owners or operators of new or existing SSI units are required to meet operator training and qualification requirements, which include: ensuring that at least one operator or supervisor per facility complete the operator training course, that qualified operator(s) or supervisor(s) complete an annual review or refresher course specified in the regulation, and that they maintain plant-specific information, updated annually, regarding training.

Owners or operators of new SSI units are required to conduct a siting analysis, which includes submitting a report that evaluates site-specific air pollution control alternatives that minimize potential risks to public health or the environment, considering costs, energy impacts, non-air environmental impacts and any other factors related to the practicability of the alternatives.

Owners or operators of new or existing SSI units are required to submit a monitoring plan for any continuous monitoring system or bag leak detection system used to comply with the rule. They must also submit a monitoring plan for their ash handling system that specifies the operating procedures they will follow to ensure that they meet the fugitive emission limit.

F. What are the recordkeeping and reporting requirements?

Records of the initial and all subsequent stack or PS tests, deviation reports, operating parameter data, continuous monitoring data, maintenance and inspections of the air pollution control devices, the siting analysis (for new units only), monitoring plan and operator training and qualification must be maintained for 5 years. The results of the stack tests and PS tests and values for operating parameters are required to be included in initial and subsequent compliance reports.

G. What are the SSM provisions?

The Court vacated portions of two provisions in EPA's CAA section 112 regulations governing the emissions of HAP during periods of SSM. Sierra Club v. EPA, 551 F.3d 1019 (D.C. Cir. 2008), cert. denied, 130 S. Ct. 1735 (U.S. 2010). Specifically, the Court vacated the SSM exemption contained in 40 CFR 63.6(f)(1) and 40 CFR 63.6(h)(1), (the "General Provisions Rule,") that EPA promulgated under section 112 of the CAA. When incorporated into CAA section 112(d) regulations for specific source categories, these two provisions exempt sources from the requirement to comply with the otherwise applicable CAA section 112(d) emission standard during periods of SSM.

While the Court's ruling in Sierra Club v. EPA directly affects only the subset of CAA section 112(d) rules that incorporate 40 CFR 63.6(f)(1) and (h)(1) by reference and that contain no other regulatory text exempting or excusing compliance during SSM events, the legality of source category-specific SSM provisions is questionable.

Consistent with Sierra Club v. EPA, EPA is requiring that emission limitations in these final standards apply at all times the unit is operating. In establishing these standards, EPA has taken into account startup and shutdown periods and, for the reasons explained below, has not established different standards for those periods.

We are not promulgating a separate emission standard for the source category that applies during periods of startup and shutdown. Based on the information available at this time, we believe that SSI units will be able to meet the emission limits during periods of startup. Units we have information on use natural gas, landfill gas, or distillate oil to start the unit and add waste once the unit has reached combustion temperatures. Emissions from burning natural gas, landfill gas or distillate fuel oil are expected to generally be lower than from burning solid wastes. Emissions during periods of shutdown are also generally lower than emissions during normal operations because the materials in the incinerator would be almost fully combusted before shutdown occurs. Furthermore, the approach for establishing MACT floors for SSI units ranked individual SSI units based on actual performance for each pollutant and subcategory, with an appropriate accounting of emissions variability. Because we accounted for emissions variability, we believe we have adequately addressed any minor variability that may potentially occur during startup or shutdown.

Periods of startup, normal operations, and shutdown are predictable and routine aspects of a source's operations. However, by contrast, malfunction is defined as a "sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment or a process to operate in a normal or usual manner * * * "(40 CFR 60.2). EPA has determined that malfunctions should not be viewed as a distinct operating mode and, therefore, any emissions that occur at such times do not need to be factored into development of CAA section 129 standards, which, once promulgated, apply at all times. Nothing in CAA section 129 or in case law requires that EPA anticipate and account for the innumerable types of potential malfunction events in setting emission standards.[5]

Further, it is reasonable to interpret CAA section 129 as not requiring EPA to account for malfunctions in setting emissions standards. For example, we note that CAA section 129 uses the concept of "best controlled" or "best performing" sources in defining MACT, the level of stringency that major source standards must meet. Applying the concept of "best controlled" or "best performing" to a source that is malfunctioning presents significant difficulties. The goal of best controlled or best

[5] See, Weyerhaeuser v Costle, 590 F.2d 1011, 1058 (D.C. Cir. 1978) (" In the nature of things, no general limit, individual permit, or even any upset provision can anticipate all upset situations. After a certain point, the transgression of regulatory limits caused by 'uncontrollable acts of third parties,' such as strikes, sabotage, operator intoxication or insanity, and a variety of other eventualities, must be a matter for the administrative exercise of case-by-case enforcement discretion, not for specification in advance by regulation.").

performing sources is to operate in such a way as to avoid malfunctions of their units.

Moreover, even if malfunctions were considered a distinct operating mode, we believe it would be impracticable to take malfunctions into account in setting CAA section 129 standards for SSI. As noted above, by definition, malfunctions are sudden and unexpected events, and it would be difficult to set a standard that takes into account the myriad different types of malfunctions that can occur across all sources in the category. Moreover, malfunctions can vary in frequency, degree, and duration, further complicating standard setting.

For the SSI standards, malfunctions are required to be reported in deviation reports. We will then review the deviation reports to determine if the deviation is a violation of the standards.

In the event that a source fails to comply with the applicable CAA section 129 standards as a result of a malfunction event, EPA would determine an appropriate response based on, among other things, the good faith efforts of the source to minimize emissions during malfunction periods, including preventative and corrective actions, as well as root cause analyses to ascertain and rectify excess emissions. EPA would also consider whether the source's failure to comply with the CAA section 129 standard was, in fact, "sudden, infrequent, not reasonably preventable" and was not instead "caused in part by poor maintenance or careless operation."[6]

Finally, EPA recognizes that even equipment that is properly designed and maintained can fail and that such failure can sometimes cause an exceedance of the relevant emission standard.[7] EPA is therefore finalizing the proposed affirmative defense to civil penalties for exceedances of emissions limits that are caused by malfunctions, with some revisions to the proposed regulatory provision.[8] Under this provision, the source

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[6] 40 CFR section 60.2 (definition of malfunction).

[7] 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).

[8] See proposed definition 40 CFR §60.4930 and 40 CFR §60.5250 (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

must prove by a preponderance of the evidence that it has met all of the elements set forth in 40 CFR 60.4860 and in 40 CFR 60.5180. 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 40 CFR part 60, subpart LLLL and 40 CFR part 60, subpart MMMM 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

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independently and objectively evaluated in a judicial or administrative proceeding).

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 part 22.77).

H. What are the Title V permit requirements?

All new and existing SSI units regulated by the final SSI rule are required to apply for and obtain a Title V permit. These Title V operating permits assure compliance with all applicable requirements for regulated SSI units, including all applicable CAA section 129 requirements[9].

The permit application deadline for a CAA section 129 source applying for a Title V operating permit depends on when the source first becomes subject to the relevant Title V permits program. If a regulated SSI unit is a new unit and is not subject to an earlier permit application

9 40 CFR 70.6(a)(1), 70.2, 71.6(a)(1) and 71.2.

deadline, a complete Title V permit application must be submitted on or before the relevant date below.

- For a SSI unit that commenced operation as a new source on or before the promulgation date of 40 CFR part 60, subpart LLLL, the source must submit a complete Title V permit application no later than 12 months after the promulgation date of 40 CFR part 60, subpart LLLL; or
- For a SSI unit that commences operation as a new source after the promulgation of 40 CFR part 60, subpart LLLL, the source must submit a complete Title V permit application no later than 12 months after the date the SSI unit commences operation as a new source[10].

If the SSI unit is an existing unit and is not subject to an earlier permit application deadline, then the source must submit a complete Title V permit application by the earlier of the following dates:

- Twelve months after the effective date of any

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[10] CAA section 503(c) and 40 CFR 70.5(a)(1)(i) and 71.5(a)(1)(i).

applicable EPA-approved CAA section 111(d)/129 plan (i.e., an EPA approved state or tribal plan that implements the SSI EG); or

- Twelve months after the effective date of any applicable federal plan; or
- Thirty-six months after promulgation of 40 CFR part 60, subpart MMMM.

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

If the SSI unit is subject to Title V as a result of some triggering requirement(s) other than those mentioned above, for example, a SSI unit may be a major source (or part of a major source), then you may be required to apply for a Title V permit prior to the deadlines specified above. If more than one requirement triggers a source’s obligation to apply for a Title V permit, the 12-month time frame for filing a Title V permit application is triggered by the requirement which first causes the source to be subject to Title V[11].

For additional background information on the interface between CAA section 129 and Title V, including EPA’s interpretation of section 129(e), information on updating existing Title V permit applications and reopening existing Title V permits, see the final “Federal Plan for Commercial and Industrial Solid Waste Incineration,” October 3, 2003 (68 FR 57518), as well as the “Summary of Public Comments and Responses” document in the OSWI docket (EPA-HQ-OAR-2003-0156).

I. What are the applicability dates of the standards?

New SSI units that commence construction after October 14, 2010, or that are modified 6 months or more after the date of promulgation, must meet the NSPS emission limits of 40 CFR part 60, subpart LLLL within 6 months after the promulgation date of the standards or upon startup,

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[11] CAA section 503(c) and 40 CFR 70.3(a) and (b), 70.5(a)(1)(i), 71.3(a) and (b) and 71.5(a)(1)(i).

whichever is later.

Under the final EG, and consistent with CAA section 129 (b)(2) and 40 CFR 60, subpart B, states are required to submit state plans containing the existing source emission limits of subpart MMMM of this part, and other requirements to implement and enforce the EG within 1 year after promulgation of the EG. States must submit state plans to EPA by [INSERT THE DATE ONE YEAR AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]. State plans apply to existing SSI in the state (including SSI that are modified prior to and including the date 6 months after promulgation) and must be at least as protective as the EG.

The final EG requires existing SSI to demonstrate compliance with the standards as expeditiously as practicable after approval of a state plan, but no later than 3 years from the date of approval of a state plan or 5 years after promulgation of the EG, whichever is earlier. Consistent with CAA section 129, EPA expects states to require compliance as expeditiously as practicable. However, because we believe that many SSI units will find it necessary to retrofit existing emissions control equipment and/or install additional emissions control equipment in order to meet the final limits, EPA anticipates that states may choose to provide the 3-year compliance period allowed by CAA section 129(f)(2). If EPA does not approve a state plan or issue a federal plan, then the compliance date is 5 years from the date of the final rule.

EPA intends to develop a federal plan that will apply to existing SSI units in any state that has not submitted an approved state plan within 2 years after promulgation of the EG. The final EG allows existing SSI units subject to the federal plan up to 5 years after promulgation of the EG to demonstrate compliance with the standards, as allowed by CAA section 129(b)(3).

J. What are the requirements for submission of emissions test results to EPA?

EPA must have performance test data to conduct effective reviews of CAA sections 112 and 129 standards, as well as for many other purposes including compliance determinations, emission factor development, and annual emission rate determinations. In conducting these required reviews, EPA has found it ineffective and time consuming, not only for us, but also for regulatory agencies and source owners and operators to locate, collect, and submit emissions test data because of varied locations for data storage and varied data storage methods. One improvement that has occurred in recent years is the availability of stack test reports in electronic format as a replacement for cumbersome paper copies.

In this final rule, EPA is taking a step to improve data accessibility and increase the ease and efficiency of reporting for sources. Owners and operators of SSI facilities are required to submit, to EPA's ERT database, electronic copies of reports of certain performance tests required under the SSI EG and NSPS. Data entry will be through an electronic emissions test report structure called the Emissions Reporting Tool (ERT) whenever conducting performance tests. The ERT was developed with input from stack testing companies who generally collect and compile performance test data electronically and offices within state and local agencies that perform field test assessments. The ERT is currently available at http://www.epa.gov/ttn/chief/ert/ert_tool.html, and access to direct data submittal to EPA's electronic emissions database (WebFIRE) will become available by December 31, 2011.

The requirement to submit source test data electronically to EPA would not require any additional performance testing and would apply to those performance tests conducted using test methods that are supported by the ERT. The ERT contains a specific electronic data entry form for most of the commonly used EPA reference methods. The website listed below contains a listing of the pollutants and test methods supported by the ERT. In addition, when a facility submits performance test data to WebFIRE, there will be no additional requirements for emissions test data compilation. Moreover, we believe industry will benefit from development of improved emission factors, fewer follow-up information requests, and better regulation development as discussed below. The information to be reported is already required for the existing test methods and is necessary to evaluate the conformance to the test method.

One major advantage of submitting source test data through the ERT is a standardized method to compile and store much of the documentation required to be reported by this rule that also clearly states what testing information would be required. Another important benefit of submitting these data to EPA at the time the source test is conducted is that it should substantially reduce the effort involved in data collection activities in the future. When EPA has source category performance test data in hand, there will likely be fewer or less substantial data collection requests in conjunction with prospective required residual risk assessments or technology reviews. This results in a reduced burden on both affected facilities (in terms of reduced manpower to respond to data collection requests) and EPA (in terms of preparing and distributing data collection requests and assessing the results).

State/local/tribal agencies may also benefit in that their review may be more streamlined and accurate because they would not have to re-enter the data to assess the calculations and verify the data entry. Finally, another benefit of submitting these data to WebFIRE electronically is that these data will greatly improve the overall quality of the existing and new emission factors by supplementing the pool of emissions test data upon which the emission factor is based and by ensuring that data are more representative of current industry operational procedures. A common complaint heard from industry and regulators is that emissions factors are outdated or not representative of a particular source category. Receiving and incorporating data for most performance tests will ensure that emissions factors, when updated, represent accurately the most current range of operational practices. In summary, in addition to supporting regulation development, control strategy development, and other air pollution control activities, receiving test data already collected and using them in the emissions factors development program will save industry, state/local/tribal agencies, and EPA significant time, money, and effort while improving the quality of emission inventories and related regulatory decisions.

As mentioned earlier, the electronic database that will be used is EPA's WebFIRE, which is a website accessible through EPA's TTN Web. The WebFIRE website was constructed to store emissions test data for use in developing emission factors. A description of the WebFIRE database can be found at http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main.

The ERT will be able to transmit the electronic report through EPA's CDX network for storage in the WebFIRE database. Although ERT is not the only electronic interface that can be used to submit source test data to the CDX for entry into WebFIRE, it makes submittal of data very straightforward and easy. A description of the ERT can be found at http://www.epa.gov/ttn/chief/ert/ert_tool.html.

IV. Summary of Significant Changes Following Proposal

EPA received over 90 public comments on the proposed rulemaking. Furthermore, we conducted one public hearing to allow the public to comment on the proposed rulemaking. After consideration of public comments received, EPA is making several changes to the standards. Following are the major changes to the standards since the proposal. The rationale for these and any other significant changes can be found in section V of this preamble or in the "Sewage Sludge Incineration (SSI) Rule: Summary of Public Comments and Responses" in the SSI docket (EPA-HQ-OAR-2009-0559).

A. Applicability

The final rule clarifies that, if any amount of sewage sludge is burned in an incinerator at a wastewater treatment facility designed to treat domestic sewage sludge, the incinerator is subject to the SSI standards in subparts LLLL and MMMM of this part while burning sewage sludge. The final rule also clarifies that sewage sludge that is not burned in a SSI located at a wastewater treatment facility designed to treat domestic sewage sludge is subject to other section 129 standards, such as the CISWI standards (40 CFR part 60, subparts CCCC and DDDD of this part), the OSWI standards (40 CFR part 60, subparts EEEE and FFFF), the MWC standards (40 CFR part 60, subparts Ea, Eb, Cb, AAAA, and BBBB of this part) or the Hazardous Waste Combustor rule (40 CFR part 63 subpart EEE).

B. Subcategories

The proposed NSPS did not subcategorize new sources. In the final NSPS, SSI units at new sources are subcategorized into two subcategories: MH and FB.

C. MACT Floor UPL Calculation and EG and NSPS Emission Limits

At proposal, we used a 99 percent UPL calculation to determine variability. For the final rule, for existing FB units, we are using a weighted 99 percent UPL calculation to account for the biasing of emissions data from one facility. The weighted UPL was not used for MH units.

In the proposed rule, two statistical measures, skewness and kurtosis, were examined to determine if the data used to calculate the MACT floor were normally or log-normally distributed. If both the reported values and the natural-log transformed reported values had skewness and kurtosis statistics that indicated neither were normally distributed, the reported dataset was selected as the basis of the floor to be conservative. If the results of the skewness and kurtosis hypothesis tests were mixed for the reported values and the natural log-transformed reported values, the analysis done on the reported data values was chosen to be conservative. We have modified our assumptions when results of the skewness and kurtosis tests do not clearly show whether a normal or log-normal distribution better represents the data, or when there are not enough data to complete the skewness and kurtosis tests. In these cases, we have chosen to use the log-normal results for the final MACT floor calculation.

In the proposed rule, we proposed setting beyond-the-floor emission standards for Hg emissions from existing MH units. In the final rule, we are establishing MACT floor emission limits but are not setting beyond-the-floor standards. Also, we are not finalizing the proposed opacity limits. At proposal, we set emission limits for both PCDD/PCDF TMB and PCDD/PCDF TEQ and required SSI units to meet both limits. In the final standards, we are allowing affected sources to comply with either the PCDD/PCDF TMB or TEQ emission limits.

In the proposed rule, we did not compare the CO span of the test to the measured CO values to determine if the values were consistent. For the final rule, we reviewed the CO values obtained from emission test reports to determine whether the span of the test used was capable of accurately reading the reported value. If the span was inconsistent with the reported value, the CO levels were adjusted to provide a value that was more consistent with the span. We revised the CO limits based on the results of this analysis.

The final emission limits resulting from the revised MACT floor calculations are presented in Tables 3 through 6 of this preamble, and compared to the proposed emission limits.

Table 3. Final and Proposed Emission Limits for Existing

FB SSI Units

Pollutant	Units	Proposed Emission Limit	Final Emission Limit
Cd	mg/dscm @ 7% O_2	0.0019	0.0016
CO	ppmvd @ 7% O_2	56	64
HCl	ppmvd @ 7% O_2	0.49	0.51
Hg	mg/dscm @ 7% O_2	0.0033	0.037
NO_x	ppmvd @ 7% O_2	63	150
Pb	mg/dscm @ 7% O_2	0.0098	0.0074
PCDD/PCDF, TEQ	ng/dscm @ 7% O_2	0.056	0.10
PCDD/PCDF, TMB	ng/dscm @ 7% O_2	0.61	1.2
PM	mg/dscm @ 7% O_2	12	18
SO_2	ppmvd @ 7% O_2	22	15

Table 4. Final and Proposed Emission Limits for Existing MH SSI Units

Pollutant	Units	Proposed Emission Limit	Final Emission Limit
Cd	mg/dscm @ 7% O_2	0.095	0.095
CO	ppmvd @ 7% O_2	3,900	3,800
HCl	ppmvd @ 7% O_2	1.0	1.2
Hg	mg/dscm @ 7% O_2	0.02	0.28
NO_x	ppmvd @ 7% O_2	210	220
Pb	mg/dscm @ 7% O_2	0.30	0.30
PCDD/PCDF, TEQ	ng/dscm @ 7% O_2	0.32	0.32
PCDD/PCDF, TMB	ng/dscm @ 7% O_2	5.0	5.0

Pollutant	Units	Proposed Emission Limit	Final Emission Limit
PM	mg/dscm @ 7% O_2	80	80
SO_2	ppmvd @ 7% O_2	26	26

Table 5. Final and Proposed Emission Limits for New FB SSI Units

Pollutant	Units	Proposed Emission Limit	Final Emission Limit
Cd	mg/dscm @ 7% O_2	0.00051	0.0011
CO	ppmvd @ 7% O_2	7.4	27
HCl	ppmvd @ 7% O_2	0.12	0.24
Hg	mg/dscm @ 7% O_2	0.0010	0.0010
NO_x	ppmvd @ 7% O_2	26	30
Pb	mg/dscm @ 7% O_2	0.00053	0.00062
PCDD/PCDF, TEQ	ng/dscm @ 7% O_2	0.0022	0.0044
PCDD/PCDF, TMB	ng/dscm @ 7% O_2	0.024	0.013
PM	mg/dscm @ 7% O_2	4.1	9.6
SO_2	ppmvd @ 7% O_2	2.0	5.3

Table 6. Final and Proposed Emission Limits for New MH SSI Units

Pollutant	Units	Proposed Emission Limit	Final Emission Limit
Cd	mg/dscm @ 7% O_2	0.00051	0.0024
CO	ppmvd @ 7% O_2	7.4	52
HCl	ppmvd @ 7% O_2	0.12	1.2

Pollutant	Units	Proposed Emission Limit	Final Emission Limit
Hg	mg/dscm @ 7% O_2	0.0010	0.15
NO_x	ppmvd @ 7% O_2	26	210
Pb	mg/dscm @ 7% O_2	0.00053	0.0035
PCDD/PCDF, TEQ	ng/dscm @ 7% O_2	0.0022	0.0022
PCDD/PCDF, TMB	ng/dscm @ 7% O_2	0.024	0.045
PM	mg/dscm @ 7% O_2	4.1	60
SO_2	ppmvd @ 7% O_2	2.0	26

D. Baseline Emissions, Costs and Impacts Estimation

For the final rule, we have revised the baseline emissions, costs, and impacts to incorporate information provided by commenters. A discussion of the changes is presented in section V of this preamble. The results of these analyses are summarized in section VI of this preamble.

E. Compliance Requirements

For both the standards, the following changes have been made:

- SSI units must submit (at least 60 days before their initial compliance test date) a monitoring plan to establish that their ash handling system will meet the visible emissions limit on a continuous basis.

- The alternative to test less frequently (every third year) is being revised to be the following:
    - o If SSI units demonstrate emissions below a specified threshold during two consecutive performance tests, they may test every 3 years instead of annually. Any year that the emission threshold is not met, the SSI must test annually until the threshold is met over a consecutive 2 year period. The alternative in the standards no longer requires that SSI units establish that they meet the lower thresholds for three consecutive years.
    - o For all pollutants, less frequent testing is allowed if emissions are no greater than an emissions threshold of 75 percent of the emission limit.
    - o For fugitive emissions from ash handling, less frequent testing is allowed as long as visible emissions of combustion ash occur less than or equal to two percent of each hourly observation period (the standard is five percent of each of

three hourly observation periods).

- The final rule removes the requirements in the standards to maintain sludge feed rate and moisture content within specified parameters. However, sludge feed rate and sludge moisture content are still required to be monitored during performance test runs, and daily records of sludge feed rate and sludge moisture content are required to be kept.
- At proposal, operating limits were calculated based on a specified percentage of the average parameter value recorded during pollutant performance tests. In the final standards, operating parameter limits are determined on a site-specific basis as the minimum or maximum operating parameter value for the parameter, as applicable, recorded during pollutant performance tests.
- The proposed standards schedule for conducting annual performance tests was each 10-12 months. This has been changed to specify that performance tests must be conducted on a calendar year basis (no less than nine calendar months and no more than 15 calendar months following the previous performance test); and you must

complete five performance tests for each such pollutant in each 5-year calendar period.

- The averaging time for demonstrating compliance with the CO CEMS operating parameters has been changed from a 4-hour rolling averaging period to a 24-hr block averaging period. The averaging times for all other operating parameters, except scrubber liquid pH, has been changed from a 4-hour rolling averaging period to a 12-hour block averaging period.
- During each compliance test run, SSI units must be operated at a minimum of 85 percent of their maximum permitted capacity.

F. Definitions

The following definitions have been revised:

- 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:

  (1) A change in the process employed at the wastewater treatment facility associated with the affected SSI unit (e.g., the addition of tertiary treatment at the facility, which changes the

method used for disposing of process solids and processing of the sludge prior to incineration).

(2) A change in the air pollution control devices used to comply with the emission limits for the affected SSI unit (e.g., change in the sorbent used for activated carbon injection).

- Sewage sludge incineration (SSI) unit means an incineration unit combusting sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter. Sewage sludge incineration unit designs include fluidized bed and multiple hearth. A SSI unit also includes, but is not limited to, the sewage sludge feed system, auxiliary fuel feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The SSI unit includes all ash handling systems connected to the bottom ash handling system. The combustion unit bottom ash system ends at the truck loading station or similar equipment that transfers the ash to final disposal. The SSI unit does not include air pollution control equipment or the stack.

V. Significant Public Comments and Rationale for Changes to the Proposed Rule

This section contains a brief summary of major comments and responses. EPA received many comments on this subpart covering numerous topics. EPA’s responses to all comments, including those below, can be found in the comment response document for SSI units in the docket.

A. Legal and Applicability Issues Regulating SSI Under Section 112 vs. Section 129

Comment: Many commenters contended that SSI are within the CWA definition of POTW; therefore, according to CAA section 112(e)(5), EPA must regulate SSI units under CAA section 112(d), and not CAA section 129. The commenters emphasized that SSI units are located within each respective POTW and are wholly integrated into the solids handling and treatment processes at each POTW.

Other commenters stated that SSI units cannot be regulated under CAA section 129 because they are combusting material that is generated by the POTW, which is neither a commercial or industrial establishment nor the general public as required in CAA section 129(g)(1). The commenters added that, based on the proposed definition of solid waste, even if they had a new point of generation within the POTW where they were generating solid waste, the POTW sewage sludge is from a municipal source and does not pass the broad applicability for solid waste incineration under CAA section 129. Another commenter added that CAA section 129(a)(1)(B)-(C) also directs EPA to set standards for solid waste incineration units combusting municipal waste, but to qualify as a unit combusting municipal waste, the unit must first be a solid waste incineration unit. The commenters concluded that this would not include SSI units.

Several commenters stated that EPA's determination to regulate SSI units under CAA section 129 contradicts previous decisions where EPA has stated that regulations were being developed for SSI under CAA section 112. Another commenter stated that EPA's revision to the list of source categories under CAA section 112 to delete SSI units was because there were no major sources in the source category. One commenter added that EPA's decision to regulate SSI units under CAA section 129 is based on an overly broad reading of the NRDC case. The commenter also claimed that SSI units are not within the scope of the definition of "solid waste incineration unit" in section 129 because sewage sludge is not generated by a commercial or industrial establishment or by the general public.

Response: EPA disagrees with the commenter's assertion that regulation of SSI units under section 129 is inconsistent with past EPA statements. As explained in the NPRM, EPA issued emissions standards for POTW in 1999 pursuant to section 112(d), and those emissions standards did not include standards for SSI units. In the proposed POTW emissions standards, EPA stated that "[s]ewage sludge incineration will be regulated under section 129 of the CAA[.]" See 63 FR 66087 (December 1, 1998). EPA also explained in the NPRM for today's action that the EPA's statements regarding SSI units during its promulgation of emissions standards for OSWI units are squarely in conflict with the Court's decision in NRDC v. EPA, 489 F.3d 1250 (D.C. Cir. 2007), which states in pertinent part that any unit that combusts any solid waste at all is subject to CAA section 129. The commenter does not appear to disagree with that conclusion, but instead simply argues that EPA cannot regulate SSI units under section 129 because it previously stated that it would regulate them under section

112. However, the NRDC decision precludes EPA from doing so. Additionally, section 112 (c)(6) requires that EPA promulgate emission standards assuring that sources accounting for not less than 90 percent of the aggregate emissions of each of the HAP identified in section 112(c)(6) are subject to emission standards. EPA has determined that section 129 source categories can be included to meet our 90 percent obligations. Therefore, EPA has included SSI units in the section 112 (c)(6) list of sources because SSI units are need to meet our 90 percent requirement for mercury. This decision is documented in the memorandum "Emission Standards for Meeting the Ninety Percent Requirement under Section 112(c)(6) of the Clean Air Act" in the SSI docket (EPA-HQ-OAR-2009-0559)

Moreover, section 112(e)(5) does not require EPA to issue emissions standards for SSI units under section 112(d). Rather, it simply governs the schedule for the issuance of section 112(d) emissions standards for POTW. Section 112(e), titled "Schedule for Standards and Review," generally requires EPA to establish emissions standards for initially listed source categories as expeditiously as practicable, with certain specific deadlines in section 112(e)(1). Section 112(e) further describes how EPA shall prioritize source categories for regulation, and requires EPA to establish a schedule for issuance of emissions standards for section 112 listed source categories. Finally, Congress specified a different schedule for POTW in section 112(e)(5), stating that emissions standards shall be issued no later than November 15, 1995. Thus, section 112(e)(5) does not require EPA to regulate SSI units under section 112(d), but rather simply identifies the date by which EPA must issue emissions standards for POTW.

Additionally, the commenter's interpretation of section 112(e)(5) would conflict with section 129(g) and with the D.C. Circuit's interpretation of section 129(g) as explained in NRDC v. EPA. Section 129(g) defines "solid waste incineration unit" to include any unit combusting any solid waste, and the Court in NRDC v. EPA rejected EPA's position that it could choose to regulate certain units, combusting solid waste, under section 112 instead of under section 129. Since SSI units do combust solid waste, EPA does not have the discretion under section 129 to create an exemption for SSI units from the statutory definition of solid waste. The court noted that section 129(g) itself specifies certain units that combust solid waste but are exempt from the definition, and noted that where Congress created such enumerated exemptions, the EPA lacks discretion to create additional ones.

EPA also disagrees with the commenter that SSI units do not combust waste from the general public. Sewage sludge clearly originates from the general public, including residential and commercial facilities. Simply because the waste is treated at a POTW prior to combustion does not change the original source of the sewage sludge. The commenter refers to a statement in EPA’s 2000 Unified Regulatory Agenda to support its argument. However, the Regulatory Agenda did not represent an Agency interpretation following a notice and comment process. Moreover, as explained above, EPA’s position regarding the section of the Act under which SSI units must be regulated has changed since 2000, in light of the D.C. Circuit’s decision in NRDC v. EPA. Finally, EPA notes that its final action on reconsideration of the OSWI rule did not refer to the source of sewage sludge as a basis for concluding that regulation under section 129 was not required. Instead, as explained above, it referred to discretion the Agency believed it had at the time to choose to regulate certain solid waste incinerators under section 112 – discretion the Agency no longer believes it has.

The commenter's reference to statements made in other Federal Register notices that pre-date the NRDC decision similarly fail to support its argument that EPA must regulate SSI units under section 112. Specifically, commenters refer to EPA's inclusion of SSI on the list of area source categories listed under section 112(c)(3) and (k)(3)(B)(ii) of the Act. See 67 Fed. Reg. 70427 (Nov. 22, 2002). However, that listing does not lead to the conclusion that SSI must be regulated under section 112. First, as explained above, EPA's interpretation of its authority to regulate SSI has changed following the issuance of the D.C. Circuit's decision in NRDC v. EPA, which occurred after the 2002 listing referred to by the commenter. Additionally, that listing included source categories that would clearly be regulated under section 129, such as medical waste incinerators and municipal waste combustors, Id. at 70428, because EPA's regulation of incinerator source categories under section 129 serves towards meeting its statutory obligations under section 112(c)(3) and (k)(3)(B)(ii). Therefore, the inclusion of SSI on that list does not indicate that such units must be regulated under section 112.

EPA further disagrees that regulation of SSI units under section 129 is unnecessary because SSI units are already regulated under section 405 of the CWA and that section 129 regulation will therefore provide no public health or environmental benefit. As explained in section VI of this preamble, today's action will benefit public health and the environment by achieving reductions of the section 129 pollutants from SSI units beyond those required by regulations issued pursuant to the CWA. Today's action must be undertaken to comply with the Clean Air Act and the court decision in NRDC v. EPA. EPA further notes that section 405 of the CWA expressly provides that nothing in that section is intended to waive more stringent requirements of any other law. Therefore, Congress clearly did not intend for regulation of SSI units under the CWA to preclude any other regulations, including regulation under CAA section 129. Overlap with Other Standards

Comment: Several commenters expressed concern that other types of solid waste incineration units could be considered SSI units and subject to the SSI standards if they combust any amount of sewage sludge. Some commenters added that the definition of a SSI does not have a ***de minimus*** level of sewage sludge burned. Other commenters requested clarification on whether SSI units burning non-sludge industrial waste would be subject to both SSI and CISWI. Some commenters suggested that SSI units be consistent with the MWC standards and provide an exemption for co-fired combustors firing 30 percent or less by weight of sewage sludge.

Commenters suggested that the SSI standards provide exclusions for all solid waste incineration units that meet the applicability requirements of other CAA section 129 standards, including MWCs regulated under Subparts Ea, Eb, Cb, AAAA, and BBBB. The commenters noted that the CISWI standards specifically exempted MWC units and other units subject to CAA section 129 standards.

Several commenters contended that EPA should exempt incineration units subject to hazardous waste combustor regulations and/or hazardous waste management permits under the Solid Waste Disposal Act. The commenters added that CAA section 129(g)(1) states that a solid waste incineration unit does not include incinerators or other units required to have a permit under section 3005 of the SWDA. Other commenters requested EPA include an exemption for hazardous waste combustion units that are affected sources under 40 CFR 63 Subpart EEE.

Response: Section 129 defines solid waste incineration unit to include any unit combusting any solid waste. Therefore, EPA is not setting *de minimus* levels for solid waste burned in incinerators. An incinerator located at a wastewater treatment facility designed to treat domestic sewage sludge that combusts any amount of sewage sludge is subject to the final SSI standards. We have clarified that the final standards and guidelines do not apply to sewage sludge that is not burned in a SSI located at a wastewater treatment facility designed to treat domestic sewage sludge. Sewage sludge that is not burned in a SSI located at a wastewater treatment facility designed to treat domestic sewage sludge is subject to other section 129 standards, such as the CISWI standards (40 CFR part 60, subparts CCCC and DDDD of this part), the OSWI standards

(40 CFR part 60, subparts EEEE and FFFF), the MWC standards (40 CFR part 60, subparts Ea, Eb, Cb, AAAA, and BBBB of this part) or the Hazardous Waste Combustor rule (40 CFR part 63 subpart EEE).

Hazardous waste combustion units that are required to have a permit under CAA section 3005 or the Solid Waste Disposal Act are exempt from CAA section 129 standards per CAA section 129(g)(1), therefore we do not believe an exemption is needed for this rule.

Comment: Several commenters objected to EPA issuing the proposed SSI standards prior to making determinations regarding the definition of non-hazardous solid waste.

Response: EPA is not making determination in this rule about the definition of non-hazardous solid waste. Section 129 of the CAA states that "solid waste" shall have meaning promulgated by the Administrator under RCRA. Therefore, today's action is consistent with using the defintion of non-hazardous secondary materials promulagted RCRA rule, elsewhere in today's Federal Register.

Comment: Several commenters contended that sewage sludge is not a solid waste, as the CAA defines solid waste by referencing the definition of solid waste under RCRA.

The commenters added that RCRA excludes sewage sludge in what is commonly referred to as the domestic sewage exclusion (DSE). The exclusion explicitly states that solid waste does not include solid or dissolved material in domestic sewage.

Response: This comment is not relevant to EPA's establishment of emissions standards for SSI units. Rather, it is relevant to EPA's proposed Identification of Non-Hazardous Secondary Materials That Are Solid Waste rule, and is addressed in EPA's final action on that proposed rule.

B. Subcategories

Comment: Many commenters agreed with the development of separate EG for existing MH and FB units. The commenters also requested adding the same subcategories for the NSPS. The commenters added that it was inappropriate to consider the best performing FB SSI as the best performing similar source for the MH SSI new source category. They also stated that, as proposed, the NSPS standards would discourage a POTW's ability to modify existing MH units, including modifications to improve combustion efficiency or boost steam output for electricity generation. Some commenters stated that, by using the best performing FB unit as the basis for the NSPS for MH units, EPA was effectively setting a beyond-the-floor MACT limit for SSI units without considering any criteria that the statute requires. Other commenters agreed with the decision to use the best-performing FB unit as the best similar source for the MH SSI source category.

Other commenters requested further subcategorization based on size of the SSI unit, type of sewage sludge incinerated, limited use units, and distance over which the SSI would need to transport its sludge for disposal.

Response: We have considered the commenters' concerns and are setting separate standards for FB and MH units at new sources in the final rule. As discussed in the NPRM, there are two types of incinerators currently used to combust sewage sludge: MH and FB incinerators. The differences between the two combustor designs result in significant differences in emissions, size of the flue gas stream, ability to handle variability in the feeds, control of temperature and other process variables, auxiliary fuel use and other characteristics. To reflect the differences in their combustion mechanisms, two subcategories, FB and

MH, were developed in the NPRM for new and existing SSI sources.

At proposal for the MH new source subcategory, we considered the best-performing FB incinerator to be the best-performing similar source because we were not aware of any new MH sources that have been constructed in the last 20 years, and information provided by the industry indicates that future units that will be constructed are likely to be FB incinerators.

We have re-evaluated our decision. Although few MH units have been constructed over the last 20 years, there is no technical reason that would preclude a source from constructing a MH unit. The same design differences that distinguish existing FB and MH units also apply to new units, and provide a similar basis for subcategorizing between the two types of units. Therefore, we are setting separate standards for MH units at new and reconstructed sources. Such subcategorization is appropriate based on the differences between FB and MH units described above, and will also serve to ensure that MH units do not avoid making modifications that may require them to meet standards based on FB units. We are not subcategorizing SSI units on any other basis because we do not have data to support distinguishing units based on class, type, or size. Without such information, we do not have a basis for concluding that these types of units should be placed in a different subcategory.

C. MACT Floor Analysis

Pollutant-by-Pollutant Approach

Comment: Many commenters objected to setting the MACT floors using a pollutant by pollutant approach because none of the facilities in EPA’s database can simultaneously meet all the proposed standards. One commenter stated that EPA's MACT Floor methodology is supposed to involve "review of actual emissions data with an appropriate accounting for emissions variability". However, the commenter contended that EPA fails to follow this guidance in a practical manner in establishing MACT Floors for SSI units and that this results is unrealistically stringent limits that are not achievable for any SSI. Several commenters noted that this was especially true for the new source standards. Several commenters added that EPA's pollutant-by-pollutant basis violates the statute and its own views of the statute. One commenter stated that if EPA cannot demonstrate that the top performers can simultaneously meet all standards, EPA has improperly circumvented the section 129 for establishing "beyond-the-floor" standards because the "floor standards would force industry-wide technological upgrades without consideration of the factors (cost and energy in particular) which Congress mandated for consideration when establishing beyond-the-floor standards."

Many commenters specifically mentioned that EPA's pollutant-by-pollutant, lowest emission methodology for setting the CO and NO_x standards is flawed because EPA did not take into account the inherent conflict in complying with two standards. The commenters noted that CO and NO_x emissions are inversely proportional. The commenters explained that decreases in CO tend to elevate NO_x and vice versa. The commenters added that high temperature combustion with long residence times and high oxygen concentration results in very low CO emissions, and that those same operating conditions favor high NO_x emissions. The commenters added that the conditions used to minimize CO (i.e., high temperature afterburners) consume more fuel and produce more CO_2 emissions.

One commenter noted that the SSI unit with the most advanced control technologies, and those EPA indicated were costed in the impacts analysis, would not meet the emission limits for all of the pollutants all of the time. The commenter provided an example showing that of 11 of 30 test data points from the SSI unit in EPA’s database would not comply with the Cd standard, 28 of 30 data points would not comply with the Pb standard, 22 of 30 would not comply with the HCl standard, six of six data points would not comply with the PCDD/PCDF TMB or TEQ, 86 of 105 would not comply with the CO standard, and eight of 15 would not comply with the NO_X standard. The commenter concluded that data variability has not been appropriately accounted for and that EPA's method of establishing the MACT floor based on the best performing unit for each pollutant is not reasonable.

Response: We disagree with the commenters who object to setting MACT floors on a pollutant-by pollutant basis. EPA previously has explained that although CAA section 129 does not unambiguously declare that MACT floors must be established on a pollutant-by-pollutant basis, applying the requirement to set MACT floors based on what has been achieved by the best-performing sources for ***each*** of the pollutants covered by CAA section 129 is a reasonable interpretation of EPA's obligation under that provision (62 FR 48363-64).

EPA interprets the provision in CAA section 129(a)(2) to support establishing emissions standards based on the actual emissions of "the best controlled similar unit" or "best-performing 12 percent of units in the category" for each covered pollutant. Even if we were to conclude that the commenters' interpretation is equally reasonable under the statute, which we do not, the commenters' interpretation is certainly not compelled by the statute. We maintain that our interpretation is reasonable under the statute and appropriate given the problems associated with implementing the commenters' approach.

The rest of CAA section 129 requires EPA to "establish performance standards and other requirements pursuant to section [111] of this title and this section [129] for each category of solid waste incineration units." Pursuant to CAA section 129(a)(2), those standards "shall reflect the ***maximum degree of reduction*** in emissions of air pollutants listed under section (a)(4)...." (emphasis added).

Subsection (a)(4) then states: "The performance standards promulgated under section [111] of this title and this section [129] and applicable to solid waste incineration units shall specify numerical emissions limitations for the following substances or mixtures: PM (total and fine), opacity (as appropriate), sulfur dioxide, hydrogen chloride, oxides of nitrogen, carbon monoxide, lead, Cd, mercury, and dioxins and dibenzofurans." Thus, the statute requires EPA to set individual numeric performance standards based on the maximum degree of reduction in emissions actually achieved for each of nine listed pollutants. Based on this, EPA believes – and has long believed – the statute supports, if not requires, that MACT floors be derived for each pollutant based on the emission levels achieved for each pollutant. Moreover, although the provisions do not state whether there is to be a separate floor for each pollutant, the fact that Congress singled out these pollutants suggests that the floor level of control need not be limited by the performance of devices that only control some of these pollutants well.

Looking at the statute as a whole, EPA declared in the 1997 rulemaking for medical waste incinerators "The EPA does not agree that the MACT floors are to be based upon one overall unit" (62 FR 48364). Pointing for instance to subsection 129(a)(4), EPA explained:

> This provision certainly appears to direct maximum reduction of each specified pollutant. Moreover, although the provisions do not state whether there is to be a separate floor for each pollutant, the fact that Congress singled out these pollutants suggests that the floor level of control need not be limited by the performance of devices that only control some of these pollutants well.

Id.

Since 1997, the courts have consistently repeated that EPA must set emission standards based on the best-performing source for ***each*** pollutant. See, e.g., Cement Kiln, 255 F.3d 855, 858 (D.C. Cir.) ("[T]he Agency first sets emission floors for each pollutant and source category...."). Accordingly, EPA's pollutant-by-pollutant approach has, as outlined above, been in place since 1997 for medical waste incinerators, and even earlier for other types of incinerators regulated under section 129. See, e.g., 59 FR 48198 (September 20, 1994) (municipal waste combustors). In addition, such an approach has been upheld in other contexts. See, e.g., Chemical Mfrs. Ass'n v. EPA, 870 F.2d 177, 239 (5^{th} Cir. 1989) (concluding that basing CWA best available technology standards on a pollutant-by-pollutant basis was a rational interpretation of EPA's obligations under that similar statute). We note that the CAA MACT provisions were fashioned on that CWA program. S. Rep. No. 228, 101^{st} Cong. 2d sess. 133-34.

Further, utilizing the single-unit theory would likely result in EPA setting the standards at levels that could, for some pollutants, actually be based on emissions limitations achieved by the ***worst***-performing unit, rather than the ***best***-performing unit, as required by the statute. See 61 FR 173687 (April 19, 1996); 62 FR 48363-64 (September 15, 1997). For example, if the best performing 12 percent of facilities for metals did not control CDD/CDF as well as a different 12 percent of facilities, the floor for PCDD/PCDF and metals would end up not reflecting best performance. Moreover, a single-unit approach would require EPA to make value judgments as to which pollutant reductions are most critical in working to identify the single unit that reduces emissions of the nine pollutants on an overall best-performing basis. Such value judgments are antithetical to the command of the statute at the MACT floor stage. It would essentially require EPA to prioritize the nine pollutants based on the relative risk to human health of each pollutant, a criterion that has no place in the establishment of MACT floors. Sierra Club v. EPA (Copper Smelters), 353 F.3d 976, 979-80 (D.C. Cir. 2004).

The fact that the statute does not contain the phrase “for each pollutant” does not compel any inference that Congress was sub silentio mandating a different result when it left the provision ambiguous on this issue. The argument that MACT floors set pollutant-by-pollutant are based on the performance of a hypothetical facility, so that the limitations are not based on those achieved in practice, just re-begs the question of whether CAA section 129 (a)(2) refers to whole facilities or individual pollutants. All of the emission limitations in this rule reflect actual performance and are achieved in practice.

An interpretation that the floor level of control must be limited by the performance of devices that only control some of these pollutants effectively "guts the standards" by including worse performers in the averaging process, whereas EPA's interpretation promotes the evident Congressional objective of having the floor reflect the average performance of best performing sources. Since Congress has not spoken to the precise question at issue, and EPA's interpretation effectuates statutory goals and policies in a reasonable manner, its interpretation must be upheld. See Chevron v. NRDC, 467 U.S. 837 (1984).

Commenters made much of the fact that no single facility is presently achieving all of the nine pollutant limits proposed. However, the available information compared to the final standards disputes this assertion. For the final standards, based on the data we have, our estimate of baseline emissions, and the revised emission limits, we are estimating that 155 of 204 existing SSI units can meet standards for all nine pollutants, without installing additional pollution control. We cannot make this assessment for new sources, because none have been constructed. However, we are not aware of any technical reason that new units could not install the most advanced pollution control techniques or reduce the pollutant concentrations in the sludge to meet the new source standards.

We recognize that the pollutant-by-pollutant approach for determining the MACT floor can, as it does in this case, increase the overall cost of the regulation compared to what would result under a unit-based methodology. We interpret CAA section 129 to require that the MACT floor be determined in this manner, and we believe that Congress did, in fact, intend that sources subject to regulations developed under CAA section 129 meet emissions limits that are achieved by the best controlled unit for each pollutant, as long as the control systems are compatible with each other. To our knowledge, there is no technical reason why these air pollution control systems cannot be combined.

Regarding the inverse relationship between CO and NO_X with regard to combustion control, it is incumbent upon the SSI facility to determine whether combustion conditions can be adjusted to meet both standards and, if not, install NO_X controls as necessary (e.g., SNCR systems, SCR systems, FGR, or low NO_X burners). In the proposed rule, we conjectured reasons why SCR and SNCR were not used or may not be able to be used at SSI units. While we are not aware of any SSI unit that currently uses SNCR or SCR, we also do not know of technical reason why they could not be used. Given the limited data available on SSI units with FGR, we could not definitely determine how effective the technology was on SSI units. However, we also do not know of a technical reason why they could not be used, if necessary, to meet NO_X limits, and commenters did not provide any reasons they could not be used.

Dataset for the MACT Floor Analysis

Comment: Many commenters urged EPA to collect more information to set the standards. Many commenters contended that EPA does not have sufficient actual emission data from enough SSI units to properly set the MACT floor. Some commenters contended that the floor-setting provision in section 129 requires them to set the existing floor standards "based on the best performing 12 percent of sources in the category" and not just based on the sources for which they have information. The commenters contended that EPA did not have emissions data from the best-performing 12 percent of sources or even from 12 percent of sources. Additionally, the commenters stated that there is no evidence that the sources for which EPA collected data are among the top 12%. One commenter added that EPA is using actual data from as little as 4.3 percent of a subcategory (7 of 163 MH units for HCl) to determine how the top 12 percent perform.

Some commenters contended that EPA chose to limit its ICR to just nine entities because collecting information from ten or more entities would have triggered the PRA obligations and a more rigorous OMB review. The commenters concluded that EPA's plan to circumvent the PRA and OMB review resulted in an inadequate dataset for this rulemaking that leaves EPA unable to reliably take the first necessary step in a section 129 rulemaking: to determine which of the SSI units are the best performing sources.

Some commenters also contended that EPA targeted its ICR to the nine POTW expected to have the lowest emissions based on the type of unit and the installed air pollution controls. The commenters contended that EPA's targeted approach to collecting data from expected top performers undermines its ability to presume the data is a random sample representative of the entire source category or subcategory. The commenters stated that if the data gathered are not representative at the outset, then the data cannot reliably be used in a statistical equation to predict the emissions data across the source category or subcategory.

Some commenters noted that in the past, EPA has used permit or other regulatory limits, emission levels, feed rate control, and other information to establish MACT standards. Despite this flexibility, the commenters stated that EPA is proposing to use an "actual emissions" method in the SSI rule, even though it does not have actual emissions for each of the regulated pollutants from at least 12% of the units.

Another commenter stated that EPA used emission data from state databases for an additional nine MHs. The commenter stated that EPA was instructed by the Court to collect data from the best-performing 12% of existing sources, and EPA needs to justify that the emissions data from the state databases for the additional nine MHs were the 12% best performing MHs.

Response: As explained in the preamble to the proposed rule, EPA requested several SSI to conduct emissions testing and provide the results to EPA for purposes of this rulemaking. Specifically, EPA collected information on the best-performing sources to establish MACT floor standards for SSI. Therefore, EPA sent emissions tests requests under section 114 of the CAA to nine entities that own and operate SSI units. EPA identified SSI units that were expected to be the best-controlled sources and the best performers for further emissions testing. The Agency acknowledges that this selection methodology targets identifying the best-performing sources rather than selecting a representative sample of sources. However, given the court-ordered deadline for EPA to issue the final SSI rule, it was not possible to undertake the time-consuming process of sending an ICR to all the affected SSI units consistent with the requirements of the PRA.

To select the surveyed owners, EPA reviewed the inventory of SSI units for the control devices being operated, and identified a subset of units expected to have the lowest emissions based on the type of unit and the installed air pollution controls. These controls generally achieve the most reductions possible for the CAA section 129 pollutants, and thereby allow EPA to identify for each pollutant the units with the lowest emissions. For example, units were selected that operated more than one of the following technologies: activated carbon injection to reduce Hg and dioxins/furans; RTOs or afterburners to reduce CO and organics; wet ESP to reduce fine particulate; high efficiency scrubbers such as packed bed scrubbers and impingement tray scrubbers to reduce PM, Cd, Pb, particulate Hg, and acid gases such as HCl and SO_2; and units with multiple control devices that could reduce PM, Cd, Pb, particulate Hg, such as venturi scrubber in combination with impingement scrubbers and wet ESPs or with another particulate control device. The 9 owners or operators selected were from different states in different regions of the country, providing a wide spectrum of sources for sludge generated.

Six of the nine ICR recipients operate MH units, resulting in 13 MH units surveyed. Three of the nine operate FB units, resulting in 7 FB units surveyed. Some owners of multiple units at a facility provided information for less than the total number they operated, e.g. 1 unit instead of 2, because not all units were in operation during the test period. Of those 20 units from the nine surveyed municipalities, EPA collected data from 17 units that were in operation (11 MH units and 6 FB units). While testing was being undertaken, the EPA also collected emission test information for 9 MH SSI units collected from state environmental agencies public databases. For some pollutants, the emissions from these supplemental test reports were lower than those from the nine ICR sources. The EPA concluded that it was appropriate to use all the emissions information from these test reports in the MACT floor analysis. The EPA also collected many test reports that were older than 15 years. The older reports were determined to not be appropriate for this rulemaking because they were unlikely to represent current emissions performance, due to their age and because they pre-dated required compliance with the CWA part 503 standard. In total, emissions information were collected from 6 FB units and 20 MH units from facilities responding to the ICR and additional test reports provided by state environmental agencies.

As discussed in the NPRM and background documentation, the EPA conducted a statistical analysis to verify the minimum number of observations needed to accurately characterize the distribution of the best-performing 12 percent of units in each subcategory. The results showed that the data utilized by EPA meets or exceeds the number of observations necessary to provide an accurate representation of that data distributed from the best-performing 12 percent of the source population. The EPA maintains that the emissions information that we have collected is adequate to determine the MACT floor for the best-performing sources. The EPA disagrees with the commenters' recommendation to use other types of data, such as permits, other regulatory limits, or feed rate controls with the emissions information to calculate the MACT floor. The other types of data mentioned do not represent the actual emissions or operation of the unit but are potential values in their permits or limits. Most units are typically operating at lower than permitted levels or emission limits.

Additionally, it would be difficult to incorporate such data into the EPA's UPL calculation because the UPL calculation is based on emission test runs of actual data, rather than limits based on permits. The permit or emission limits would be on a different basis and potentially skew the MACT floor UPL calculation.

The EPA has also updated the inventory of sources based on additional data provided in the comment letters. The inventory now contains 204 SSI units, 60 FB units and 144 MH units. Given this change in population, 12 percent of each subcategory are equal to 8 FB units and 18 MH units. Although we do not have any more emissions information than at proposal, the change in inventory results in more than 12 percent of MH units with data for PM and Hg. For these pollutants, we determined the MACT floor based on the best-performing 12 percent of emissions data, as documented in the memorandum "Revised MACT Floor Analysis for the Sewage Sludge Incinerator Source Category" in the SSI docket (EPA-HQ-OAR-2009-0559). EPA solicited additional emission test reports in the NPRM. Although many commenters summarized the results of their most recent emission tests when comparing their site-specific emissions to EPA's baseline emissions, none of the commenters actually provided the emissions test reports. The emission test reports are necessary for the EPA to review the test methods and procedures to ensure consistency with other emissions data, and to verify the tests represent a valid test result that can be used in the MACT floor analysis. Additionally, the test reports provide information necessary to correct the emissions measured into the units used for the MACT floor analysis. Therefore, these additional test result summaries, without background documentation, could not be used in the MACT floor UPL calculation.

Comment: One commenter stated that, to fill the data gap caused by the lack of actual emissions data from the required number of units in each subcategory, EPA applied statistical analysis to single test run results. Several commenters contended that, in order to enhance the data available for MACT development, EPA counted each test run as a separate data point.

Some commenters stated that basing a MACT Analysis on test runs, instead of tests, is improper. The commenters noted that CAA section 129 states that MACT standards for existing sources must be as stringent as the "emissions limitation achieved by the best performing 12 percent of units in, the category." The commenters added that, assuming that EPA equates the term "emissions limitation" with the concept of emission level (as often stated by

EPA), this clause means that EPA must use the emission levels that have been achieved to set the MACT floors. The commenters contended that, under the MACT program, it takes a "minimum" of three test runs to make up a valid emissions level test. The commenter stated that a test run is not an accurate measure of the performance of the unit and should not be used as if it were. Commenters added that EPA should use the results of the test for each unit (comprised of at least three test runs) to represent what is being achieved by a unit.

Several commenters contended that EPA must go back and reset the process based on 12% of MH and 12% of FBI sources (not individual incinerators). The commenters added that it is important that individual sources, not units, be utilized because the composition of the sludge varies greatly from source to source and utilizing multiple units at one source skews the data development process and ultimately provides the basis for a flawed MACT standard at best.

Response: We disagree with the commenters. The 99 percent UPL values were calculated for each pollutant and for each subcategory using the test run data for those units in the best-performing 12 percent. Consistent with EPA's procedures on other MACT standards, such as HMIWI, CISWI, and boilers, the MACT floor emission limits were calculated on a run basis since compliance is based on the average of a 3-run test. The 99 percent UPL represents the value which one can expect the mean of future 3-run performance tests form the best-performing 12 percent of sources to fall below, with 99 percent confidence, based upon the results of the independent sample observations from the same best-performing sources.

Variability Calculation

For the final rule, as in the NPRM, we are incorporating variability in the MACT floor calculation for this source category using the 99 percent UPL. We are also following the same procedures for establishing limits and incorporating non-detect values as discussed in the NPRM. We have made three revisions to the variability calculation for the final rule. First, we revised the MACT floor variability calculation to incorporate weighted UPL's for existing FB units. Second, we selected log-normal results when it is not clear that data are normally distributed. Lastly, we revised the CO limits based on an analysis of the span of the test. The weighted UPL's and log-normal results are discussed in responses to comments. The revision to the CO limits based on reviewing the CO span was done to correct errors in the CO values provided in test reports and to be consistent with the calculation methods used in the CISWI and boilers rules.

Carbon monoxide values obtained from emission test reports were reviewed to determine whether the span of the test used was capable of accurately reading the reported value. If the span was inconsistent with the reported value, the CO levels were adjusted to provide a value that was more consistent with the span. EPA Method 10 is structured such that measurement data quality relative to the calibration span of the instrument can be assessed. For a measurement made using an instrumental test method, the equivalent of the method detection level can be assessed using: a square root formula, the reported calibration span value, and the allowable data quality criteria (i.e. the allowable calibration error, bias, and drift values). The estimated CO measurement error resulting from the square root formula was adjusted by a factor of three to be consistent with the methodology EPA applied for non-detect data (where limits no less than three times the method detection level were established).

In order to develop a basis for measurement error, instrument calibration spans in available test reports were reviewed. Where no span values could be found, it was assumed that if the test was conducted on or before May, 2008, the associated CO span would be 1000 ppm, and tests conducted after May 2008 would have a CO span of 100 ppm. This assumption was made because, before revisions were made to Method 10 in May of 2008, it was common that units were using the prescriptive span guidance that was listed in the old method. The current version of EPA Method 10 does not include these span requirements but instead requires the tester to choose calibration ranges that reflect the range of expected emission concentrations at the unit. In cases where the reported emission concentrations were lower than their corresponding measurement errors, the default measurement errors were used in lieu of the reported concentration.

These revisions are further documented in the memorandum "Revised MACT Floor Analysis for the Sewage Sludge Incinerator Source Category" in the SSI docket (EPA-

HQ-OAR-2009-0559). Table 7 of this preamble shows the revised results of the MACT floor analysis for existing sources, and Table 8 of this preamble shows the results for new sources.

Table 7. Summary of MACT Floor Analysis for Existing SSI Units

Pollutant	Units	MACT Floor Emission Limit for FB Incinerators[a]	MACT Floor Emission Limit for MH Incinerators[a]
Cd	mg/dscm @7% O_2	0.0016	0.095
CO	ppmvd @7% O_2	64	3,800
HCl	ppmvd @7% O_2	0.51[b]	1.2
Hg	mg/dscm @7% O_2	0.037	0.28 [b]
NO_x	ppmvd @7% O_2	150	220
Pb	mg/dscm @7% O_2	0.0074	0.30
PCDD/PCDF TEQ	ng/dscm @7% O_2	0.1	0.32
PCDD/PCDF TMB	ng/dscm @7% O_2	1.2	5.0
PM	mg/dscm @7% O_2	18	80
SO_2	ppmvd @7% O_2	15	26

[a] Limits were rounded up to two significant figures.
[b] Limits represent three times the detection level.

Table 8. Summary of MACT Floor Analysis for New SSI Units

Pollutant	Units	MACT Floor Emission Limit for FB Incinerators[a]	MACT Floor Emission Limit for MH Incinerators[a]
Cd	mg/dscm @7% O_2	0.0011	0.0024
CO	ppmvd @7% O_2	27	52
HCl	ppmvd @7% O_2	0.24	1.2 **c**
Hg	mg/dscm @7% O_2	0.0010	0.15 **b**
NO_x	ppmvd @7% O_2	30	210
Pb	mg/dscm @7% O_2	0.00062	0.0035
CDD/CDF TEQ	ng/dscm @7% O_2	0.0044	0.0022
CDD/CDF TMB	ng/dscm @7% O_2	0.013	0.045
PM	mg/dscm @7% O_2	9.6	60
SO_2	ppmvd @7% O_2	5.3	26 **c**

[a] Limits were rounded up to two significant figures.
[b] Limits represent three times the detection level.
[c] Limits defaulted to EG limits since NSPS limits were less stringent than EG.

Comment: One commenter contended that because CAA section 129 unambiguously requires EPA to set floors reflecting the "average" emission level achieved by the best sources, setting floors that instead reflect a UPL for those sources is unlawful. The commenter, added that by claiming that it can use the UPL for all sources in the top twelve percent, EPA misreads its authority to consider variability under the CAA and relevant case law. The commenter explained that, although EPA may consider variability in estimating an individual source's actual performance over time, nothing in the CAA or the case law even suggests that EPA may account for differences in performance between sources except as section 129 provides, by averaging the emission levels achieved by the sources in the top twelve percent.

Response: In assessing sources' performance, EPA may consider variability both in identifying which performers are "best" and in assessing their level of performance. Sierra Club v. EPA (Brick MACT), 479 F. 3d 875, 881-82 (D.C. Cir. 2007); see also Mossville Environmental Action Now v. EPA, 370 F.3d 1232, 1241–42 (D.C. Cir 2004) (EPA must exercise its judgment, based on an evaluation of the relevant factors and available data, to determine the level of emissions control that has been achieved by the best performing sources considering these sources' operating variability). The Brick MACT decision indicated that floors for existing sources must reflect the average emission limitation achieved by the best-performing 12 percent of existing sources. The Brick MACT decision also reiterated that EPA may account for variability in setting floors; however, the Court found that EPA erred in assessing variability because it relied on data from the worst performers to estimate best performers' variability. The Court held that "EPA may not use emission levels of the worst performers to estimate variability of the best performers without a demonstrated relationship between the two." 479 F. 3d at 882.

In determining the MACT floor limits, we first determine the floor, which, for existing sources, is the emissions limitation achieved in practice by the average of the top 12 percent of existing sources, or the level achieved in practice by the best controlled similar source for new sources. In this rule, EPA is using lowest emissions limitation as the measure of best performance. We then assess variability of the best performers by using a statistical formula designed to estimate a MACT floor level based on the average of the best performing sources using the expected distribution of future compliance tests. We used the UPL to perform this calculation, as explained below.

Variability can be accounted for using different statistical methods. For example, recent standards have used the UL or the UPL to determine the MACT floor emission limits. A UL is based on the distribution of the available emission observations (e.g., test runs), and does not embody a predictive aspect that a UPL does. A prediction interval (e.g., a UPL) for a future observation is an interval that will, with a specified degree of confidence, contain the next (or some other pre-specified) randomly selected observation from a population. In other words, the prediction interval estimates what future values will be, based on present or past background samples taken. Given this definition, the UPL represents the value the mean of three future test run observations (three-run average) can be expected to fall below, based on the results of the independent sample of size (n) from the same population. Therefore, should a future test condition be selected randomly from any of these sources (i.e., average of three runs), we can be 99 percent confident that the reported level will fall below a MACT floor emission limit calculated using a UPL. The UPL is an appropriate statistical tool to use in determining variability in the SSI data. For this source category, where there is a limited sampling of the source category and we do not have test data from all of the SSI units in the best performing 12% for each subcategory, the predictive aspect of the UPL calculation is especially important.

Because the UPL represents the value which we can expect the mean (i.e., average) of three future observations (3-run average) to fall below, based upon the results of the independent sample size from the same population, the UPL reflects average emissions. The UPL is also consistent with other recent rulemakings.

Comment: Several commenters asserted that, in setting MACT standards for existing units, EPA pooled and utilized data from all available test runs for the best performing units without regard to the number of data points available for each unit. The commenters added that, for all pollutants, the number of test runs varies from unit to unit. One commenter stated that using data this way biases the statistical results, and ultimately, the standards by over-weighting the performance of the units that have more data. The commenter suggested that EPA should employ an alternate methodology which determines the emissions limitation achieved for each best performing unit first, and then averages these limitations to determine the least stringent standard, or MACT floor.

Response: The SSI emissions database for fluidized bed units contains data from six units at four facilities. The entities surveyed were requested to provide recent (within the previous 5 years) emissions test reports. Most survey recipients provided only the most recent report. One facility, with three units, provided results of emissions test conducted for compliance reports spanning a 10-year period. This facility also uses the most advanced pollution controls on their fluidized bed units in the subcategory. This facility constitutes 70 percent of the Cd and Pb data, 90 percent of the CO and Hg data, and 75 percent of the HCl data and PM data. As a result, the existing source MACT floors calculated using the UPL methodology, and all the test run data from the one facility, effectively result in calculating more stringent limits more akin to a new source MACT floor than an existing source MACT floor, because it is based primarily on only the emissions performance of the best-performing single source, rather than the average of the best-performing 12 percent of sources.. In order to adequately incorporate the emissions from the best-performing SSI units in the fluidized bed subcategory, a weighted UPL was used for calculating the existing source MACT floors for the final rule. The weighted UPL is calculated from a weighted mean and weighted variance as described below.

There are many different types of weighting procedures. We have chosen the most straightforward methodology, to base it on the number of data points (i.e., test runs) from each SSI unit.[12] This weighting scheme ensures that no facility in the MACT best performers pool is over-represented in the computation of the MACT floor. The first step in weighting procedure is to assign a weighting factor to each test run by multiplying each observation for source $\underline{i}$ and run $\underline{j}$ with a weight term, w_{ij},

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[12] Heckert, N. A. and Filliben, James J.(2003). "NIST Handbook 148: DATAPLOT Reference Manual, Volume I: Commands", National Institute of Standards and Technology Handbook Series, June 2003. [Available at www.itl.nist.gov/div898/software/dataplot/document.html]

as shown in Equation 1 of this preamble:

$$w_{ij} = \left(\frac{1}{M_i}\right) \times \left(\frac{1}{N}\right)$$

(Eq. 1)

Where:

M_i = Number of observations (i.e., runs) for source i and
N = Number of best performing sources in the MACT pool.

The second step is to calculate the mean and total variance for the weighted data from the weight terms using Equations 2 and 3 of this preamble:

Weighted Mean: $$\bar{x}^{weighted} = \frac{\sum_{i=1}^{N}\sum_{j=1}^{M_i} w_{ij} x_{ij}}{\sum_{i=1}^{N}\sum_{j=1}^{M_i} w_{ij}}$$

Equation 2

Weighted Variance: $$v^{weighted} = \frac{\sum_{i=1}^{N}\sum_{j=1}^{M_i} w_{ij}\left(x_{ij} - \bar{x}_U^{weighted}\right)^2}{\frac{(K-1)\sum_{i=1}^{N}\sum_{j=1}^{M_i} w_{ij}}{K}}$$

Equation 3

Where:

$K = \sum_{i=1}^{N} M_i$ is the total number of observations in the MACT best performers pool.

When the weights are equal to one, the above equations reduce to those for un-weighted data, as expected. As shown in Equation 4 of this preamble, the weighted mean and weighted variance are then used in the UPL calculation (discussed in the NPRM) instead of the simple (i.e., un-weighted) mean and variance.

$$UPL = \bar{x}^{weighted} + t(0.99, n_i - 1) \times \sqrt{\left(\nu^{weighted}\right) \times \left(\frac{1}{n_i} + \frac{1}{m_i}\right)} \quad \text{Equation 4}$$

For multiple hearth units, there are more emissions data from a larger number of facilities/units. For example, we have data on Cd and Pb from 11 facilities with 14 units, Hg from 11 facilities with 18 units. The MACT floor calculations are not skewed by one or two units or facilities. Consequently, the MACT floor for existing multiple hearth units does not need to be calculated using a weighted UPL.

The revisions to the MACT floor methodology are discussed in detail in the memorandum "Revised MACT Floor Analysis for the Sewage Sludge Incinerator Source Category" in the SSI docket (EPA-HQ-OAR-2009-0559).

Comment: One commenter contended that EPA should determine the MACT floor emission limits to be consistent with EPA’s Guidance for Data Quality Assessment Manual, which holds that it is more likely that environmental data are distributed log-normally. The commenter considered it reasonable to believe that environmental emission distributions are non-normal, since frequency plots typically show many readings approaching zero and fewer large readings forming an elongated tail to the right. The commenter concluded that normal distributions may exist for certain pollutants where the entire dataset is many standard deviations away from zero, and values are controlled by an air pollution control process with set points and feedback and control loops.

Response: We have reviewed the document referenced and agree with the commenter that the referenced document shows that environmental data are more likely to be log-normally distributed than normally distributed. In the proposed rule, two statistical measures, skewness and kurtosis, were examined to determine if the data used to calculate the MACT floor were normally or log-normally distributed. If both the reported values and the natural-log transformed reported values had skewness and kurtosis statistics that indicated neither were normally distributed, the reported dataset was selected as the basis of the floor to be conservative. If the results of the skewness and kurtosis hypothesis tests were mixed for the reported values and the natural log-transformed reported values, the analysis done on the reported data values was chosen to be conservative.

Based on "Guidance for Data Quality Assessment: Practical Methods for Data Analysis" EPA/600/R-96/084, July 2000, we have modified our assumptions when results of the skewness and kurtosis tests do not clearly show whether a normal or log-normal distribution better represents the data, or when there are not enough data to complete the skewness and kurtosis tests. In these cases, we have chosen to use the log-normal results for the final MACT floor calculation.

Comment: Some commenters contended that EPA incorrectly presumes that stack test results account for the full variability of a SSI's performance. Several commenters stated that emissions from SSI units are affected not just by control technology but also by other factors including the contents of the sludge that a unit is burning. Many commenters urged EPA to determine the MACT floor limits by incorporating the variability of the sludge contents. The commenters added that the methodology in developing the proposed standards does not take into account that Hg, Cd, Pb, HC1 and SO_2 emissions are a function of the sludge content of Hg, Cd, Pb, chlorine and sulfur. The commenters expressed concern that the limits were based on test results obtained with sludge containing very low concentration of metals, chlorides, and sulfur. The commenter explained that if the sludge burned during an emissions test was not at or near the maximum constituent concentration level (e.g., due to seasonal variability), a new source emission limit based on these data could not be achieved over the full range of expected normal operating conditions confronted by the best performing source.

The commenters contended that EPA must consider all available data (including Part 503 data) for the best performing source and use that to establish a variability factor applied to the stack test data. The commenters added that EPA’s request for metals data during the stack test is insufficient to account for the full intra-source variability. The commenters added that variability for the compounds not regulated by Part 503 must also be accounted for as well before setting the new source limit.

The commenters explained that POTW, and their SSI units, are statutorily obligated to manage all of the sewage that enters into the sanitary sewer system, resulting in highly variable and often unpredictable spikes in concentrations. The commenters continued that POTW inlet concentrations also vary based on the nature and type of dischargers. The commenters explained that POTW treat wastewater from residential, commercial and industrial dischargers in varying degrees, and pretreatment opportunities also vary because POTW authority to control discharges into the sewer system is limited and the way that authority is exercised varies. The commenters also noted that the nature of sewage entering the POTW changes over time as the character of a community changes, the age of the population changes, and commercial and industrial dischargers come and go. The commenters added that without the use of long-term data to support the level of emission standards, this variability makes numeric technology-based limits impractical and infeasible. The commenters also explained that POTW also face significant regional and seasonal variability that is not captured by EPA’s dataset.

The commenters stated that initial high flow periods in the spring often scour the sewers and dislodge heavier material that has settled in the sewer system during low-flow periods, which often results in a spike in metals concentrations (e.g., Hg, Cd, Pb) in the sewage sludge. The commenters noted that the ICR stack tests in January and February that were used for the EPA database would not have captured these events. The commenter also noted that northern cities that use salt for de-icing roadways experience significant increases in chlorides during the winter months, and high chloride concentrations are known to improve the effectiveness of Hg control at existing wet scrubbers.

Response: The variability analysis is based on emissions information gathered from nine different facilities located in nine different states. The facilities we collected emissions information from are located in a mix of northern, southern, eastern, and western states. Each facility has its own unique sludge characteristics from different residential and commercial populations. We agree that the emissions data represents a "point in time". However, combined together, they represent sufficient variation in regions, climates and populations that adequately incorporates variability in wastewater treatment systems across the U.S. We have also incorporated variability using the UPL. The variability analysis based on the emissions data collected adequately characterizes the potential differences in sludge contents and regional differences. Because we have a mixture of southern and northern states in the emissions database, we believe that it also adequately considers differences between cold and warm weather climates. Additionally, we did not have sufficient information at proposal to consider if it were appropriate to incorporate variability based on sludge content. We requested additional information in the NPRM, but did not receive adequate sampling data from the best-performing sources.

Comment: Some commenters claimed that EPA's identification of the relevant best performing units for both existing and new unit standards is both unlawful and arbitrary, and EPA may not use sources' control technology as a proxy for their actual performance unless "pollution control technology is the only factor determining emission levels." Cement Kiln Recycling Coalition v. EPA, 255 F.3d

855. 863 (D.C. Cir. 2001). The commenters stated that, in Cement Kiln Recycling Coalition v. EPA, 255 F.3d 855 (D.C. Cir 2001) ("CKRC"), the Court considered Sierra Club's challenge that EPA could not set the floors based solely on the performance of one method: add-on technology. The commenters added that the Court remanded the rule because EPA did not consider all of the ways facilities control emissions. The commenters stated that this requirement is consistent with doing a more complete study as required by section 111 and is antithetical to a methodology based solely on emission levels since setting the floor in this fashion does not require EPA to examine all methods of control. The commenters concluded that EPA's performance data approach in this rule may violate CKRC because EPA did not check for all methods that sources use to reduce pollution.

Response: EPA disagrees with the commenter who alleges that EPA has not properly identified the best performing SSI units for purposes of calculating MACT floor limits. As explained above, EPA targeted its emissions testing requests to units it believed had the lowest emissions, while accounting for factors such as sludge content and seasonal variation by selecting units in different geographic areas of the country.

EPA further notes that SSI units currently employ non-technology measures (pollution prevention) to reduce emissions to comply with CWA regulations at 40 CFR Part 503. These regulations establish daily average concentration limits for Pb, Cd, and other metals in sewage sludge that is disposed of by incineration. Part 503 also requires that SSI meet the National Emission Standards for Beryllium and Hg in subparts C and E, respectively, of 40 CFR part 61. In order to meet the 40 CFR part 503 standards, facilities are already incorporating management practices and measures to reduce waste and limit the concentration of pollutants in the sludge sent to SSI units, such as segregating contaminated and uncontaminated wastes and establishing discharge limits or pre-treatment standards for non-domestic users discharging wastewater to POTW. Thus, the facilities from which EPA received emissions test results are already applying non-technology measures to reduce emissions.

Comment: One commenter suggested that if EPA employs the statistical limit to set MACT floor emission limits, it should use the 99.9 percent limit. The commenter stated that the 99.9 percent UPL represents a 0.1 percent probability of a failure for individual tests, or a one percent per unit non-compliance probability per annual performance test program. The commenter concluded that this value better encompasses unit emissions variability and represents a manageable risk to the responsible facility operator.

Response: We disagree with the commenters. For the final standards, we maintain the use of 99 percent UPL is appropriate and sufficiently addresses variability in the emissions information. Our analysis of variability is explained in detail in the memorandum "Revised MACT Floor Analysis for the Sewage Sludge Incinerator Source Category" in the SSI docket (EPA-HQ-OAR-2009-0559).

Comment: Several commenters opposed an opacity limit of zero percent because opacity is a subjective measurement and no unit can meet opacity limits of zero at all times. Another commenter suggested that control and monitoring of PM is sufficient.

Response: We agree that a no visible emissions (zero opacity) limit for combustion processes is impractical for both compliance and enforcement purposes. We also believe that a measurable opacity may or may not be indicative of compliance with a PM emissions limit when applied to multiple sources within the category. That is, an opacity limit applied to one facility could very readily correspond to a PM emissions level different than that same opacity limit applied to another facility and one or both may be emitting above the PM limit. That opacity limits do not apply very well when wet control devices are used further confounds the benefit of such regulatory limits. We also agree that there are both CEMS and site-specific parametric monitoring approaches applicable to various control devices that can be more closely aligned with PM control and compliance with the PM emissions limit than would an opacity limit and opacity monitoring. Instead of establishing opacity limits that may or may not assure compliance with PM emissions limits, the final rules include rigorous requirements for establishing site-specific operating limits derived from the results of performance testing. The rules also include a requirement that sources update those enforceable operating limits with each repeated performance test. Re-establishing operating limits periodically will assure that the monitoring will continue to indicate compliance with the PM emissions limits. The rules also provide the source the option of apply CEMS to monitor directly the pollutant of interest in lieu of parametric monitoring. We believe that continuous compliance with operating limits and periodic stack testing to verify the operating limits plus the CEMS option will ensure that sources demonstrate continuous compliance with the PM emission limits more effectively than would periodic or continuous monitoring of a broadly applicable opacity limit.

Format of the Standards

Comment: Several commenters requested that EPA develop emission limits for some pollutants in different units or to provide a control efficiency alternative. The commenters expressed concern that the use of concentration limits would not reflect the variability of the unique sludge characteristics of each SSI unit, and may unfairly penalize units with very low or very high feed concentrations of certain pollutants, such as Hg, Cd, or Pb. Some commenters suggested establishing limits similar to the EPA 503 regulations, which provided emission limits based on control efficiencies coupled with feed concentration limits.

Response: We did not have sufficient data to set alternative control efficiency standards or standards in other units at proposal. We requested additional information in the proposal. However, sufficient data were not provided in response to our request for alternative formats to be developed.

D. Baseline Emissions

Comment: Commenters stated that EPA overestimated baseline emissions because EPA used incorrect air flow rate parameters, pollution control device efficiencies, sludge feed rates, and operating hours. Many commenters provided stack test data, emission estimates, and corrections to the EPA's SSI inventory database. Other commenters noted that EPA used uncorrected flue gas flow rates and flow rate factors in combination with pollutant concentrations corrected to seven percent oxygen.

Response: We have incorporated corrections to the inventory and calculation inputs provided by the commenters where applicable. In some cases, commenters did not provide information sufficient for us to revise the inventory or calculation inputs for the commenter's facility. For example, commenters may have provided an average concentration for a pollutant, but did not provide run-specific information that would allow us to convert the concentration information provided to standardized units (7 percent oxygen). Other commenters may have provided emission rates in pounds per hour, but did not provide vent gas flow rate, oxygen content, or moisture content to convert to concentration units. None of the commenters provided test reports that would have include this information.

We have also revised the calculation of baseline emissions by revising the defaults assigned to SSI units where information was not available. Defaults were necessary to be assigned because, even after new data were received in comments, a significant number of units did not have data on sludge capacity, flue gas flow rates, etc. A detailed discussion of the methodology used to estimate baseline emissions for the final standards is presented in the memorandum "Revised Estimation of Baseline Emissions from Existing Sewage Sludge Incineration Units"(EPA-HQ-OAR-2009-0559). The revisions to the inventory and other corrections resulted in the final rule baseline emissions shown in Table 9 of this preamble. The table shows a range of emissions for each pollutant. The lower bound represents an estimation of actual emissions based on the actual dry sludge feed rates commenters indicated their units were running. The upper bound represents an estimation of potential emissions if the sludge feed rate was at the dry sludge capacity of each unit. We estimated the potential emissions because the amount of wastewater treated (and sludge produced) may vary significantly based on changes in population or sources of wastewater. Facilities have the potential to burn up to their units permitted capacity although they may not be doing so currently.

Table 9. Estimated Baseline Emissions for Existing SSI Units

Pollutant	Range of Baseline Emissions By Subcategory (TPY)		Range of Total Baseline Emissions (TPY)
	FB	MH	
Cd	0.0022-0.0015	0.91-1.2	0.91-1.2
CO	73-100	8,400-11,500	8,500-11,600
HCl	1.6-2.2	26-41	28-43
Hg	0.040-0.058	0.85-1.15	0.9-1.2
NO_x	320-480	2,100-2,800	2,400-3,300

Pollutant	Range of Baseline Emissions By Subcategory (TPY)		Range of Total Baseline Emissions (TPY)
	FB	MH	
Pb	0.0056-0.0077	2.4-3.1	2.4-3.1
PCDD/PCDF TEQ[a]	0.00012-0.00016	0.00076-0.0010	0.0009-0.0012
PCDD/PCDF TMB[a]	0.0014-0.0020	0.011-0.015	0.013-0.017
PM	25-37	310-410	330-450
SO_2	43-57	660-1,020	700-1,100

[a] Baseline emissions are in pounds per year for PCDD/PCDF.

E. Beyond-the-Floor Analysis

Comment: Several commenters requested that EPA reconsider the beyond-the-floor Hg limit for MH units because baseline Hg emissions were overstated and costs for Hg control were understated. Many of the commenters contended that carbon injection is an unproven technology for SSI units, and is currently used at only one facility with FB units. The commenters added that the facility is undergoing significant issues with the technology.

Commenters also contended that Hg removal using carbon injection cannot be accomplished with existing PM controls, such as venturi scrubbers, and that FFs would be necessary.

The commenters added that the high moisture content in the form of liquid droplets from the incinerator will plug FFs, and additional equipment may be necessary to keep the temperature above the dew point, such as an afterburner.

Response: We have revised the beyond-the-floor analysis to incorporate changes made to the baseline emissions, new facility specific data and inputs provided by commenters, and revised control options. We analyzed several beyond-the-floor controls for the final rule. First, we evaluated the use of an afterburner for control of CO at MH units. We then evaluated whether additional control of Hg should be required at MH units. We have reviewed the commenters concerns regarding Hg control technologies and agree that applying carbon injection to existing scrubbers has not been demonstrated to be effective at removing Hg. For combustion sources that are not SSI, such as boilers, carbon injection in combination with a FF has proven to be highly effective in removing Hg. However, for high moisture flue gas streams, such as emitted from SSI units, the use of FFs is problematic due to plugging/fouling. In order to use carbon injection with a FF with high moisture streams, a waste heat boiler, RTO, or afterburner is necessary to maintain a high enough temperature to keep the stream above the dew point prior to sending the stream to the FF.

Therefore, we next evaluated the combination of using an afterburner, carbon injection, and FF for additional control of Hg at MH units. Additional equipment may also be necessary to reduce the temperature of the flue gas to prevent damage to the fabric filter bags. Sufficient information was not collected to estimate this cost. Table 10 of this preamble summarizes the cost for existing SSI units to apply different controls that were analyzed.

Table 10. Costs Expected for Existing SSI Units to Apply MACT Controls Analyzed(2008$)

Control Analyzed	Total Capital Costs (million $)	Total Annualized Costs (million ($/Yr)[a]
1 - MACT Floor	55	18
2 - MACT Floor + Afterburner for MH units	155	46
3 - MACT Floor+ Afterburner and Activated carbon injection and FF for MH units	490	138

[a] Calculated using a seven percent discount factor.

Table 11 of this preamble summarizes the emission reductions of each pollutant for various controls analyzed.

Table 11. Summary of Emission Reductions for Existing Units to Apply the MACT Controls Analyzed

Pollutant	Emission Reductions for MACT Controls Analyzed (TPY)		
	MACT Floor	MACT Floor + Afterburner for MH Units	MACT Floor + Afterburner + ACI and FF for MH Units
Cd	0.5-0.6	0.5-0.6	0.87-1.1
CO	0	6,900-9,300	6,900-9,300
HCl	19-30	19-30	19-30
Hg	0.0022-0.0025	0.0022-0.0025	0.67-0.89
NO_x	6.8-16	6.8-16	6.8-16
Pb	1.2-1.5	1.2-1.5	2.3-2.9
PCDD/PCDF TEQ	0	0	0.0000003-0.0000004
PCDD/PCDF TMB	0	0	0.000005-0.000007
PM	58-70	58-70	300-400
SO_2	430-700	430-700	430-700

The results provided in Tables 10 and 11 of this preamble were calculated using data gathered for each source (e.g., emissions, vent gas flow rates, controls currently used), as well as default values for emissions, sludge capacity, and vent gas flow rate for sources where data were unavailable. We estimate that requiring the use of an afterburner for MH units not already having an afterburner could require as much as 1,010 million cubic feet of natural gas a year to be burned, resulting in NO_x and CO emissions of 51 and 43 TPY, respectively. We estimate that applying activated carbon injection with a FF and an afterburner or RTO to all MH units to control Hg and PCDD/PCDF would result in total annualized costs of $138 million dollars (using a discount rate of seven percent) and would achieve Hg reductions of 0.67-0.89 TPY. The incremental cost-effectiveness of adding afterburners/RTO, activated carbon injection, and FFs to all MH units is estimated to be $80,000 to $100,000 per pound of Hg removed. Costs would increase if equipment necessary to cool the flue gas is also necessary. Therefore, given these factors, we are not finalizing any beyond-the-floor requirements for SSI units.

We also analyzed going beyond-the-floor to require packed bed scrubbers for additional HCl and SO_2 reduction, a wet ESP for additional PM, Cd and Pb reduction, and SNCR for additional NO_x reduction. We determined that it was not appropriate to go beyond-the-floor to achieve greater reduction of HCl, SO_2, PM, Cd, Pb, and NO_x considering the cost and secondary impacts incurred. Our beyond-the-floor analyses for the final standards are documented in the memorandum "Revised Analysis of Beyond the Maximum Achievable Control Technology (MACT) Floor Controls for Existing SSI Units" (EPA-HQ-OAR-2009-0559).

F. Cost and Economic Impacts

Comment: Commenters contended that EPA had underestimated the cost of the proposed rule for the beyond-the-floor option of Hg control as well as for the MACT floor for other pollutants because it only has information for less than 12 percent of the SSI units. The commenters added that EPA used information from these limited sources and applied it to remaining sources for which they did not have. The commenters contended that this results inaccurate determinations of which units could meet the proposed emission limits and which could not. The commenters contended that EPA overestimated the number of sources that could meet the proposed standards resulting in a significant underestimation of controls.

Some commenters also contended that EPAs choices of controls to cost for compliance with the proposed standards were inappropriate for SSI units. Many commenters stated that the high moisture content of flue gas streams in some applications may mean that FFs would not be an appropriate control for PM, Cd, or Pb.

Response: EPA is not prescribing a specific control technology or method. A source is required to meet the final emissions limits in these standards, and has the flexibility to use the control method or technology that is best suited for their individual facility. EPA's costs are estimated based on technologies we believe may be appropriate for the sources to meet the emissions limits.

At proposal, and for the final standards, we estimated costs and emissions reductions based on the best available information to us. We acknowledge that the inventory database did not have complete information for all 204 SSI units. Consequently, we developed defaults for flue gas flow rate, hours of operation, sludge capacity, and other inputs for the proposed rule. We have updated our analyses using data provided by the commenters as summarized in section IV. Summary of Significant Changes Following Proposal and the memorandum titled, "Post-Proposal SSI Database Revisions and Data Gap Filling Methodology" in the docket (EPA-HQ-OAR-2009-0559). However, for a number of inputs, we are still assigning default values where data were not available for each SSI. For the final rule, we have correlated some of the defaults to populations served by the facilities in order to better estimate costs and emission reductions more specifically to each facility. Sources will have the best idea of the costs of controls for their site specific conditions. For some sources, the costs and emission reductions estimated by EPA may be higher than what the source estimates, and for others they will be less. EPA's estimates are estimates based on the best information available to us. We also note that the MACT floor costs and emission reductions, and determination of the number of sources estimated to require control, estimated for the final rule are also based on the revised MACT floor limits.

For the final standards we have also revised the types of controls costed to meet the MACT floor limits. For SSI that we estimate will need further control of PM, Cd, or Pb to meet the MACT floor, we have costed out wet ESP as a more appropriate PM control for high moisture streams. We have also costed out SNCR for SSI that we estimate will need further control of NO_x to meet the MACT floor limits. As at proposal, we have costed out packed scrubbers for SSI that we estimate will need further control of HCl or SO_2.

At the MACT floor level, we do not estimate that any SSI will need to add control for Hg, PCDD/PCDF, or CO. A detailed discussion of the costs and emissions reductions estimates for the final standards is provided in the memorandum "Revised Cost and Emission Reduction of the MACT Floor Level of Control" in the SSI docket (EPA-HQ-OAR-2009-0559).

Comment: Commenters contended that EPA had incorrectly calculated the costs of the landfilling alternative because it used dry tons of sewage sludge instead of wet tons. The commenters added that wet tons is the appropriate basis of the sludge because even after the dewatering process, the sludge contains 70 to 80 percent moisture. Many of the commenters provided estimates for landfilling sludge from their specific unit. The commenters added that because of the error, EPA has significantly underestimated the impacts from transporting sludge by truck. Other commenters added that EPA had not evaluated the negative social impact of hauling sludge to a landfill. Some commenters added that EPA did not consider the additional costs for specific state landfilling regulations.

Several commenters contended that EPA incorrectly estimated the on-site sludge storage requirements because calculations were not done on a wet basis. Commenters added that the cost of the storage units would be significant and would need to include odor control as well as a settling basin.

Other commenters expressed concern regarding the availability of landfills to POTW needing disposal sites. The commenters contended there was insufficient landfill capacity to handle the influx of sewage sludge.

Response: We have revised our costs and impacts of the landfill alternative based on comments received on the proposal and corrections made to the analysis. Table 14 of this preamble summarizes the revised costs and impacts of this alternative if small entities choose to landfill rather than incinerate sewage sludge. A detailed discussion of the landfilling alternative analysis is provided in the memorandum “Revised Cost and Emission Reduction of the MACT Floor Level of Control” in the SSI docket (EPA-HQ-OAR-2009-0559).

Based on the revised impacts, it is unlikely that many sources will find landfilling an appropriate alternative.

The selection of a management option for sewage sludge is often a local decision that is based on environmental protection concerns, community needs, geographic constraints, and economic conditions. Given a full evaluation of these factors, for some sources, landfilling or land treatment may be a better management option than incineration.

G. Startup, Shutdown, and Malfunction

Comment: Numerous commenters disagreed with EPA's proposed language requiring facilities to meet the proposed SSI standards "at all times" because it would be difficult to comply with certain proposed emission limits during startup and shutdown. Many of these commenters were specifically concerned about not being able to meet the proposed CO concentration limit upon startup of a SSI because when a heat up burner system is fired into a cold vessel, the flame tip is quenched before the combustion is completed creating a small flow of CO. One commenter contended that EPA is proposing a new source CO standard without any evidence that it can be achieved during startup, shutdown, or malfunction. This commenter provided an example of CO data from one hazardous waste combustor that averaged 2.2 ppmv during normal operations but averaged 48.6 ppmv during startup, 40.5 ppmv during shutdown, and 815.5 during malfunctions. The commenters stated that absolute pollutant levels tend to increase during startup and shutdown due to incomplete combustion that is unavoidable at lower temperatures, and noted that the influence of unstable combustion may be more pronounced during shutdowns as the incinerator combusts the remaining sewage sludge for 30 minutes or more. The commenters recommended that EPA account for situations where higher emissions occur during the time it takes to bring control equipment from startup to steady-state operations.

Response: At this time, we are not promulgating a separate emission standard for the source category that applies during periods of startup and shutdown. We do not have data that would allow us to set a separate standard during periods of startup and shutdown. We requested information in the NPRM. However, no data were provided. Based on the information available at this time, we believe that SSI units will be able to meet the emission limits during periods of startup. Units we have information on use natural gas, landfill gas, or distillate oil to start the unit and add waste once the unit has reached combustion temperatures. Emissions from burning natural gas, landfill gas or distillate fuel oil are expected to generally be lower than from burning solid wastes. Emissions during periods of shutdown are also generally lower than emissions during normal operations because the materials in the incinerator would be almost fully combusted before shutdown occurs. Furthermore, the approach for establishing MACT floors for SSI units ranked individual SSI units based on actual performance for each pollutant and subcategory, with an appropriate accounting of emissions variability. Because we accounted for emissions variability, we believe we have adequately addressed any minor variability that may potentially occur during startup or shutdown.

Periods of startup, normal operations, and shutdown are all predictable and routine aspects of a source's operations. However, by contrast, EPA has determined that malfunctions should not be viewed as a distinct operating mode and, therefore, any emissions that occur at such times were not needed to be factored into development of CAA section 129 standards, which, once promulgated, apply at all times. We note that continuous compliance is demonstrated using continuous parametric monitoring, except for CO from new sources. CO CEMS are required for new source using a 24-hour block average.

Comment: Some commenters argued that EPA incorrectly claims that its authority to prescribe unique standards for SSM periods is constrained by Sierra Club v. EPA, 551 F.3d 1019 (D.C. Cir. 2008). These commenters stated that EPA has failed to account adequately for emissions that occur during SSM periods. One commenter contended that the Sierra Club decision interpreted CAA section 112, not CAA section 129 (which incorporates, by reference, CAA section 111), and pointed out that this interpretation is not merely a technical distinction. The commenter pointed out that since 1977, EPA has exempted emissions during SSM events from compliance with NSPS under CAA section 111 (referenced 40 CFR §60.8(c)). The commenter argued that Congress enacted the continuous basis language in section 302(k) knowing that EPA's emissions standards under section 111 exempted SSM periods, and pointed out that there is nothing in the legislative history of the 1977 amendments to the CAA that suggests congress intended to overturn that practice.

Response: As explained above, EPA believes the reasoning in the D.C. Circuit's decision in Sierra Club v. EPA applies equally to section 129. Additionally, EPA explains above the reasons it is not establishing different emissions standards for periods of startup, shutdown, and malfunction.

H. Compliance Requirements

Comment: Several commenters indicated that the proposed operating parameter ranges for minimum pressure drop across a wet scrubber, minimum scrubber liquid flow rate, minimum scrubber liquid pH, and minimum combustion temperature (or minimum afterburner temperature) would not be achievable. They explained that these ranges are too narrow and that they will be inconsistent with the operating standards already required by 40 CFR 60 subpart O, 40 CFR 503, and state permits. Two commenters agreed with the proposed operating parameter ranges.

Response: The EPA reviewed the information provided by the commenters and determined that proposed procedure for establishing the operating ranges (i.e., calculated as the average of three test runs and as 90 percent of the minimum value recorded during the applicable performance tests) may be too restrictive on control device operations in terms of energy or other operating needs. We determined that the operating limits should be more appropriately based on values recorded during the performance test runs. The final rule requires that operating limits be established on a site-specific basis as the minimum (or maximum, as appropriate) operating parameter value measured during the performance test. This approach has been incorporated into the final rule for all operating parameters and will result in achievable operating ranges that will ensure that the control devices used for compliance will be operated to achieve continuous compliance with the emissions limits.

Comment: Many commenters argued that the proposed operating range for sludge feed rate would not be achievable, that it results in the EPA changing the current state-permitted maximum sludge feed rate, and that it could force SSI units to conduct performance tests at maximum rated capacity. They explained that the proposed approach fails to take into account the normal feed condition and rate variation that occur on a daily and seasonal basis. A few commenters suggested that charging a SSI at 75 percent to 90 percent of its rated capacity results in a steadier state of control and more efficient combustion of the sludge.

Many commenters indicated that the proposed operating range for sludge moisture content would not be achievable and that EPA does not need sludge moisture content to determine whether SSI units are in compliance with their emission limits. They explained that sludge moisture is very sensitive to the type of dewatering equipment used, seasonal changes in the sewage or sludge received by a SSI, temperature changes, the biological systems that treat the sewage, and to operational changes, and that these changes cannot always be anticipated and are not always immediately correctable.

Response: The EPA reviewed its decision at proposal to require that SSI units maintain the sludge feed rate and sludge moisture content of the incinerated sludge within specified ranges. We determined that the operating limit for temperature of the combustion chamber (or afterburner temperature) is sufficient to ensure good combustion practice, and that moisture content is not needed to establish that SSI units are in compliance with their emission limits. If a SSI has a higher moisture content, the SSI will need to use more fuel to comply with their operating limit for temperature of the combustion chamber. We are no longer requiring that SSI units maintain sludge moisture content within specified ranges. We are also no longer requiring SSI units to maintain sludge feed rates within specified ranges due to the seasonal variability at wastewater treatment plants. Sludge feed rate information is necessary during performance test runs to establish that SSI units are in compliance with the new requirement that they conduct performance tests at 85 percent capacity. We are retaining the requirement to keep daily records of sludge feed rates and moisture contents, as SSI units should already be keeping records of these parameters, and this information will be useful in establishing representative operating limitations for a SSI unit.

EPA added a requirement that performance tests be conducted at 85 percent of the permitted maximum capacity. This level has been selected based on the performance test operating information provided by the commenters and previous EPA standards.

Comment: A few commenters indicated that the 4-hour rolling averaging period selected in the proposed rule for determining compliance with the operating parameters and CO limit was more burdensome and difficult to achieve. They explained that the recordkeeping and compliance burden is less if the averaging period for CEMS and CPMS are both based on a 24-hour block average. They also explained that the proposed CO limit on a 4-hour rolling average basis would be unachievable with MH incinerators and difficult to achieve with FB incinerators.

Response: The EPA has determined that a 24-hour block averaging period for compliance with the CO CEMS requirement for new sources will provide a sufficient indication of compliance and will allow more flexibility for facilities. Additionally, the proposed CO emission guidelines limit of 7.4 ppm for existing fluidized bed SSI units has changed in the final guidelines to 27 ppm, and this change is discussed in Section IV of this preamble. We have also revised the averaging periods for all other operating parameters, except scrubber liquid pH, to be on a 12-hour block average instead of a 4-hour rolling average basis in order to relate the averaging time for operating limits to the duration of the performance tests (e.g., a three run test of 4 hour test runs would equal a 12-hour averaging time). For scrubber liquid pH, we chose 3-hour averages to be consistent with the performance test duration for acid gas scrubbers.

In the final rule, we are also not incorporating the alternative THC compliance requirement. Section 129 requires that limits be set for each of the 9 regulated pollutants. Surrogates, such as THC, cannot be used in place of the regulated pollutants.

Comment: Many commenters disagreed with the requirement in the proposed rule for annual testing, and argued that annual testing of each SSI is not needed to demonstrate compliance, too costly, and inconsistent with current Title V permits. They also argued that Method 22 compliance testing for fugitive ash emissions is not feasible or difficult to conduct due to space constraints, and that many FB incinerators utilize wet ash removal systems that do not require annual testing. They explained that the cost for emissions testing may be significantly higher than the proposed cost of $61,000 per unit. They further explained that Title V permits require facilities to test each of its SSI units once per 5 years. They pointed out that current management practices and strict health-based sludge content limits under the CWA section 405 and the CAA 40 CFR 503 regulations will help ensure that SSI units are in compliance with their emission limits. One commenter pointed out that the proposed compliance schedule of every 10 to 12 months will essentially shorten the testing year by one month each year.

Response: The proposed standards included provisions for less frequent testing. In the final standards, EPA has revised these provisions, making it easier for facilities to qualify for less frequent testing, allowing less frequent testing for more pollutants, and ensuring that facilities that do less frequent testing are well below their emission limits. In the final standards, owners or operators are required to establish that emissions of a given pollutant are under a specified threshold for two consecutive years, rather than 3 years as proposed, to qualify for less frequent testing for that pollutant. We have also extended the option to do less frequent testing to PCDD/PCDF and fugitive ash emissions testing. The threshold is 75 percent of the emission limit for each of the nine regulated pollutants. In order to allow a decrease in testing frequency, EPA must have assurance that SSI units can meet a more stringent threshold than the limits. This is particularly necessary because of the variability in sludge that may occur at wastewater treatment facilities. Additionally, in the final standards we are also providing assurance that the SSI unit is being operated properly and emission limits are being met continuously by requiring stringent parametric monitoring requirements. Specifically, exceedances of the minimum or maximum values established during the performance tests are considered deviations. For fugitive emissions from ash handling, owners or operators must demonstrate that visible emissions occur no more than 2 percent of the time during each Method 22 1-hour observation period. This allowance for fugitive ash emissions has been included in the final standards with a new requirement that all facilities must submit a monitoring plan at least 60 days before their initial compliance test to establish that their ash handling system will continuously meet the visible emissions limit.

Additionally, to allow facilities more flexibility regarding their test dates, to ensure that facilities are not forced to test at intervals less than 12 months, and to ensure that facilities are testing once per year, we have revised the testing schedule provisions. In the final standards, performance tests (except for pollutants that qualify for less frequent testing) must be conducted on a calendar year basis (no less than nine calendar months and no more than 15 calendar months following the previous performance test); and facilities must complete five performance tests per pollutant in each 5-year calendar period.

Comment: Many commenters requested that the definition of "process change" be revised to exclude the provision that a process change include an increase in the allowable wastewater received from an industrial source. They pointed out that any such increase would trigger a performance test, as required by the proposed standards, and that such increases did not warrant a re-test. They explained that industrial discharges often constitute only a small percentage of total influent flow (e.g., 3.5 percent, four to eight percent), that such discharges are sometimes from sources that do not discharge the pollutants regulated by the proposed NSPS and guidelines (e.g., food processing facilities), that some merchant SSI facilities regularly receive variable amounts of sludge from other regional wastewater treatment plants and POTW, and that it is difficult for impossible to anticipate some industrial load changes ahead of time. Several commenters argued that this proposed requirement would be redundant to the National Pretreatment Regulations at 40 CFR 403, which are incorporated into their SSI's National Pollutant Discharge Elimination System (NPDES) permit, which require them to establish local limits on industrial discharges to prevent interference with sludge processes, use, and disposal. The commenters anticipate that they would establish similar limits to prevent noncompliance with the final emission limits. A few commenters suggested that the proposed provision for industrial discharges is vague and open to interpretation.

Response: The EPA reviewed the definition of "process change" and agrees with the commenters that there are some situations where an increase in the allowable wastewater received from an industrial source should not trigger a performance test. We have revised the definition of "process change" to more specifically and clearly identify the type of process change that will trigger a performance test. The revised definition identifies a "process change" as pollutant-specific and as including only situations where the SSI has undergone a significant permit revision. This revision will ensure that facilities retest whenever they have a significant change in the process that could trigger higher emissions of a given pollutant.

Comment: Several commenters requested EPA clarify what equipment are included as part of the SSI unit. The commenters stated that the proposed rules do not specify the equipment and without clarification, a SSI unit could be interpreted inconsistently or over-broadly. Commenters requested clarification regarding whether the "modification" (which refers to an "SSI unit") applies to the multiple hearth or fluid bed "reactor" or whether it includes the entire system including all air emission controls and auxiliary equipment.

Response: We agree that the definition of the SSI unit in the proposed rule was unclear as to what equipment constitutes the SSI unit. We have revised the definition of SSI unit in the final rule. A SSI unit means an incineration unit combusting sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter. Sewage sludge incineration unit designs include fluidized bed and multiple hearth. We have clarified that a SSI unit also includes, but is not limited to, the sewage sludge feed system, auxiliary fuel feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The SSI unit includes all ash handling systems connected to the bottom ash handling system. The combustion unit bottom ash system ends at the truck loading station or similar equipment that transfers the ash to final disposal. The SSI unit does not include air pollution control equipment or the stack.

VI. Impacts of the Final Action

As discussed in sections IV and V of this preamble, we have made several revisions to the impacts analyses for the final rules. We have incorporated revisions to the variability calculation. These revisions include: incorporating weighted UPL's for existing FB units, selecting log-normal results when it is not clear that data are normally distributed, and revising CO limits based on an analysis of the span of the test. The result of these changes increased UPL values for most pollutants.

Additionally, we have incorporated corrections to the inventory and calculation inputs provided by the commenters where applicable. We have also revised the calculation of baseline emissions by revising the defaults assigned to SSI units where information was not available. These changes resulted in decreasing the baseline emissions for each of the pollutants. The combination of increase UPL and decreased baseline emissions resulted in less SSI units estimated to need additional control to meet the MACT floor limits.

For the final rules, we also selected the MACT floor level of control for both subcategories instead of selecting a beyond-the-floor requirement.

For the final rules we have also revised the types of controls costed to meet the MACT floor limits. For SSI that we estimate will need further control of PM, Cd, or Pb to meet the MACT floor, we have costed out wet ESP as a more appropriate PM control for high moisture streams. We have also costed out SNCR for SSI that we estimate will need further control of NO_x to meet the MACT floor limits. As at proposal, we have costed out packed-bed scrubbers for SSI that we estimate will need further control of HCl or SO_2.

A. Impacts of the Final Action for Existing Units

1. What are the primary air impacts?

We have estimated the potential emission reductions that may be realized through implementation of the final emission limits. As discussed in section V of this preamble, we have revised the estimation of baseline emissions and emission reductions to present a range to show the variability in the emission calculations between estimated actual and estimated potential sludge feed rates. Table 12 of this preamble summarizes the emission reductions for MACT compliance for each pollutant. The analysis is documented in the memorandum "Revised Analysis of Beyond the Maximum Achievable Control Technology (MACT) Floor Controls for Existing SSI Units" in the SSI docket (EPA-HQ-OAR-2009-0559).

Table 12. Projected Emission Reductions for Existing SSI Units Complying With the Proposed Emission Limits

Pollutant	Range of Reductions Achieved Through Meeting MACT By Subcategory (TPY)		Range of Total Reductions (TPY)
	FB	MH	
Cd	0	0.5-0.6	0.5-0.6
CO	0	0	0
HCl	0.73-0.94	18-29	19-30
Hg	0.0005-0.0006	0.0017-0.0019	0.0022-0.0025
NO_x	6.8-16	0	6.8-16
Pb	0	1.2-1.5	1.2-1.5
PCDD/PCDF TEQ	0	0	0
PCDD/PCDF TMB	0	0	0
PM	0	58-70	58-70
SO_2	17-21	420-680	430-700

2. What are the water and solid waste impacts?

We anticipate affected sources will need to apply additional controls to meet the proposed emission limits. These controls may utilize water, such as wet scrubbers, which would need to be treated. We estimate an annual requirement of 234 million gallons per year of additional wastewater will be generated as a result of operating additional controls or increased sorbents.

The analysis is documented in the memorandum "Revised Secondary Impacts for the Sewage Sludge Incineration Source Category" in the SSI docket (EPA-HQ-OAR-2009-0559).

3. What are the energy impacts?

The energy impacts associated with meeting the proposed emission limits 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; sorbent injection controls would likewise require electricity to power pumps and motors. We anticipate that an additional 5,420 megawatt-hours per year will be required for the additional and improved control devices. The analysis is documented in the memorandum "Revised Secondary Impacts for the Sewage Sludge Incineration Source Category" in the SSI docket (EPA-HQ-OAR-2009-0559).

4. What are the secondary air impacts?

For SSI units adding controls to meet the final emission limits, we anticipate very minor secondary air impacts. The combustion of fuel needed to generate additional electricity will yield slight increases in emissions, including NO_x, CO, PM and SO_2 and an increase in CO_2 emissions. Since NO_x and SO_2 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.

5. What are the cost and economic impacts?

We have estimated compliance costs for all existing units to add the necessary controls, monitoring equipment, inspections, recordkeeping, and reporting requirements to comply with Option 1 (i.e., the selected SSI standards). Based on this analysis, we anticipate an overall total capital investment of $55 million with an associated total annualized cost of $18 million, in 2008 dollars (and using a discount rate of seven percent), as shown in Table 13 of this preamble. We anticipate that owner/operators will need to install one or more air pollution control devices for 43 of the 204 affected units to meet the final emission limits. The analysis is documented in the memorandum "Revised Analysis of Beyond the Maximum Achievable Control

Technology (MACT) Floor Controls for Existing SSI Units" in the SSI docket (EPA-HQ-OAR-2009-0559).

Table 13. Summary of Costs for Existing SSI If All Entities Comply With Proposed Emission Limits (Millions of 2008$)

Subcategory	Capital Cost ($million)	Annualized Cost ($million/yr)[a]
FB	10.1	3.1
MH	45.0	14.7
Total	55.0	17.8

[a] Calculated using a discount factor of seven percent.

Analysis of Alternative Sewage Sludge Disposal. At proposal, we evaluated landfilling as an alternative disposal method. We have revised our costs and impacts of this alternative based on comments received on the proposal and corrections made to the analysis. Table 14 of this preamble summarizes the revised costs and impacts of this alternative if small entities choose to landfill rather than incinerate sewage sludge. A detailed discussion of the landfilling alternative analysis is provided in the memorandum "Revised Cost and Emission Reduction of the MACT Floor Level of Control" in the SSI docket (EPA-HQ-OAR-2009-0559).

Based on the revised impacts, it is unlikely that many sources will find landfilling an appropriate alternative.

However, the selection of a management option for sewage sludge is often a local decision that is based on environmental protection concerns, community needs, geographic constraints, and economic conditions. Given a full evaluation of these factors, for some sources, landfilling or land treatment may be a better management option than incineration.

Table 14. Summary of Revised Costs for Small Entities that Landfill in Lieu of Incineration (Millions of 2008$)

Subcategory	Capital Cost ($million)	Annualized Cost ($million/yr)[a]
FB	278	38
MH	313	42.7
Total	591	80.7

[a] Calculated using a discount factor of seven percent.

B. Impacts of the Final Action for New Units

As discussed in the proposal, based on trends of SSI units constructed and replaced, technical advantages of FB incinerators, and information provided by the industry on likely units constructed, we believe that new SSI units constructed are likely to be FB incinerators.

1. What are the primary air impacts?

We have estimated the potential emission reductions that may be realized through implementation of the final emission limits on two new FB incinerators potentially being constructed in the next 5 years. Table 15 of this preamble summarizes these emission reductions for MACT compliance for each pollutant from two new FB incinerators. The analysis is documented in the memorandum "Revised Estimation of Impacts for New Units Constructed Within 5 Years After Promulgation of the SSI NSPS" in the SSI docket (EPA-HQ-OAR-2009-0559).

Table 15. Emission Reductions for Two New SSI Units (i.e., Fluidized Bed Incinerators) Constructed

Pollutant	**Emission Reduction (TPY)**
Cd	0
CDD/CDF, TEQ	0.0000000033
CDD/CDF, TMB	0.000000051
CO	0.26
HCl	0
Hg	0.0026
NO_x	14
Pb	0.00053
PM	0
$PM_{2.5}$	0
SO_2	0

2. What are the water and solid waste impacts?

We anticipate affected sources would need to apply controls in addition to what they would have planned to include in the absence of this rule to meet the final emission limits. These controls may utilize water, such as wet scrubbers, which would need to be treated. We estimate an annual requirement of 8.6 million gallons per year of additional wastewater will be generated as a result of operating additional controls or increased sorbents for the two new units expected to come on-line in the next 5 years. The analysis is documented in the memorandum "Revised Analysis of Secondary Impacts for the Sewage Sludge Incineration Source Category" in the SSI docket (EPA-HQ-OAR-2009-0559).

Likewise, the application of PM controls results in particulate collected that would require disposal. Furthermore, activated carbon injection may be used by some sources, which would result in solid waste needing disposal. The annual amounts of solid waste that will require disposal are anticipated to be approximately 34 TPY from activated carbon injection for the two units.

3. What are the energy impacts?

The energy impacts associated with meeting the final 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. Sorbent injection controls would likewise require electricity to power pumps and motors. By our estimate, we anticipate that an additional 300 megawatt-hours per year will be required for the additional and improved control devices for the two new units modeled to come on-line in the next 5 years. The analysis is documented in the memorandum "Revised Analysis of Secondary Impacts for the Sewage Sludge Incineration Source Category Analysis of New Units for the Sewage Sludge Incineration Source Category" in the SSI docket (EPA-HQ-OAR-2009-0559).

4. What are the secondary air impacts?

For SSI units adding controls to meet the final emission limits, we anticipate very minor secondary air impacts. The analysis is documented in the memorandum "Revised Analysis of Secondary Impacts for the Sewage Sludge Incineration Source Category."

5. What are the cost impacts?

We have estimated compliance costs for new SSI units coming on-line in the next 5 years. This analysis is based on a model plant, the assumption that two new units will come on-line and will add the necessary controls, monitoring equipment, inspections, recordkeeping, and reporting requirements to comply with the final SSI standards. Based on this analysis, we anticipate an overall total capital investment of $8 million (2008$) with an associated total annualized cost of $2 million (2008$ and using a seven percent discount rate). This analysis assumes that new SSI units constructed are only FB incinerators.

VIII. Statutory and Executive Order Reviews

A. Executive Order 12866 and 13563: Regulatory Planning and Review

Under Executive Order (EO) 12866 (58 FR 51735, October 4, 1993) and EO 13563 (76 FR 3821, January 21, 2011), this action is a "significant regulatory action" because it was likely to have an annual effect on the economy of $100 million or more based on the proposed standards. However, the cost of the final standards are no longer likely to have an annual effect on the economy of $100 million or more. Despite the change in costs, EPA submitted this action to the Office of Management and Budget (OMB) for review under EOs 12866 and 13563 and any changes made in response to OMB recommendations have been documented in the docket for this action. Although EPA prepared a RIA of the potential costs and benefits associated with the proposed standards we are simply updating the RIA rather than revising it.

A RIA was prepared in September of 2010 for the proposed Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Sewage Sludge Incineration Units. However, based on the lower costs associated with the selected alternative in this final action we are providing an update of the RIA rather than completely revising the RIA. Within this update, we are providing updated costs and benefits of the controls analyzed and have provided a comparison of the selected controls with the alternatives.[13] While the characteristics of the controls analyzed have changed, we have also provided a comparison of the costs and benefits of the proposed controls analyzed with the selected alternative in this final action. A summary of the differences are presented below.

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[13] **In the RIA, the controls analyzed are referred to as Option 1 (MACT floor), Option 2 (MACT floor, plus afterburner for MH units), and Option 3 (MACT floor, plus afterburner and activated carbon injection and fabric filter for MH units).**

- Costs for the selected controls analyzed for promulgation are 80% lower and benefits are 81% lower than they were for the selected controls analyzed for proposal.

- Because the regulated sewage sludge incineration is a government provided service that does not involve a market, no price, quantity, or employment impacts were estimated for the proposal RIA. The economic impact analysis focused on the comparison of control cost to total governmental revenue. Because the costs are 80% lower for the selected controls analyzed for promulgation compared to the proposed controls analyzed, the control costs are expected to be a smaller portion of government revenues for the selected controls for promulgation than they were for the proposed controls.

- Because of insufficient information, employment changes due to the requirements for operating and maintaining control equipment were not estimated. Also, we did not have the information needed to estimate any labor changes related to governmental decisions to switch from incineration to landfilling.

- Monetized benefits are greater than costs for the selected option by \$3 million to \$34 million at three percent and \$1 million to \$29 million at seven percent. The benefits from reducing exposure to HAP, direct exposure to NO_x and SO_2, ecosystem effects, and visibility impairment have not been monetized, including reducing 19 tons of HCl, 4 pounds of Hg, 2,400 pounds of Pb, and 1,000 pounds of Cd.

Net Benefits for Final Sewage Sludge Incinerators NSPS and EG (millions of \$2008)

MACT Floor (Selected)	3% Discount Rate	7% Discount Rate

Monetized Benefits	$21	to	$52	$19	to	$47
Costs	$18	to	$18	$18	to	$18
Net Benefits	$3	to	$34	$1	to	$29

Monetized Benefits for Final Sewage Sludge Incinerators NSPS and EG

Total Monetized Benefits for Final Controls Analyzed (millions of 2008$)	**3% Discount Rate**			**7% Discount Rate**		
MACT Floor (Selected)	$21	to	$52	$19	to	$47
MACT Floor + Afterburner for MH units	$20	to	$50	$18	to	$45
MACT Floor + Afterburner and Activated carbon injection and fabric filter for MH units	$55	to	$140	$50	to	$130

Monetized Benefits Changes for MACT Floor (millions of 2008$)	**3% discount rate**			**7% discount rate**		
Proposal (MACT Floor, all comply)	$110	to	$270	$100	to	$250
Final (MACT Floor)	$21	to	$52	$19	to	$47
% Change	-81%			-81%		

Monetized Benefits Changes for Selected Controls Analyzed (millions of 2008$)	**3% discount rate**			**7% discount rate**		
Proposal (BTF Option 2, all comply)	$110	to	$270	$100	to	$250
Final (MACT Floor)	$21	to	$52	$19	to	$47

% Change	-81%	-81%

Costs for Final Sewage Sludge Incinerators NSPS and EG

Total Costs for Final Controls Analyzed (millions of 2008$)	**3% or 7% Discount Rate**
MACT Floor (Selected)	$18
MACT Floor + Afterburner for MH units	$46
MACT Floor + Afterburner and activated carbon injection + fabric filter for MH units	$138

Costs Changes for MACT Floor (millions of 2008$)	**3% or 7% Discount Rate**
Proposal (MACT Floor, all comply)	$63
Final (MACT Floor)	$18
% Change	-71%

Cost Changes for Selected Controls Analyzed (millions of 2008$)	**3% or 7% Discount Rate**
Proposal (BTF Option 2, all comply)	$92
Final (MACT Floor)	$18
% Change	-80%

B. Paperwork Reduction Act

The information collection requirements in this rule have been submitted for approval to the OMB under the

Paperwork Reduction Act, 44 U.S.C. 3501 et seq. The information collection requirements are not enforceable until OMB approves them. The ICR documents prepared by EPA have been assigned EPA ICR number 2369.02 for subpart LLLL, and 2403.02 for subpart MMMM.

The recordkeeping and reporting requirements in this rule are based on the information collection requirements in CAA section 129 and EPA's NSPS General Provisions (40 CFR part 60, subpart A). The recordkeeping and reporting requirements in the General Provisions are mandatory pursuant to CAA section 114 (42 U.S.C. 7414). All information other than emissions data submitted to EPA pursuant to the information collection requirements for which a claim of confidentiality is made is safeguarded according to CAA section 114(c) and EPA's implementing regulations at 40 CFR part 2, subpart B.

The requirements in this action result in industry recordkeeping and reporting burden associated with review of the amendments for all SSI and initial and annual compliance with the emission limits using EPA approved emissions test methods. The burden also includes continuous parameter monitoring and annual inspections of air pollution control devices that may be used to meet the emission limits. Operators are required to obtain qualification and complete annual training. New units are also required to submit a report prior to construction, including a siting analysis.

When a malfunction occurs, sources must report them according to the applicable reporting requirements of Subparts LLLL and MMMM. An affirmative defense to civil penalties for exceedances of emission limits that are caused by malfunctions is available to a source if it can demonstrate that certain criteria and requirements are satisfied. 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 C.F.R. 60.2 (sudden, infrequent, not reasonably preventable and not caused by poor maintenance and or careless operation) and where the source took necessary actions to minimize emissions. In addition, the source must meet certain notification and reporting requirements. For example, the source must prepare a written root cause analysis and submit a written report to the Administrator documenting that it has met the conditions and requirements for assertion of the affirmative defense.

To provide the public with an estimate of the relative magnitude of the burden associated with an assertion of the affirmative defense position adopted by a source, EPA provides an administrative adjustment to this ICR that shows what the notification, recordkeeping and reporting requirements associated with the assertion of the affirmative defense might entail. EPA's estimate for the required notification, reports and records, including the root cause analysis, totals $3,141 and is based on the time and effort required of a source to review relevant data, interview plant employees, and document the events surrounding a malfunction that has caused an exceedance of an emission limit. The estimate also includes time to produce and retain the record and reports for submission to EPA. EPA provides this illustrative estimate of this burden because these costs are only incurred if there has been a violation and a source chooses to take advantage of the affirmative defense.

The annual average burden associated with the emission guidelines over the first 3 years following promulgation is estimated to be $9.6 million. This includes 39,350 hours at a total annual labor cost of $2.2 million and total annualized capital/startup and operation and maintenance costs of $7.4 million per year, associated with the monitoring requirements, storage of data and reports and photocopying and postage over the 3-year period of the ICR. The annual inspection costs are included under the recordkeeping and reporting labor costs

The annual average burden associated with the NSPS over the first 3 years following promulgation is estimated to involve 701 hours at a total annual labor cost of $40,000. The total annualized capital/startup costs are estimated at $232,000 per year. This gives a cumulative annual burden of $272,000 per year for the NSPS. Burden is defined at 5 CFR 1320.3(b).

An Agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it currently displays a valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9. When this ICR is approved by OMB, the Agency will publish a technical amendment to 40 CFR part 9 in the Federal Register to display the OMB control number for the approved information collection requirements contained in this final.

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 Administrative Procedures Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of this action on small entities, a small entity is defined as follows: 1) a small business as defined by the SBA 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.

In the proposal, we certified that there would not be a significant economic impact on a substantial number of small entities. The economic analysis conducted at proposal identified 18 small entities none of which had cost-revenue-ratios greater than one percent. The cost analysis for the final standards showed a significant decrease (35 to 98 percent) in all costs for 11 of the 18 small entities. The cost-revenue-ratios were again estimated using the costs for the final rule and the same revenue estimates used in the proposal screening analysis. The revenue estimates were obtained using census average per capita revenue numbers ($1,696 for entities with populations between 10 thousand and 25 thousand and $1,677 for entities with populations between 25 thousand and 50 thousand) The resulting cost-revenue-ratios ranged between 0.04% and 0.5. Thus all cost-revenue-ratios were well below 1%. Therefore, we consider the final rule to have no significant impact on a substantial number of small entities.

After considering the economic impacts of this final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. None of the 18 small entities has cost-revenue-ratios greater than one percent. Thus, this is not considered to be a significant impact.

Although the final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this rule on small entities by allowing optional CEMS instead of requiring them, allowing information from tests conducted in recent years to show compliance rather than require all new testing and allowing reduced testing with continued compliance.

D. Unfunded Mandates Reform Act

This rule does not contain a federal mandate that may result in expenditures of $100 million or more for state, local, and tribal governments, in the aggregate, or the private sector in any 1 year. Thus, this final rule is not subject to the requirements of sections 202 or 205 of UMRA.

At proposal, EPA prepared under section 202 of the UMRA a written statement that is summarized in section VIII.D of the proposal preamble (75 FR 63260, October 14, 2010). A copy of the UMRA written statement can be found in the docket.

At proposal, the estimated costs were higher than the estimated costs of the final rule. At proposal, EPA prepared an RIA, including EPA's assessment of costs and benefits, which is detailed in the "Regulatory Impact Analysis: Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Sewage Sludge Incineration Units" in the docket. Based on estimated compliance costs associated with the final rule and the predicted change in prices and production in the affected industries, the estimated social costs of the final rule are $55 million ($).

At proposal, EPA consulted with governmental entities expected to be affected by the proposed rule, consistent with the intergovernmental consultation provisions of section 204 of the UMRA. Those consultations are discussed in section VIII.D of the proposal preamble (75 FR 63260).

This final rule 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. Because this final rule's requirements apply equally to SSI units owned and/or operated by governments or SSI units owned and/or operated by private entities, there would be no requirements that uniquely apply to such government or impose any disproportionate impacts on them.

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.

Under Executive Order 13132, EPA may not issue an action that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the federal government provides the funds necessary to pay the direct compliance costs incurred by state and local governments, or EPA consults with state and local officials early in the process of developing the proposed action.

EPA's proposed action estimated expenditures of greater than $100 million to state and local governments and therefore as specified by the Executive Order, EPA consulted with elected state and local government officials, or their representative national organizations, when developing regulations and policies that impose substantial compliance costs on state and local governments. Pursuant to Agency policy, EPA conducted a briefing for the "Big 10" intergovernmental organizations representing elected state and local government officials, as discussed in section VIII.D of the proposal preamble (75 FR 63260) to formally request their comments and input on the action. The Big 10 provided EPA with feedback on the proposed standards and EG for SSI units.

EPA has concluded that this final rule will not have federalism implications, as defined by Agency guidance for implementing the Executive Order, due to the final rule's direct compliance costs on state or local governments resulting in expenditures of less than $100 million.

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

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

During proposal EPA was not aware of any SSI owned or operated by an Indian tribe or tribal governments, thus, Executive Order 13175 did not appear to have implications. However as specified in Executive Order 13175, (65 FR 67249, November 9, 2000), EPA has attempted to outreach and discuss possible SSI implications with tribal contacts.

EPA presented information on the SSI proposal and specifically solicited additional comment on the proposed action from tribal contacts in the proposal period via the NTAA conference calls.

EPA has received coordinated comments from the NTAA; those comments can be reviewed in the public docket, document number EPA-HQ-OAR-2009-0559-0130.1. Commenters expressed that SSI units located in proximity to Indian country units, obtaining Title V permits, may trigger tribal consultation with regard to potential impact from the SSI unit. Commenters are dismayed, as they believe EPA failed to consult with Indian tribes regarding the standards and have failed to fully assess the potential impacts of SSI units on tribal communities. Lastly, commenters recommended that EPA provide a map overlay that accounts for both SSI units and tribal lands so tribes can acquire a better understanding on how they might be affected by such sites and these standards in general.

EPA participated on two NTAA conference calls to discuss the rule development process, first to provide general information on the development of the SSI standards and second providing more specific background information on the purpose of the rulemaking, number and locations of units, and unit types. EPA allowed time for clarifying questions and requested information if any NTAA members were aware of any type of incinerator burning sewage sludge in Indian Country. EPA will provide a map overlay for the SSI docket so that tribes can acquire a better understanding on how they might be affected by SSI sites and the standards in general.

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

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 final action is not subject to Executive Order 13045 because it is based solely on technology performance. We note however, that reductions in air emissions by these facilities will improve air quality, with expected positive impacts for children's health.

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

This action is not subject to Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not a significant regulatory action under Executive Orders 12866 and 13563.

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 EPA to use voluntary consensus standards (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 EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable VCS.

EPA conducted searches for the "Standards of Performance for New Stationary Sources and Emission

Guidelines for Existing Sources: Sewage Sludge Incineration Units" through the Enhanced National Standards Service Network Database managed by the ANSI. We also contacted VCS organizations, accessed, and searched their data bases.

This rulemaking involves technical standards. EPA has decided to use ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," for its manual methods of measuring the oxygen or carbon dioxide content of the exhaust gas. These parts of ASME PTC 19.10-1981 are acceptable alternatives to EPA Methods 6, 7. This standard is available from the ASME, Three Park Avenue, New York, NY 10016-5990.

Another VCS, ASTM D6784-02 (Reapproved 2008), "Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method)" is an acceptable alternative to Method 29 and 30B. EPA has also decided to use EPA Methods 5, 6, 6C, 7, 7E, 9, 10, 10A, 10B, 22, 23, 26A, 29 and 30B. No VCS were found for EPA Method 9 and 22.

During the search, if the title or abstract (if provided) of the VCS described technical sampling and analytical procedures that are similar to EPA's reference method, EPA ordered a copy of the standard and reviewed it as a potential equivalent method. All potential standards were reviewed to determine the practicality of the VCS for this rule. This review requires significant method validation data that meet the requirements of EPA Method 301 for accepting alternative methods or scientific, engineering and policy equivalence to procedures in EPA reference methods. EPA may reconsider determinations of impracticality when additional information is available for particular VCS.

The search identified other VCS that were potentially applicable for this rule in lieu of EPA reference methods. After reviewing the available standards, EPA determined that candidate VCS (ASME B133.9-1994 (2001), ISO 9096:1992 (2003), ANSI/ASME PTC PTC¬38-1980 (1985), ASTM D3685/D3685M-98 (2005), CAN/CSA Z223.1-M1977, ANSI/ASME PTC 19.10-1981, ISO 10396:1993 (2007), ISO 12039:2001, ASTM D5835-95 (2007), ASTM D6522-00 (2005), CAN/CSA Z223.2-M86 (1999), ISO 7934:1998, ISO 11632:1998, ASTM D1608-98 (2003), ISO I1564:1998, CAN/CSA Z223.24-MI983, CAN/CSA Z223.21-MI978, ASTM D3162-94 (2005), EN 1948-3 (1996), EN 1911-1,2,3 (1998), ASTM D6735-01, EN 13211:2001, CAN/CSA

Z223.26-MI987) identified for measuring emissions of pollutants or their surrogates subject to emission standards in the rule would not be practical due to lack of equivalency, documentation, validation data, and other important technical and policy considerations.

Under 40 CFR 60.13(i) of the NSPS General Provisions, a source may apply to EPA for permission to use alternative test methods or alternative monitoring requirements in place of any required testing methods, performance specifications, or procedures in the final rule and any amendments.

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 environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice 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.

EPA has determined that this final 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 populations. Additionally, the Agency has reviewed this final rule to determine if there was existing disproportionately high and adverse human health or environmental effects on minority or low-income populations that could be mitigated by this rulemaking. An analysis of demographic data showed that the average of populations in close proximity to the sources, and thus most likely to be effected by the sources, were similar in demographic composition to national averages. The results of the demographic analysis are presented in "Review of Environmental Justice Impacts," June 2010, a copy of which is available in the SSI docket (EPA-HQ-OAR-2009-0559).

This final action establishes national emission standards for new and existing SSI units. The EPA estimates that there are approximately 204 such units covered by this rule. The final rule will reduce emissions of many of the listed HAP emitted from this source. This includes emissions of Cd, HCl, Pb, and Hg. Adverse health effects from these pollutants include cancer, irritation of the lungs, skin and mucus membranes, effects on the central nervous system and damage to the kidneys and acute health disorders. The rule will also result in substantial reductions of criteria pollutants such as CO, NO_x, PM and $PM_{2.5}$ and SO_2. Sulfur dioxide and NO_x are precursors for the formation of $PM_{2.5}$ and ozone. Reducing these emissions will reduce ozone and $PM_{2.5}$ formation and associated health effects, such as adult premature mortality, chronic and acute bronchitis, asthma and other respiratory and cardiovascular diseases. For additional information, please refer to the RIA contained in the docket for this rulemaking. In EPA's July 2010 "Interim Guidance on Considering Environmental Justice During the Development of an Action," EPA defines "environmental justice" as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

To help achieve EPA's goal for Environmental Justice (i.e., the fair treatment and meaningful involvement of all people), EPA places particular emphasis on the public health of and environmental conditions affecting minority, low-income, and indigenous populations. In recognizing that these populations frequently bear a disproportionate burden of environmental harms and risks, EPA works to protect them from adverse public health and environmental effects of its programs. EPA looks at the vulnerabilities of these populations because they have historically been exposed to a combination of physical, chemical, biological, social, and cultural factors that have imposed greater environmental burdens on them than those imposed on the general population.

To promote meaningful involvement, EPA has developed a communication and outreach strategy to ensure that interested communities have access to this final rule, are aware of its content and have an opportunity to comment during the comment period. During the comment period, EPA publicized the rulemaking via environmental newsletters, tribal newsletters, environmental justice listservs, and the Internet, including the OPEI Rulemaking Gateway website (http://yosemite.epa.gov/opei/RuleGate.nsf/). EPA will also provide general rulemaking fact sheets (e.g., why is this important for my community) for environmental justice community groups and conduct conference calls with interested communities. In addition, state and federal permitting requirements will provide state and local governments and members of affected communities the opportunity to provide comments on the permit conditions associated with permitting the sources affected by this rulemaking.

J. Congressional Review Act

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

List of Subjects in 40 CFR Part 60

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

____
Dated:

____
Lisa Jackson,
Administrator.

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

PART 60—[AMENDED]

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

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

2. Section 60.17 is amended by:

a. Adding paragraph (a)(93);

b. Revising paragraph (h)(4); and

c. Adding paragraph (o) to read as follows:

§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, 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.

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(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, D.C. 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. Part 60 is amended by adding subparts LLLL and MMMM to read as follows:

Subpart LLLL--Standards of Performance for New Sewage Sludge Incineration Units

Sec.

Introduction

Applicability and Delegation of Authority

Preconstruction Siting Analysis

Operator Training and Qualification

Emission Limits, Emission Standards, and Operating Limits and Requirements

and malfunction?

60.4861 How do I establish affirmative defense for exceedance of an emission limit or standard during malfunction?

Initial Compliance Requirements

60.4865 How and when do I demonstrate initial compliance with the emission limits and standards?

60.4870 How do I establish my operating limits?

60.4875 By what date must I conduct the initial air pollution control device inspection and make any necessary repairs?

60.4880 How do I develop a site-specific monitoring plan for my continuous monitoring systems, bag leak detection system, and ash handling system, and by what date must I conduct an initial performance evaluation of my continuous monitoring systems and bag leak detection system?

Continuous Compliance Requirements

60.4885 How and when do I demonstrate continuous compliance with the emission limits and standards?

60.4890 How do I demonstrate continuous compliance with my operating limits?

60.4895 By what date must I conduct annual air pollution control device inspections and make any necessary repairs?

Performance Testing, Monitoring, and Calibration Requirements

60.4900 What are the performance testing, monitoring, and calibration requirements for compliance with the emission limits and standards?

60.4905 What are the monitoring and calibration requirements for compliance with my operating limits?

Recordkeeping and Reporting

60.4910 What records must I keep?

60.4915 What reports must I submit?

Title V Operating Permits

60.4920 Am I required to apply for and obtain a title V operating permit for my unit?

60.4925 When must I submit a title V permit application for my new SSI unit?

Definitions

60.4930 What definitions must I know?

Tables

Table 1 to Subpart LLLL of Part 60—Emission Limits and Standards for Fluidized Bed New Sewage Sludge Incineration Units

Table 2 to Subpart LLLL of Part 60—Emission Limits and Standards for New Multiple Hearth Sewage Sludge Incineration Units

Table 3 to Subpart LLLL of Part 60—Operating Parameters for New Sewage Sludge Incineration Units

Table 4 to Subpart LLLL of Part 60—Toxic Equivalency Factors

Table 5 to Subpart LLLL of Part 60—Summary of Reporting Requirements for New Sewage Sludge Incineration Units

Introduction

§60.4760 What does this subpart do?

This subpart establishes new source performance standards for sewage sludge incineration (SSI) units. To the extent any requirement of this subpart is inconsistent with the requirements of subpart A of this part, the requirements of this subpart will apply.

§60.4765 When does this subpart become effective?

This subpart takes effect on [INSERT THE DATE 6 MONTHS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]. Some of the requirements in this subpart apply to planning a SSI unit and must be completed even before construction is initiated on a SSI unit (i.e., the preconstruction requirements in §§60.4800 and 60.4805). Other requirements such as the emission limits, emission standards, and operating limits apply after the SSI unit begins operation.

Applicability and Delegation of Authority

§60.4770 Does this subpart apply to my sewage sludge incineration unit?

Yes, your SSI unit is an affected source if it meets all the criteria specified in paragraphs (a) through (c) of this section.

(a) Your SSI unit is a SSI unit for which construction commenced after October 14, 2010 or for which modification commenced after [INSERT THE DATE 6 MONTHS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

(b) Your SSI unit is a SSI unit as defined in §60.4930.

(c) Your SSI unit is not exempt under §60.4780.

§60.4775 What is a new sewage sludge incineration unit?

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

(1) Commenced construction after October 14, 2010.

(2) Commenced modification after [INSERT THE DATE 6 MONTHS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

(b) Physical or operational changes made to your SSI unit to comply with the emission guidelines in subpart MMMM of this part (Emission Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units) do not qualify as a modification under this subpart.

§60.4780 What sewage sludge incineration units are exempt from this subpart?

This subpart exempts combustion units that incinerate sewage sludge and are not located at a wastewater treatment facility designed to treat domestic sewage sludge. These units may be subject to another subpart of this part (e.g., subpart CCCC of this part). The owner or operator of such a combustion unit must notify the Administrator of an exemption claim under this section.

§60.4785 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the Administrator, as defined in §60.2, or a delegated authority such as your state, local, or tribal agency. If the Administrator has delegated authority to your state, local, or tribal agency, then that agency (as well as the Administrator) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your state, local, or tribal agency.

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

(c) The authorities that will not be delegated to state, local, or tribal agencies are specified in paragraphs (c)(1) through (c)(8) of this section.

(1) Approval of alternatives to the emission limits and standards in Tables 1 and 2 to this subpart and operating limits established under §60.4850.

(2) Approval of major alternatives to test methods.

(3) Approval of major alternatives to monitoring.

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

(5) The requirements in §60.4855.

(6) The requirements in §60.4835(b)(2).

(7) Performance test and data reduction waivers under §60.8(b).

(8) Preconstruction siting analysis in §60.4800 and §60.4805.

§60.4790 How are these new source performance standards structured?

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

(a) Preconstruction siting analysis.

(b) Operator training and qualification.

(c) Emission limits, emission standards, and operating limits.

(d) Initial compliance requirements.

(e) Continuous compliance requirements.

(f) Performance testing, monitoring, and calibration requirements.

(g) Recordkeeping and reporting.

(h) Definitions.

(i) Tables.

§60.4795 Do all nine components of these new source performance standards apply at the same time?

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

Preconstruction Siting Analysis

§60.4800 Who must prepare a siting analysis?

(a) You must prepare a siting analysis if you plan to commence construction of a SSI unit after October 14, 2010.

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

§60.4805 What is a siting analysis?

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

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

(c) You must complete and submit the siting requirements of this section as required under §60.4915(a)(3) prior to commencing construction.

Operator Training and Qualification

§60.4810 What are the operator training and qualification requirements?

(a) A SSI unit cannot be operated unless a fully trained and qualified SSI unit operator is accessible, either at the facility or can be at the facility within 1 hour. The trained and qualified SSI unit operator may operate the SSI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified SSI unit operators are temporarily not accessible, you must follow the procedures in §60.4835.

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

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

(1) Training on the 10 subjects listed in paragraphs (c)(1)(i) through (c)(1)(x) of this section.

(i) Environmental concerns, including types of emissions.

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

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

(iv) Combustion controls and monitoring.

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

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

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

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

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

(x) Pollution prevention.

(2) An examination designed and administered by the state-approved program.

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

§60.4815 When must the operator training course be completed?

The operator training course must be completed by the later of the two dates specified in paragraphs (a) and (b) of this section.

(a) Six months after your SSI unit startup.

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

§60.4820 How do I obtain my operator qualification?

(a) You must obtain operator qualification by completing a training course that satisfies the criteria under §60.4810(b).

(b) Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under §60.4810(c)(2).

§60.4825 How do I maintain my operator qualification?

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

(a) Update of regulations.

(b) Incinerator operation, including startup and shutdown procedures, sewage sludge feeding, and ash handling.

(c) Inspection and maintenance.

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

(e) Discussion of operating problems encountered by attendees.

§60.4830 How do I renew my lapsed operator qualification?

You must renew a lapsed operator qualification before you begin operation of a SSI unit by one of the two methods specified in paragraphs (a) and (b) of this section.

(a) For a lapse of less than 3 years, you must complete a standard annual refresher course described in §60.4825.

(b) For a lapse of 3 years or more, you must repeat the initial qualification requirements in §60.4820(a).

§60.4835 What if all the qualified operators are temporarily not accessible?

If a qualified operator is not at the facility and cannot be at the facility within 1 hour, you must meet the criteria specified in either paragraph (a) or (b) of this section, depending on the length of time that a qualified operator is not accessible.

(a) When a qualified operator is not accessible for more than 8 hours, the SSI unit may be operated for less than 2 weeks by other plant personnel who are familiar with the operation of the SSI unit and who have completed a review of the information specified in §60.4840 within the past 12 months. However, you must record the period when a qualified operator was not accessible and include this deviation in the annual report as specified under §60.4915(d).

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

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

that a qualified operator will be accessible.

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

(i) If the Administrator notifies you that your request to continue operation of the SSI unit is disapproved, the SSI unit may continue operation for 30 days, and then must cease operation.

(ii) Operation of the unit may resume if a qualified operator is accessible as required under §60.4810(a). You must notify the Administrator within 5 days of having resumed operations and of having a qualified operator accessible.

§60.4840 What site-specific documentation is required and how often must it be reviewed by qualified sewage sludge incineration unit operators and other plant personnel who may operate the unit according to the provisions of

§60.4835(a)?

(a) You must maintain at the facility the documentation of the operator training procedures specified under §60.4910(c)(1) and make the documentation readily accessible to all SSI unit operators.

(b) You must establish a program for reviewing the information listed in §60.4910(c)(1) with each qualified incinerator operator and other plant personnel who may operate the unit according to the provisions of §60.4835(a), according to the following schedule:

(1) The initial review of the information listed in §60.4910(c)(1) must be conducted within 6 months after the effective date of this subpart or prior to an employee's assumption of responsibilities for operation of the SSI unit, whichever date is later.

(2) Subsequent annual reviews of the information listed in §60.4910(c)(1) must be conducted no later than 12 months following the previous review.

Emission Limits, Emission Standards, and Operating Limits and Requirements

§60.4845 What emission limits and standards must I meet and by when?

You must meet the emission limits and standards specified in Table 1 or 2 to this subpart within 60 days after your SSI unit reaches the feed rate at which it will operate or within 180 days after its initial startup, whichever comes first. The emission limits and standards apply at all times the unit is operating, and during periods of malfunction. The emission limits and standards apply to emissions from a bypass stack or vent while sewage sludge is in the combustion chamber (i.e., until the sewage sludge feed to the combustor has been cut off for a period of time not less than the sewage sludge incineration residence time).

§60.4850 What operating limits and requirements must I meet and by when?

You must meet, as applicable, the operating limits and requirements specified in paragraphs (a) through (d) and (h) of this section, according to the schedule specified in paragraph (e) of this section. The operating parameters for which you will establish operating limits for a wet scrubber, fabric filter, electrostatic precipitator, or activated carbon injection are listed in Table 3 to this subpart. You must comply with the operating requirements in paragraph (f) of this section and the requirements in paragraph (g) of this section for meeting any new operating limits, re-established in §60.4890. The operating limits apply at all times that sewage sludge is in the combustion chamber (i.e., until the sewage sludge feed to the combustor has been cut off for a period of time not less than the sewage sludge incineration residence time).

(a) You must meet a site-specific operating limit for minimum operating temperature of the combustion chamber (or afterburner combustion chamber) that you establish in §60.4890(a)(2)(i).

(b) If you use a wet scrubber, electrostatic precipitator, or activated carbon injection to comply with an emission limit, you must meet the site-specific operating limits that you establish in §60.4870 for each operating parameter associated with each air pollution control device.

(c) If you use a fabric filter to comply with the emission limits, you must install the bag leak detection system specified in §§60.4880(b) and 60.4905(b)(3)(i) and operate the bag leak detection system such that the alarm does not sound more than 5 percent of the operating time during a 6-month period. You must calculate the alarm time as specified in §60.4870.

(d) You must meet the operating requirements in your site-specific fugitive emission monitoring plan, submitted as specified in §60.4880(d) to ensure that your ash handling system will meet the emission standard for fugitive emissions from ash handling.

(e) You must meet the operating limits and requirements specified in paragraphs (a) through (d) of this section 60 days after your SSI unit reaches the feed rate at which it will operate, or within 180 days after its initial startup, whichever comes first.

(f) You must monitor the feed rate and moisture content of the sewage sludge fed to the sewage sludge incinerator, as specified in paragraphs (f)(1) and (f)(2) of this section.

(1) Continuously monitor the sewage sludge feed rate and calculate a daily average for all hours of operation during each 24-hour period. Keep a record of the daily average feed rate, as specified in §60.4910(f)(3)(ii).

(2) Take at least one grab sample per day of the sewage sludge fed to the sewage sludge incinerator. If you

take more than one grab sample in a day, calculate the daily average for the grab samples. Keep a record of the daily average moisture content, as specified in §60.4910(f)(3)(ii).

(g) For the operating limits and requirements specified in paragraphs (a) through (d) and (h) of this section, you must meet any new operating limits and requirements, re-established according to §60.4890(d).

(h) If you use an air pollution control device other than a wet scrubber, fabric filter, electrostatic precipitator, or activated carbon injection to comply with the emission limits in Table 1 or 2 to this subpart, you must meet any site-specific operating limits or requirements that you establish as required in §60.4855.

§60.4855 How do I establish operating limits if I do not use a wet scrubber, fabric filter, electrostatic precipitator, or activated carbon injection, or if I limit emissions in some other manner, to comply with the emission limits?

If you use an air pollution control device other than a wet scrubber, fabric filter, electrostatic precipitator, or activated carbon injection, or limit emissions in some other manner (e.g., materials balance) to comply with the emission limits in §60.4845, you must meet the requirements in paragraphs (a) and (b) of this section.

(a) Meet the applicable operating limits and requirements in §60.4850, and establish applicable operating limits according to §60.4870.

(b) Petition the Administrator for specific operating parameters, operating limits, and averaging periods to be established during the initial performance test and to be monitored continuously thereafter.

(1) You are responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test. You must not conduct the initial performance test until after the petition has been approved by the Administrator, and you must comply with the operating limits as written, pending approval by the Administrator. Neither submittal of an application, nor the Administrator’s failure to approve or disapprove the application relieves you of the responsibility to comply with any provision of this subpart.

(2) Your petition must include the five items listed

in paragraphs (b)(2)(i) through (b)(2)(v) of this section.

(i) Identification of the specific parameters you propose to monitor.

(ii) 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.

(iii) A discussion of how you will establish the upper and/or lower values for these parameters that will establish the operating limits on these parameters, including a discussion of the averaging periods associated with those parameters for determining compliance.

(iv) 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.

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

§60.4860 Do the emission limits, emission standards, and operating limits apply during periods of startup, shutdown, and malfunction?

The emission limits and standards apply at all times and during periods of malfunction. The operating limits apply at all times that sewage sludge is in the combustion chamber (i.e., until the sewage sludge feed to the combustor has been cut off for a period of time not less than the sewage sludge incineration residence time).

§60.4861 How do I establish an affirmative defense for exceedance of an emission limit or standard during malfunction?

In response to an action to enforce the numerical emission standards set forth in paragraph §60.4845, you may assert an affirmative defense to a claim for civil penalties for exceedances of emission limits that are caused by malfunction, as defined in §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 the conditions in paragraphs (a)(1) through (a)(9) of this section are met.

(1) The excess emissions meet:

(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 limits 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 monitoring and 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 affected 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) The owner or operator of the SSI unit 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 2 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 §60.4845 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.

Initial Compliance Requirements

§60.4865 How and when do I demonstrate initial compliance with the emission limits and standards?

To demonstrate initial compliance with the emission limits and standards in Table 1 or 2 to this subpart, use the procedures specified in paragraph (a) of this section for particulate matter, hydrogen chloride, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, lead, and fugitive emissions from ash handling, and follow the procedures specified in paragraph (b) of this section for carbon monoxide. In lieu of using the procedures specified in paragraph (a) of this section, you also have the option to demonstrate initial compliance using the procedures specified in paragraph (b) of this section for particulate matter, hydrogen chloride, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, and lead. You must meet the requirements of paragraphs (a) or (b) of this section, as applicable, and paragraphs (c) and (d) of this section, according to the performance testing, monitoring, and calibration requirements in §60.4900(a) and (b). Except as provided in paragraph (e) of this section, within 60 days after your SSI unit reaches the feed rate at which it will operate, or within 180 days after its initial startup, whichever comes first, you must demonstrate that your SSI unit meets the emission limits and standards specified in Table 1 or 2 to this subpart.

(a) Demonstrate initial compliance using the performance test required in §60.8. You must demonstrate that your SSI unit meets the emission limits and standards specified in Table 1 or 2 to this subpart for particulate matter, hydrogen chloride, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, lead, and fugitive emissions from ash handling using the performance test. The initial performance test must be conducted using the test methods, averaging methods, and minimum sampling volumes or durations specified in Table 1 or 2 to this subpart and according to the testing, monitoring, and calibration requirements specified in §60.4900(a).

(b) Demonstrate initial compliance using a continuous emissions monitoring system or continuous automated sampling system. The option to use a continuous emissions monitoring system for hydrogen chloride, dioxins/furans, cadmium, or lead takes effect on the date a final performance specification applicable to hydrogen chloride, dioxins/furans, cadmium, or lead is published in the Federal Register. The option to use a continuous automated sampling system for dioxins/furans takes effect on the date a final performance specification for such a continuous automated sampling system is published in the Federal Register. Collect data as specified in §60.4900(b)(6) and use the following procedures:

(1) To demonstrate initial compliance with the carbon monoxide emission limit specified in Table 1 or 2 to this subpart, you must use the carbon monoxide continuous emissions monitoring system specified in §60.4900(b). For determining compliance with the carbon monoxide concentration limit using carbon monoxide CEMS, the correction to 7 percent oxygen does not apply during periods of startup or shutdown. Use the measured carbon monoxide concentration without correcting for oxygen

concentration in averaging with other carbon monoxide concentrations (corrected to 7 percent oxygen) to determine the 24-hour average value.

(2) To demonstrate initial compliance with the emission limits specified in Table 1 or 2 to this subpart for particulate matter, hydrogen chloride, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, and lead, you may substitute the use of a continuous monitoring system in lieu of conducting the initial performance test required in paragraph (a) of this section, as follows:

(i) You may substitute the use of a continuous emissions monitoring system for any pollutant specified in paragraph (b)(2) of this section in lieu of conducting the initial performance test for that pollutant in paragraph (a) of this section.

(ii) You may substitute the use of a continuous automated sampling system for mercury or dioxins/furans in lieu of conducting the initial mercury or dioxin/furan performance test in paragraph (a) of this section.

(3) If you use a continuous emissions monitoring system to demonstrate compliance with an applicable

emission limit in Table 1 or 2 to this subpart, as described in paragraph (b)(1) or (b)(2) of this section, you must use the continuous emissions monitoring system and follow the requirements specified in §60.4900(b). You must measure emissions according to §60.13 to calculate 1-hour arithmetic averages, corrected to 7 percent oxygen (or carbon dioxide). You must demonstrate initial compliance using a 24-hour block average of these 1-hour arithmetic average emission concentrations, calculated using Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7.

(4) If you use a continuous automated sampling system to demonstrate compliance with an applicable emission limit in Table 1 or 2 to this subpart, as described in paragraph (b)(2) of this section, you must:

(i) Use the continuous automated sampling system specified in §60.58b(p) and (q), and measure and calculate average emissions corrected to 7 percent oxygen (or carbon dioxide) according to §60.58b(p) and your monitoring plan.

(A) Use the procedures specified in §60.58b(p) to calculate 24-hour block averages to determine compliance with the mercury emission limit in Table 1 or 2 to this subpart.

(B) Use the procedures specified in §60.58b(p) to calculate 2-week block averages to determine compliance with the dioxin/furan (total mass basis or toxic equivalency basis) emission limits in Table 1 or 2 to this subpart.

(ii) Comply with the provisions in §60.58b(q) to develop a monitoring plan. For mercury continuous automated sampling systems, you must use Performance Specification 12B of appendix B of part 75 and Procedure 5 of appendix F of this part.

(5) Except as provided in paragraph (e) of this section, you must complete your initial performance evaluations required under your monitoring plan for any continuous emissions monitoring system and continuous automated sampling systems according to the provisions of §60.4880. Your performance evaluation must be conducted using the procedures and acceptance criteria specified in §60.4880(a)(3).

(c) To demonstrate initial compliance with the dioxins/furans toxic equivalency emission limit in Table 1 or 2 to this subpart, determine dioxins/furans toxic equivalency as follows:

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

(2) Multiply the concentration of each dioxin/furan (tetra- through octa-chlorinated) isomer by its corresponding toxic equivalency factor specified in Table 4 to this subpart.

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

(d) Submit an initial compliance report, as specified in §60.4915(c).

(e) If you demonstrate initial compliance using the performance test specified in paragraph (a) of this section, then the provisions of this paragraph (e) apply. If a force majeure is about to occur, occurs, or has occurred for which you intend to assert a claim of force majeure, you must notify the Administrator in writing as specified in §60.4915(g). You must conduct the initial performance test as soon as practicable after the force majeure occurs. The Administrator will determine whether or not to grant the extension to the initial performance test deadline, and will notify you in writing of approval or disapproval of the request for an extension as soon as practicable. Until an extension of the performance test deadline has been approved by the Administrator, you remain strictly subject to the requirements of this subpart.

§60.4870 How do I establish my operating limits?

(a) You must establish the site-specific operating limits specified in paragraphs (b) through (h) of this section or established in §60.4855, as applicable, during your initial performance tests required in §60.4865. You must meet the requirements in §60.4890(d) to confirm these operating limits or re-establish new operating limits using operating data recorded during any performance tests or performance evaluations required in §60.4885. You must follow the data measurement and recording frequencies and data averaging times specified in Table 3 to this subpart or as established in §60.4855, and you must follow the testing, monitoring, and calibration requirements specified in §§60.4900 and 60.4905 or established in §60.4855. You are not required to establish operating limits for the operating parameters listed in Table 3 to this subpart for a control device if you use a continuous monitoring system to demonstrate compliance with the emission limits in Table 1 or 2 to this subpart for the applicable pollutants, as follows:

(1) For a scrubber designed to control emissions of hydrogen chloride or sulfur dioxide, you are not required to establish an operating limit and monitor , scrubber liquid flow rate or scrubber liquid pH if you use the continuous monitoring system specified in §§60.4865(b) and 60.4885(b) to demonstrate compliance with the emission limit for hydrogen chloride or sulfur dioxide.

(2) For a scrubber designed to control emissions of particulate matter, cadmium, and lead, you are not required to establish an operating limit and monitor pressure drop across the scrubber or scrubber liquid flow rate if you use the continuous monitoring system specified in §§60.4865(b) and 60.4885(b) to demonstrate compliance with the emission limit for particulate matter, cadmium, and lead.

(3) For an electrostatic precipitator designed to control emissions of particulate matter, cadmium, and lead, you are not required to establish an operating limit and

monitor secondary voltage of the collection plates, secondary amperage of the collection plates, or effluent water flow rate at the outlet of the electrostatic precipitator if you use the continuous monitoring system specified in §§60.4865(b) and 60.4885(b) to demonstrate compliance with the emission limit for particulate matter, cadmium, and lead.

(4) For an activated carbon injection system designed to control emissions of mercury, you are not required to establish an operating limit and monitor sorbent injection rate and carrier gas flow rate (or carrier gas pressure drop) if you use the continuous monitoring system specified in §§60.4865(b) and 60.4885(b) to demonstrate compliance with the emission limit for mercury.

(5) For an activated carbon injection system designed to control emissions of dioxins/furans, you are not required to establish an operating limit and monitor sorbent injection rate and carrier gas flow rate (or carrier gas pressure drop) if you use the continuous monitoring system specified in §§60.4865(b) and 60.4885(b) to demonstrate compliance with the emission limit for dioxins/furans (total mass basis or toxic equivalency

basis).

(b) Minimum pressure drop across each wet scrubber used to meet the particulate matter, lead, and cadmium emission limits in Table 1 or 2 to this subpart, equal to the lowest 4-hour average pressure drop across each such wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter, lead, and cadmium emission limits.

(c) Minimum scrubber liquid flow rate (measured at the inlet to each wet scrubber), equal to the lowest 4-hour average liquid flow rate measured during the most recent performance test demonstrating compliance with all applicable emission limits.

(d) Minimum scrubber liquid pH for each wet scrubber used to meet the sulfur dioxide or hydrogen chloride emission limits in Table 1 or 2 to this subpart, equal to the lowest 1-hour average scrubber liquid pH measured during the most recent performance test demonstrating compliance with the sulfur dioxide and hydrogen chloride emission limits.

(e) Minimum combustion chamber operating temperature (or minimum afterburner temperature), equal to the lowest

4-hour average combustion chamber operating temperature (or afterburner temperature) measured during the most recent performance test demonstrating compliance with all applicable emission limits.

(f) Minimum power input to the electrostatic precipitator collection plates, equal to the lowest 4-hour average power measured during the most recent performance test demonstrating compliance with the particulate matter, lead, and cadmium emission limits. Power input must be calculated as the product of the secondary voltage and secondary amperage to the electrostatic precipitator collection plates. Both the secondary voltage and secondary amperage must be recorded during the performance test.

(g) Minimum effluent water flow rate at the outlet of the electrostatic precipitator, equal to the lowest 4-hour average effluent water flow rate at the outlet of the electrostatic precipitator measured during the most recent performance test demonstrating compliance with the particulate matter, lead, and cadmium emission limits.

(h) For activated carbon injection, establish the site-specific operating limits specified in paragraphs (h)(1) through (h)(3) of this section.

(1) Minimum mercury sorbent injection rate, equal to the lowest 4-hour average mercury sorbent injection rate measured during the most recent performance test demonstrating compliance with the mercury emission limit.

(2) Minimum dioxin/furan sorbent injection rate, equal to the lowest 4-hour average dioxin/furan sorbent injection rate measured during the most recent performance test demonstrating compliance with the dioxin/furan (total mass basis or toxic equivalency basis) emission limit.

(3) Minimum carrier gas flow rate or minimum carrier gas pressure drop, as follows:

(i) Minimum carrier gas flow rate, equal to the lowest 4-hour average carrier gas flow rate measured during the most recent performance test demonstrating compliance with the applicable emission limit.

(ii) Minimum carrier gas pressure drop, equal to the lowest 4-hour average carrier gas flow rate measured during the most recent performance test demonstrating compliance with the applicable emission limit.§60.4875 By what date must I conduct the initial air pollution control device inspection and make any necessary repairs?

(a) You must conduct an air pollution control device inspection according to §60.4900(c) within 60 days of installing an air pollution control device or within 180 days of startup of the SSI unit using the air pollution control device, whichever comes first.

(b) Within 10 operating days following the air pollution control device inspection under paragraph (a) of this section, all necessary repairs must be completed unless you obtain written approval from the Administrator establishing a date whereby all necessary repairs of the SSI unit must be completed.

§60.4880 How do I develop a site-specific monitoring plan for my continuous monitoring systems, bag leak detection system, and ash handling system, and by what date must I conduct an initial performance evaluation of my continuous monitoring systems and bag leak detection system?

You must develop and submit to the Administrator for approval a site-specific monitoring plan for each continuous monitoring system required under this subpart, according to the requirements in paragraphs (a) through (d) of this section. This requirement also applies to you if you petition the Administrator for alternative monitoring parameters under §60.13(i) and paragraph (e) of this section. If you use a continuous automated sampling system to comply with the mercury or dioxin/furan (total mass basis or toxic equivalency basis) emission limit, you must develop your monitoring plan as specified in §60.58b(q), and you are not required to meet the requirements in paragraphs (a) and (b) of this section. You must also submit a site-specific monitoring plan for your ash handling system, as specified in paragraph (d) of this section. You must submit and update your monitoring plans as specified in paragraphs (f) through (h) of this section.

(a) For each continuous monitoring system, your monitoring plan must address the elements and requirements specified in paragraphs (a)(1) through (a)(8) of this section. You must operate and maintain the continuous monitoring system in continuous operation according to the site-specific monitoring plan.

(1) 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).

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

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

(i) For continuous emissions monitoring systems, your performance evaluation and acceptance criteria must include, but is not limited to, the following:

(A) The applicable requirements for continuous emissions monitoring systems specified in §60.13.

(B) The applicable performance specifications (e.g., relative accuracy tests) in appendix B of this part.

(C) The applicable procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) in appendix F of this part.

(D) A discussion of how the occurrence and duration of out-of-control periods will affect the suitability of CEMS data, where out-of-control has the meaning given in section (a)(7)(i) of this section.

(ii) For continuous parameter monitoring systems, your performance evaluation and acceptance criteria must include, but is not limited to the following:

(A) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (a)(3)(ii)(A)(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.

(B) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (a)(3)(ii)(B)(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., particulate matter 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.

(C) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (a)(3)(ii)(C)(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.

(D) If you have an operating limit that requires the use of a temperature measurement device, you must meet the requirements in paragraphs (a)(3)(ii)(D)(1) through (4) of this section.

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

(2) Use a temperature sensor with a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit), or 1.0 percent of the temperature value, whichever is larger, for a noncryogenic temperature range.

(3) Use a temperature sensor with a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit), or 2.5 percent of the temperature value, whichever is larger, for a cryogenic temperature range.(4) Conduct a temperature measurement device performance evaluation at the time of each performance test but no less frequently than annually.

(E) 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 (a)(3)(ii)(E)(1) and (2) of this section.

(1) Install sensors to measure (secondary) voltage and current to the electrostatic 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.

(F) 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 (a)(3)(ii)(F)(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.

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

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

(6) 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).

(7) Provisions for periods when the continuous monitoring system is out of control, as follows:

(i) A continuous monitoring system is out of control if the conditions of paragraph (a)(7)(i)(A) or (a)(7)(i)(B) of this section are met.

(A) 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.

(B) 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.

(ii) When the continuous monitoring system is out of control as specified in paragraph (a)(7)(i) of this section, you must take the necessary corrective action and must repeat all necessary tests that indicate that the system is out of control. You must take corrective action and conduct retesting until the performance requirements are below the applicable limits. The beginning of the out-of-control period is the hour you conduct a performance check (e.g., calibration drift) that indicates an exceedance of the performance requirements established under this part. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits.

(8) Schedule for conducting initial and periodic performance evaluations.

(b) If a bag leak detection system is used, your monitoring plan must include a description of the following items:

(1) Installation of the bag leak detection system in accordance with paragraphs (b)(1)(i) and (ii) of this section.

(i) Install the 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.

(ii) 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.

(2) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established. Use a bag leak detection system equipped with a system that will sound an alarm when the system detects an increase in relative particulate matter emissions over a preset level. The alarm must be located where it is observed readily and any alert is detected and recognized easily by plant operating personnel.

(3) Evaluations of the performance of the bag leak detection system, performed in accordance with your monitoring plan and consistent with the guidance provided in Fabric Filter Bag Leak Detection Guidance, EPA-454/R-98-015, September 1997 (incorporated by reference, see §60.17).

(4) Operation of the bag leak detection system, including quality assurance procedures.

(5) Maintenance of the bag leak detection system, including a routine maintenance schedule and spare parts inventory list.

(6) Recordkeeping (including record retention) of the bag leak detection system data. Use a bag leak detection

system equipped with a device to continuously record the output signal from the sensor.

(c) You must conduct an initial performance evaluation of each continuous monitoring system and bag leak detection system, as applicable, in accordance with your monitoring plan and §60.13(c). For the purposes of this subpart, the provisions of §60.13(c) also apply to the bag leak detection system. You must conduct the initial performance evaluation of each continuous monitoring system within 60 days of installation of the monitoring system.

(d) You must submit a monitoring plan specifying the ash handling system operating procedures that you will follow to ensure that your meet the fugitive emissions limit specified in Table 1 or 2 to this subpart.

(e) You may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the standards of this subpart, subject to the provisions of paragraphs (e)(1) through (e)(6) of this section.

(1) The Administrator will not approve averaging periods other than those specified in this section, unless you document, using data or information, that the longer

averaging period will ensure that emissions do not exceed levels achieved over the duration of three performance test runs.

(2) If the application to use an alternate monitoring requirement is approved, you must continue to use the original monitoring requirement until approval is received to use another monitoring requirement.

(3) You must submit the application for approval of alternate monitoring requirements no later than the notification of performance test. The application must contain the information specified in paragraphs (e)(3)(i) through (e)(3)(iii) of this section:

(i) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach.

(ii) A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach and technique, the averaging period for the limit, and how the limit is to be calculated.

(iii) Data or information documenting that the alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard.

(4) The Administrator will notify you of the approval or denial of the application within 90 calendar days after receipt of the original request, or within 60 calendar days of the receipt of any supplementary information, whichever is later. The Administrator will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard. Before disapproving any alternate monitoring application, the Administrator will provide the following:

(i) Notice of the information and findings upon which the intended disapproval is based.

(ii) Notice of opportunity for you to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for you to provide additional supporting information.

(5) You are responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test.

Neither submittal of an application, nor the Administrator’s failure to approve or disapprove the application relieves you of the responsibility to comply with any provision of this subpart.

(6) The Administrator may decide at any time, on a case-by-case basis, that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of this subpart.

(f) You must submit your monitoring plans required in paragraphs (a) and (b) of this section at least 60 days before your initial performance evaluation of your continuous monitoring system(s).

(g) You must submit your monitoring plan for your ash handling system, as required in paragraph (d) of this section, at least 60 days before your initial compliance test date.

(h) You must update and resubmit your monitoring plan if there are any changes or potential changes in your monitoring procedures or if there is a process change, as defined in §60.4930.

Continuous Compliance Requirements

§60.4885 How and when do I demonstrate continuous compliance with the emission limits and standards?

To demonstrate continuous compliance with the emission limits and standards specified in Table 1 or 2 to this subpart, use the procedures specified in paragraph (a) of this section for particulate matter, hydrogen chloride, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, lead, and fugitive emissions from ash handling, and follow the procedures specified in paragraph (b) of this section for carbon monoxide. In lieu of using the procedures specified in paragraph (a) of this section, you also have the option to demonstrate continuous compliance using the procedures specified in paragraph (b) of this section for particulate matter, hydrogen chloride, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, and lead. You must meet the requirements of paragraphs (a) and (b) of this section, as applicable, and paragraphs (c) through (e) of this section, according to the performance testing, monitoring, and calibration requirements in §60.4900(a) and (b). You may also petition the Administrator for alternative monitoring parameters as specified in paragraph (f) of this section.

(a) Demonstrate continuous compliance using a performance test. Except as provided in paragraphs (a)(3) and (e) of this section, following the date that the initial performance test for each pollutant in Table 1 or 2 to this subpart except carbon monoxide is completed, you must conduct a performance test for each such pollutant on an annual basis (between 11 and 13 calendar months following the previous performance test). The performance test must be conducted using the test methods, averaging methods, and minimum sampling volumes or durations specified in Table 1 or 2 to this subpart and according to the testing, monitoring, and calibration requirements specified in §60.4900(a).

(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. 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 §60.4930.

(3) Except as specified in paragraphs (a)(1) and (2)

of this section, you can conduct performance tests less often for a given pollutant, as specified in paragraphs (a)(3)(i) through (iii) of this section.

(i) You can conduct performance tests less often if your performance tests for the pollutant for at least 2 consecutive years show that your emissions are at or below 75 percent of the emission limit specified in Table 2 or 3 to this subpart, and there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case, you do not have to conduct a performance test for that pollutant for the next 2 years. You must conduct a performance test during the third year and no more than 37 months after the previous performance test.

(ii) If your SSI unit continues to meet the emission limit for the pollutant, you may choose to conduct performance tests for the pollutant every third year if your emissions are at or below 75 percent of the emission limit, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions, but each such performance test must be conducted no more than 37 months after the previous performance test.

(iii) If a performance test shows emissions exceeded 75 percent of the emission limit for a pollutant, you must conduct annual performance tests for that pollutant until all performance tests over 2 consecutive years show compliance.(b) Demonstrate continuous compliance using a continuous emissions monitoring system or continuous automated sampling system. The option to use a continuous emissions monitoring system for hydrogen chloride, dioxins/furans, cadmium, or lead takes effect on the date a final performance specification applicable to hydrogen chloride, dioxins/furans, cadmium, or lead is published in the Federal Register. The option to use a continuous automated sampling system for dioxins/furans takes effect on the date a final performance specification for such a continuous automated sampling system is published in the Federal Register. Collect data as specified in §60.4900(b)(6) and use the following procedures:

(1) To demonstrate continuous compliance with the carbon monoxide emission limit, you must use the carbon monoxide continuous emissions monitoring system specified in §60.4900(b). For determining compliance with the carbon

monoxide concentration limit using carbon monoxide CEMS, the correction to 7 percent oxygen does not apply during periods of startup or shutdown. Use the measured carbon monoxide concentration without correcting for oxygen concentration in averaging with other carbon monoxide concentrations (corrected to 7 percent oxygen) to determine the 24-hour average value.

(2) To demonstrate continuous compliance with the emission limits for particulate matter, hydrogen chloride, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, and lead, you may substitute the use of a continuous monitoring system in lieu of conducting the annual performance test required in paragraph (a) of this section, as follows:

(i) You may substitute the use of a continuous emissions monitoring system for any pollutant specified in paragraph (b)(2) of this section in lieu of conducting the annual performance test for that pollutant in paragraph (a) of this section.

(ii) You may substitute the use of a continuous automated sampling system for mercury or dioxins/furans in lieu of conducting the annual mercury or dioxin/furan performance test in paragraph (a) of this section.

(3) If you use a continuous emissions monitoring system to demonstrate compliance with an applicable emission limit in either paragraph (b)(1) or (b)(2) of this section, you must use the continuous emissions monitoring system and follow the requirements specified in §60.4900(b). You must measure emissions according to §60.13 to calculate 1-hour arithmetic averages, corrected to 7 percent oxygen (or carbon dioxide). You must demonstrate initial compliance using a 24-hour block average of these 1-hour arithmetic average emission concentrations, calculated using Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7.

(4) If you use a continuous automated sampling system to demonstrate compliance with an applicable emission limit in paragraph (b)(2) of this section, you must:

(i) Use the continuous automated sampling system specified in §60.58b(p) and (q), and measure and calculate average emissions corrected to 7 percent oxygen (or carbon dioxide) according to §60.58b(p) and your monitoring plan.

(A) Use the procedures specified in §60.58b(p) to calculate 24-hour averages to determine compliance with the mercury emission limit in Table 1 or 2 to this subpart.

(B) Use the procedures specified in §60.58b(p) to calculate 2-week averages to determine compliance with the dioxin/furan emission limit (total mass basis or toxic equivalency basis) in Table 1 or 2 to this subpart.

(ii) Update your monitoring plan as specified in §60.4880(e). For mercury continuous automated sampling systems, you must use Performance Specification 12B of appendix B of part 75 and Procedure 5 of appendix F of this part.

(5) Except as provided in paragraph (e) of this section, you must complete your periodic performance evaluations required under your monitoring plan for any continuous emissions monitoring system and continuous automated sampling systems, according to the schedule specified in your monitoring plan. If you were previously determining compliance by conducting an annual performance test (or according to the less frequent testing for a pollutant as provided in paragraph (a)(3) of this section), you must complete the initial performance evaluation required in your monitoring plan in §60.4880 for the

continuous monitoring system prior to using the continuous emissions monitoring system to demonstrate compliance or continuous automated sampling system. Your performance evaluation must be conducted using the procedures and acceptance criteria specified in §60.4880(a)(3).

(c) To demonstrate compliance with the dioxins/furans toxic equivalency emission limit in paragraph (a) or (b) of this section, you must determine dioxins/furans toxic equivalency as follows:

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

(2) For each dioxin/furan (tetra- through octa-chlorinated) isomer measured in accordance with paragraph (c)(1) of this section, multiply the isomer concentration by its corresponding toxic equivalency factor specified in Table 4 to this subpart.

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

(d) You must submit the annual compliance report specified in §60.4915(d). You must submit the deviation report specified in §60.4915(e) for each instance that you did not meet each emission limit in Table 1 or 2 to this subpart.

(e) If you demonstrate continuous compliance using a performance test, as specified in paragraph (a) of this section, then the provisions of this paragraph (e) apply. If a force majeure is about to occur, occurs, or has occurred for which you intend to assert a claim of force majeure, you must notify the Administrator in writing as specified in §60.4915(g). You must conduct the performance test as soon as practicable after the force majeure occurs. The Administrator will determine whether or not to grant the extension to the performance test deadline, and will notify you in writing of approval or disapproval of the request for an extension as soon as practicable. Until an extension of the performance test deadline has been approved by the Administrator, you remain strictly subject to the requirements of this subpart.

(f) After any initial requests in §60.4880 for alternative monitoring requirements for initial compliance, you may subsequently petition the Administrator for alternative monitoring parameters as specified in §§60.13(i) and 60.4880(e).

§60.4890 How do I demonstrate continuous compliance with my operating limits?

You must continuously monitor your operating parameters as specified in paragraph (a) of this section and meet the requirements of paragraphs (b) and (c) of this section, according to the monitoring and calibration requirements in §60.4905. You must confirm and re-establish your operating limits as specified in paragraph (d) of this section.

(a) You must continuously monitor the operating parameters specified in paragraphs (a)(1) and (a)(2) of this section using the continuous monitoring equipment and according to the procedures specified in §60.4905 or established in §60.4855. To determine compliance, you must use the data averaging period specified in Table 3 to this subpart (except for alarm time of the baghouse leak detection system) unless a different averaging period is established under §60.4855.

(1) You must demonstrate that the SSI unit meets the operating limits established according to §§60.4855 and

60.4870 and paragraph (d) of this section for each applicable operating parameter.

(2) You must demonstrate that the SSI unit meets the operating limit for bag leak detection systems as follows:

(i) For a bag leak detection system, you must calculate the alarm time as follows:

(A) If inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted.

(B) If corrective action is required, each alarm time shall be counted as a minimum of 1 hour.

(C) If you take longer than 1 hour to initiate corrective action, each alarm time (i.e., time that the alarm sounds) is counted as the actual amount of time taken by you to initiate corrective action.

(ii) Your maximum alarm time is equal to 5 percent of the operating time during a 6-month period, as specified in §60.4850(c).

(b) 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. You must submit the deviation report specified in §60.4915(e) for each instance that you did not meet one of your operating limits established under this subpart.

(c) You must submit the annual compliance report specified in §60.4915(d) to demonstrate continuous compliance.

(d) You must confirm your operating limits according to paragraph (d)(1) of this section or re-establish operating limits according to paragraph (d)(2) of this section. Your operating limits must be established so as to assure ongoing compliance with the emission limits. These requirements also apply to your operating requirements in your fugitive emissions monitoring plan specified in §60.4850(d).

(1) Your operating limits must be based on operating data recorded during any performance test required in §60.4885(a) or any performance evaluation required in §60.4885(b)(5).

(2) You may conduct a repeat performance test at any

time to establish new values for the operating limits to apply from that point forward.

§60.4895 By what date must I conduct annual air pollution control device inspections and make any necessary repairs?

(a) You must conduct an annual inspection of each air pollution control device used to comply with the emission limits, according to §60.4900(c), no later than 12 months following the previous annual air pollution control device inspection.

(b) Within 10 operating days following an air pollution control device inspection, all necessary repairs must be completed unless you obtain written approval from the Administrator establishing a date whereby all necessary repairs of the affected SSI unit must be completed.

Performance Testing, Monitoring, and Calibration Requirements

§60.4900 What are the performance testing, monitoring, and calibration requirements for compliance with the emission limits and standards?

You must meet, as applicable, the performance testing requirements specified in paragraph (a) of this section, the monitoring requirements specified in paragraph (b) of this section, the air pollution control device inspections requirements specified in paragraph (c) of this section, and the bypass stack provisions specified in paragraph (d) of this section.

(a) Performance testing requirements.

(1) All performance tests must consist of a minimum of three test runs conducted under conditions representative of normal operations, as specified in §60.8(c). Emissions in excess of the emission limits or standards during periods of startup, shutdown, and malfunction are considered deviations from the applicable emission limits or standards.

(2) You must document that the dry sludge burned during the performance test is representative of the sludge burned under normal operating conditions by:

(i) Maintaining a log of the quantity of sewage sludge burned during the performance test by continuously monitoring and recording the average hourly rate that sewage sludge is fed to the incinerator.

(ii) Maintaining a log of the moisture content of the sewage sludge burned during the performance test by taking grab samples of the sewage sludge fed to the incinerator for each 8 hour period that testing is conducted.

(3) All performance tests must be conducted using the test methods, minimum sampling volume, observation period, and averaging methods specified in Table 1 or 2 to this subpart.

(4) Method 1 at 40 CFR part 60, appendix A-1 must be used to select the sampling location and number of traverse points.

(5) Method 3A or 3B at 40 CFR part 60, appendix A-2 must be used for gas composition analysis, including measurement of oxygen concentration. Method 3A or 3B at 40 CFR part 60, appendix A-2 must be used simultaneously with each method.

(6) All pollutant concentrations must be adjusted to 7 percent oxygen using Equation 1 of this section:

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

Where:

C_{adj} = Pollutant concentration adjusted to 7 percent oxygen.

C_{meas} = Pollutant concentration measured on a dry basis.

(20.9−7) = 20.9 percent oxygen−7 percent oxygen (defined oxygen correction basis).

20.9 = Oxygen concentration in air, percent.

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

(7) Performance tests must be conducted and data reduced in accordance with the test methods and procedures contained in this subpart unless the Administrator does one of the following.

(i) Specifies or approves, in specific cases, the use of a method with minor changes in methodology.

(ii) Approves the use of an equivalent method.

(iii) Approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

(iv) Waives the requirement for performance tests because you have demonstrated by other means to the Administrator's satisfaction that the affected SSI unit is in compliance with the standard.

(v) Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph is construed to abrogate the Administrator's authority to require testing under section 114 of the Clean Air Act.

(8) You must provide the Administrator at least 30

days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, you must notify the Administrator as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator by mutual agreement.

(9) You must provide, or cause to be provided, performance testing facilities as follows:

(i) Sampling ports adequate for the test methods applicable to the SSI unit, as follows:

(A) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures.

(B) Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

(ii) Safe sampling platform(s).

(iii) Safe access to sampling platform(s).

(iv) Utilities for sampling and testing equipment.

(10) Unless otherwise specified in this subpart, each performance test must consist of three separate runs using the applicable test method. Each run must be conducted for the time and under the conditions specified in the applicable standard. Compliance with each emission limit must be determined by calculating the arithmetic mean of the three runs. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond your control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

(11) During each test run specified in paragraph (a)(1) of this section, you must operate your sewage sludge incinerator at a minimum of 85 percent of your maximum permitted capacity.

(b) Continuous monitor requirements. You must meet the following requirements, as applicable, when using a continuous monitoring system to demonstrate compliance with the emission limits in Table 1 or 2 to this subpart. The option to use a continuous emissions monitoring system for hydrogen chloride, dioxins/furans, cadmium, or lead takes effect on the date a final performance specification applicable to hydrogen chloride, dioxins/furans, cadmium, or lead is published in the Federal Register. If you elect to use a continuous emissions monitoring system instead of conducting annual performance testing, you must meet the requirements of paragraphs (b)(1) through (b)(6) of this section. If you elect to use a continuous automated sampling system instead of conducting annual performance testing, you must meet the requirements of paragraph (b)(7) of this section. The option to use a continuous automated sampling system for dioxins/furans takes effect on the date a final performance specification for such a continuous automated sampling system is published in the Federal Register.

(1) You must notify the Administrator one month before starting use of the continuous monitoring system.

(2) You must notify the Administrator one month

before stopping use of the continuous monitoring system, in which case you must also conduct a performance test prior to ceasing operation of the system.

(3) You must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the emissions to the atmosphere in accordance with the following:

(i) Section 60.13 of subpart A of this part.

(ii) The following performance specifications of appendix B of this part, as applicable:

(A) For particulate matter, Performance Specification 11 of appendix B of this part.

(B) For hydrogen chloride, Performance Specification 15 of appendix B of this part.

(C) For carbon monoxide, Performance Specification 4B of appendix B of this part with the modifications shown in Tables 1 and 2 to this subpart.

(D) [Reserved]

(E) For mercury, Performance Specification 12A of appendix B of this part.

(F) For nitrogen oxides, Performance Specification 2 of appendix B of this part.

(G) For sulfur dioxide, Performance Specification 2 of appendix B of this part.

(iii) For continuous emissions monitoring systems, the quality assurance procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) of appendix F of this part specified in paragraphs (b)(3)(iii)(A) through (b)(3)(iii)(G) of this section. For each pollutant, the span value of the continuous emissions monitoring system is two times the applicable emission limit, expressed as a concentration.

(A) For particulate matter, Procedure 2 in appendix F of this part.

(B) For hydrogen chloride, Procedure 1 in appendix F of this part except that the Relative Accuracy Test Audit requirements of Procedure 1 shall be replaced with the validation requirements and criteria of sections 11.1.1 and 12.0 of Performance Specification 15 of appendix B of this part.

(C) For carbon monoxide, Procedure 1 in appendix F of this part.

(D) [Reserved]

(E) For mercury, Procedures 5 in appendix F of this part.

(F) For nitrogen oxides, Procedure 1 in appendix F of this part.

(G) For sulfur dioxide, Procedure 1 in appendix F of this part.

(iv) If your monitoring system has a malfunction or out-of-control period, you must complete repairs and resume operation of your monitoring system as expeditiously as possible.

(4) During each relative accuracy test run of the continuous emissions monitoring system using the performance specifications in paragraph (b)(3)(ii) of this section, emission data for each regulated pollutant and oxygen (or carbon dioxide as established in paragraph (b)(5) of this section) must be collected concurrently (or within a 30- to 60-minute period) by both the continuous emissions monitoring systems and the test methods specified in paragraphs (b)(4)(i) through (b)(4)(viii) of this section. Relative accuracy testing must be at representative operating conditions while the SSI unit is charging sewage sludge.

(i) For particulate matter, Method 5 at 40 CFR part

60, appendix A-3 or Method 26A or 29 at 40 CFR part 60, appendix A-8 shall be used.

(ii) For hydrogen chloride, Method 26 or 26A at 40 CFR part 60, appendix A-8, shall be used as specified in Tables 2 and 3 to this subpart.

(iii) For carbon monoxide, Method 10, 10A, or 10B at 40 CFR part 60, appendix A-4, shall be used.

(iv) For dioxins/furans, Method 23 at 40 CFR part 60, appendix A-7, shall be used.

(v) For mercury, cadmium, and lead, Method 29 at 40 CFR part 60, appendix A-8 shall be used. Alternatively for mercury, Method 30B at 40 CFR part 60, appendix A-8 or ASTM D6784-02 (Reapproved 2008) (incorporated by reference, see §60.17), may be used.

(vi) For nitrogen oxides, Method 7 or 7E at 40 CFR part 60, appendix A-4, shall be used.

(vii) For sulfur dioxide, Method 6 or 6C at 40 CFR part 60, appendix A-4, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17) must be used. For sources that have actual inlet emissions less than 100 parts per million dry volume, the relative accuracy criterion for inlet sulfur dioxide continuous emissions monitoring system should be no greater than 20 percent of the mean value of the 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 method and the continuous emissions monitoring system, whichever is greater.

(viii) For oxygen (or carbon dioxide as established in (b)(5) of this section), Method 3A or 3B at 40 CFR part 60, appendix A-2, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17), as applicable, must be used.

(5) You may request that compliance with the emission limits 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 (b)(5)(i) through (b)(5)(iv) of this section. This relationship may be re-established during subsequent performance tests.

(i) The fuel factor equation in Method 3B at 40 CFR part 60, appendix A-2 must be used to determine the relationship between oxygen and carbon dioxide at a sampling location. Method 3A or 3B at 50 CFR part 60, appendix A-2, 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.

(6) You must operate the continuous monitoring system and collect data with the continuous monitoring system as follows:

(i) You must collect data using the continuous monitoring system at all times the affected SSI unit is operating and at the intervals specified in paragraph (b)(6)(ii) of this section, except for periods of monitoring system malfunctions that occur during periods specified in §60.4880(a)(7)(i), repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). Any such periods that you do not collect data using the continuous monitoring system constitute a deviation from the monitoring requirements and must be reported in a deviation report.

(ii) You must collect continuous emissions monitoring system data in accordance with §60.13(e)(2).

(iii) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions must not be included in calculations used to report emissions or operating levels. Any such periods must be reported in a deviation report.

(iv) Any data collected during periods when the monitoring system is out of control as specified in §60.4880(a)(7)(i), repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out-of-control periods must not be included in calculations used to report emissions or operating levels. Any such periods that do not coincide with a monitoring system malfunction constitute a deviation from the monitoring requirements and must be reported in a deviation report.

(v) You must use all the data collected during all periods except those periods specified in paragraphs (b)(6)(iii) and (b)(6)(iv) of this section in assessing the operation of the control device and associated control system.

(7) If you elect to use a continuous automated sampling system instead of conducting annual performance testing, you must:

(i) Install, calibrate, maintain, and operate a continuous automated sampling system according to the site-specific monitoring plan developed in §60.58b(p)(1) through (p)(6), (p)(9), (p)(10), and (q).

(ii) Collect data according to §60.58b(p)(5) and paragraph (b)(6) of this section.

(c) Air pollution control device inspections. You must conduct air pollution control device inspections that include, at a minimum, the following:

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

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(2) Generally observe that the equipment is maintained in good operating condition.

(3) Develop a site-specific monitoring plan according to the requirements in §60.4880. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under §60.13(i). (d) Bypass stack. Use of the bypass stack at any time that sewage sludge is being charged to the SSI unit is an emissions standards deviation for all pollutants listed in Table 1 or 2 to this subpart. The use of the bypass stack during a performance test invalidates the performance test.

§60.4905 What are the monitoring and calibration requirements for compliance with my operating limits?

(a) You must install, operate, calibrate, and maintain the continuous parameter monitoring systems according to the requirements in paragraphs (a)(1) and (2) of this section.

(1) Meet the following general requirements for flow, pressure, pH, and operating temperature measurement devices:

(i) You must collect data using the continuous monitoring system at all times the affected SSI unit is operating and at the intervals specified in paragraph (a)(1)(ii) of this section, except for periods of monitoring system malfunctions that occur during periods specified in §60.4880(a)(7)(i), repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). Any such periods that you do not collect data using the continuous monitoring system constitute a deviation from the monitoring requirements and must be reported in a deviation report.

(ii) You must collect continuous parameter monitoring system data in accordance with §60.13(e)(2).

(iii) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions must not be included in calculations used to report emissions or operating levels. Any such periods must be reported in your annual deviation report.

(iv) Any data collected during periods when the monitoring system is out of control as specified in §60.4880(a)(7)(i), repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out-of-control periods must not be included in calculations used to report emissions or operating levels. Any such periods that do not coincide with a monitoring system malfunction, as defined in §60.4930, constitute a deviation from the monitoring requirements and must be reported in a deviation report.

(v) You must use all the data collected during all periods except those periods specified in paragraphs (a)(1)(iii) and (a)(1)(iv) of this section in assessing the operation of the control device and associated control system.

(vi) Record the results of each inspection, calibration, and validation check.

(2) Operate and maintain your continuous monitoring system according to your monitoring plan required under §60.4880. Additionally:

(i) For carrier gas flow rate monitors (for activated carbon injection), during the performance test conducted pursuant to §60.4885, you must demonstrate that the system is maintained within +/-5 percent accuracy, according to the procedures in appendix A to part 75 of this chapter.

(ii) For carrier gas pressure drop monitors (for activated carbon injection), during the performance test conducted pursuant to §60.4885, you must demonstrate that the system is maintained within +/-5 percent accuracy.

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(b) You must operate and maintain your bag leak detection system in continuous operation according to your monitoring plan required under §60.4880. Additionally:

(1) For positive pressure fabric filter systems that do not duct all compartments of cells to a common stack, a bag leak detection system must be installed in each baghouse compartment or cell.

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

(3) You must initiate procedures to determine the cause of every alarm within 8 hours of the alarm, and you must alleviate the cause of the alarm within 24 hours of

the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:

(i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in particulate matter emissions.

(ii) Sealing off defective bags or filter media.

(iii) Replacing defective bags or filter media or otherwise repairing the control device.

(iv) Sealing off a defective fabric filter compartment.

(v) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system.

(vi) Shutting down the process producing the particulate matter emissions.

(c) You must operate and maintain the continuous parameter monitoring systems specified in paragraphs (a) and (b) of this section in continuous operation according to your monitoring plan required under §60.4880.

(d) If your SSI unit has a bypass stack, you must 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.

Recordkeeping and Reporting

§60.4910 What records must I keep?

You must maintain the items (as applicable) specified in paragraphs (a) through (n) of this section for a period of at least 5 years. All records must be available on site in either paper copy or computer-readable format that can be printed upon request, unless an alternative format is approved by the Administrator.

(a) Date. Calendar date of each record.

(b) Siting. All documentation produced as a result of the siting requirements of §§60.4800 and 60.4805.

(c) Operator Training. Documentation of the operator training procedures and records specified in paragraphs (c)(1) through (c)(4) of this section. You must make available and readily accessible at the facility at all times for all SSI unit operators the documentation specified in paragraph (c)(1) of this section.

(1) Documentation of the following operator training procedures and information:

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

(ii) Procedures for receiving, handling, and feeding sewage sludge.

(iii) Incinerator startup, shutdown, and malfunction preventative and corrective procedures.

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

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

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

(vii) Reporting and recordkeeping procedures.

(viii) Procedures for handling ash.

(ix) A list of the materials burned during the performance test, if in addition to sewage sludge.

(x) For each qualified operator and other plant personnel who may operate the unit according to the provisions of §60.4835(a), the phone and/or pager number at which they can be reached during operating hours.

(2) Records showing the names of SSI unit operators and other plant personnel who may operate the unit according to the provisions of §60.4835(a), as follows:

(i) Records showing the names of SSI unit operators and other plant personnel who have completed review of the information in paragraph (c)(1) of this section as required by §60.4840(b), including the date of the initial review and all subsequent annual reviews.

(ii) Records showing the names of the SSI operators who have completed the operator training requirements under §60.4810, met the criteria for qualification under §60.4820, and maintained or renewed their qualification under §60.4825 or §60.4830. Records must include documentation of training, including the dates of their initial qualification and all subsequent renewals of such qualifications.

(3) Records showing the periods when no qualified operators were accessible for more than 8 hours, but less than 2 weeks, as required in §60.4835(a).

(4) Records showing the periods when no qualified operators were accessible for 2 weeks or more along with copies of reports submitted as required in §60.4835(b).

(d) <u>Air pollution control device inspections.</u> Records of the results of initial and annual air pollution control device inspections conducted as specified in

§§60.4875 and 60.4900(c), including any required maintenance and any repairs not completed within 10 days of an inspection or the timeframe established by the Administrator.

(e) Performance test reports.

(1) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and standards and/or to establish operating limits, as applicable.

(2) Retain a copy of the complete performance test report, including calculations.

(3) Keep a record of the hourly dry sludge feed rate measured during performance test runs, as specified in §60.4900(a)(2)(i).

(4) Keep any necessary records to demonstrate that the performance test was conducted under conditions representative of normal operations, including a record of the moisture content measured as required in §60.4900(a)(2)(ii) for each grab sample taken of the sewage sludge burned during the performance test.

(f) Continuous monitoring data. Records of the following data, as applicable:

(1) For continuous emissions monitoring systems, all 1-hour average concentrations of particulate matter, hydrogen chloride, carbon monoxide, dioxins/furans total mass basis, mercury, nitrogen oxides, sulfur dioxide, cadmium, and lead emissions.

(2) For continuous automated sampling systems, all average concentrations measured for mercury and dioxins/furans total mass basis at the frequencies specified in your monitoring plan.

(3) For continuous parameter monitoring systems:

(i) All 1-hour average values recorded for the following operating parameters, as applicable:

(A) Combustion chamber operating temperature (or afterburner temperature).

(B) If a wet scrubber is used to comply with the rule, pressure drop across each wet scrubber system, liquid flow rate to each wet scrubber used to comply with the emission limit in Table 1 or 2 to this subpart for particulate matter, cadmium, or lead, and scrubber liquid flow rate and scrubber liquid pH for each wet scrubber used to comply with an emission limit in Table 1 or 2 to this subpart for sulfur dioxide or hydrogen chloride.

(C) If an electrostatic precipitator is used to comply with the rule, secondary voltage and secondary amperage of the electrostatic precipitator collection plates, and effluent water flow rate at the outlet of the wet electrostatic precipitator.

(D) If activated carbon injection is used to comply with the rule, sorbent flow rate and carrier gas flow rate or pressure drop, as applicable.

(ii) All daily average values recorded for the feed rate and moisture content of the sewage sludge fed to the sewage sludge incinerator, monitored and calculated as specified in §60.4850(f).

(iii) If a fabric filter is used to comply with the rule, the date, time, and duration of each alarm and the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. You must also record the percent of operating time during each 6-month period that the alarm sounds, calculated as specified in §60.4890.

(iv) For other control devices for which you must establish operating limits under §60.4855, you must maintain data collected for all operating parameters used to determine compliance with the operating limits, at the frequencies specified in your monitoring plan.

(g) Other records for continuous monitoring systems. You must keep the following records, as applicable:

(1) Keep records of any notifications to the Administrator in §60.4915(h)(1) of starting or stopping use of a continuous monitoring system for determining compliance with any emissions limit.

(2) Keep records of any requests under §60.4900(b)(5) that compliance with the emission limits be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen.

(3) If activated carbon injection is used to comply with the rule, the type of sorbent used and any changes in the type of sorbent used.

(h) Deviation Reports. Records of any deviation reports submitted under §60.4915(e) and (f).

(i) Equipment specifications and operation and maintenance requirements. Equipment specifications and related operation and maintenance requirements received from vendors for the incinerator, emission controls, and monitoring equipment.

(j) Inspections, calibrations, and validation checks of monitoring devices. Records of inspections, calibrations, and validations checks of any monitoring devices as required under §§60.4900 and 60.4905.

(k) Monitoring plan and performance evaluations for continuous monitoring systems. Records of the monitoring plans required under §60.4880, and records of performance evaluations required under §60.4885(b)(5).

(l) Less frequent testing. If, consistent with 60.4885(a)(3), you elect to conduct performance tests less frequently than annually, you must keep annual records that document that your emissions in the 2 previous consecutive years were at or below 75 percent of the applicable emission limit in Table 1 or 2 to this subpart, and document that there were no changes in source operations or air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past 2 years.

(m) Use of bypass stack. Records indicating use of the bypass stack, including dates, times, and durations as required under §60.4905(d).

(n) If a malfunction occurs, you must keep a record of the information submitted in your annual report in §60.4915(d)(16).

§60.4915 What reports must I submit?

You must submit the reports specified in paragraphs (a) through (j) of this section. See Table 5 to this subpart for a summary of these reports.

(a) Notification of construction. You must submit a notification prior to commencing construction that includes the four items listed in paragraphs (a)(1) through (a)(4) of this section:

(1) A statement of intent to construct.

(2) The anticipated date of commencement of construction.

(3) All documentation produced as a result of the siting requirements of §60.4805.

(4) Anticipated date of initial startup.

(b) Notification of initial startup. You must submit the information specified in paragraphs (b)(1) through (b)(5) of this section prior to initial startup:

(1) The maximum design dry sludge burning capacity.

(2) The anticipated and permitted maximum dry sludge feed rate.

(3) If applicable, the petition for site-specific operating limits specified in §60.4855.

(4) The anticipated date of initial startup.

(5) The site-specific monitoring plan required under §60.4880, at least 60 days before your initial performance evaluation of your continuous monitoring system.

(6) The site-specific monitoring plan for your ash handling system required under §60.4880, at least 60 days before your initial performance test to demonstrate compliance with your fugitive ash emission limit.

(c) Initial compliance report. You must submit the following information no later than 60 days following the initial performance test.

(1) Company name, physical address, and mailing address.

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

(3) Date of report.

(4) The complete test report for the initial performance test results obtained by using the test methods specified in Table 1 or 2 to this subpart.

(5) If an initial performance evaluation of a continuous monitoring system was conducted, the results of that initial performance evaluation.

(6) The values for the site-specific operating limits established pursuant to §§60.4850 and 60.4855 and the calculations and methods, as applicable, used to establish each operating limit.

(7) If you are using a fabric filter to comply with the emission limits, documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by §60.4850(b).

(8) The results of the initial air pollution control device inspection required in §60.4875, including a description of repairs.

(d) Annual compliance report. You must submit an annual compliance report that includes the items listed in paragraphs (d)(1) through (d)(16) of this section for the reporting period specified in paragraph (d)(3) of this section. You must submit your first annual compliance report no later than 12 months following the submission of the initial compliance report in paragraph (c) of this section. You must submit subsequent annual compliance reports no more than 12 months following the previous annual compliance report. (You may be required to submit these reports (or additional compliance information) more frequently by the title V operating permit required in §60.4920.)

(1) Company name, physical address, and mailing address.

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

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

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

(i) If operating limits were established during the performance test, include the value for each operating limit and, as applicable, the method used to establish each operating limit, including calculations.

(ii) If activated carbon is used during the performance test, include the type of activated carbon used.

(5) For each pollutant and operating parameter

recorded using a continuous monitoring system, the highest average value and lowest average value recorded during the reporting period, as follows:

(i) For continuous emission monitoring systems and continuous automated sampling systems, report the highest and lowest 24-hour average emission value.

(ii) For continuous parameter monitoring systems, report the following values:

(A) For all operating parameters except scrubber liquid pH, the highest and lowest 12-hour average values.

(B) For scrubber liquid pH, the highest and lowest 3-hour average values.

(6) If there are no deviations during the reporting period from any emission limit, emission standard, or operating limit that applies to you, a statement that there were no deviations from the emission limits, emission standard, or operating limits.

(7) Information for bag leak detection systems recorded under §60.4910(f)(3)(iii).

(8) If a performance evaluation of a continuous monitoring system was conducted, the results of that performance evaluation. If new operating limits were

established during the performance evaluation, include your calculations for establishing those operating limits.

(9) If you elect to conduct performance tests less frequently as allowed in §60.4885(a)(3) and did not conduct a performance test during the reporting period, you must include the dates of the last two performance tests, a comparison of the emission level you achieved in the last two performance tests to the 75 percent emission limit threshold specified in §60.4885(a)(3), and a statement as to whether there have been any process changes and whether the process change resulted in an increase in emissions.

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

(11) Results of annual air pollution control device inspections recorded under §60.4910(d) for the reporting period, including a description of repairs.

(12) If there were no periods during the reporting period when your continuous monitoring systems had a malfunction, a statement that there were no periods during which your continuous monitoring systems had a malfunction.

(13) If there were no periods during the reporting

period when a continuous monitoring system was out of control, a statement that there were no periods during which your continuous monitoring system was out of control.

(14) If there were no operator training deviations, a statement that there were no such deviations during the reporting period.

(15) If you did not make revisions to your site-specific monitoring plan during the reporting period, a statement that you did not make any revisions to your site-specific monitoring plan during the reporting period. If you made revisions to your site-specific monitoring plan during the reporting period, a copy of the revised plan.

(16) 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.

(e) Deviation reports.

(1) You must submit a deviation report if:

(i) Any recorded operating parameter level, based on the averaging time specified in Table 3 to this subpart, is above the maximum operating limit or below the minimum operating limit established under this subpart.

(ii) The bag leak detection system alarm sounds for more than 5 percent of the operating time for the 6-month reporting period.

(iii) Any recorded 24-hour block average emissions level is above the emission limit, if a continuous monitoring system is used to comply with an emission limit.

(iv) There are visible emissions of combustion ash from an ash conveying system for more than 5 percent of the hourly observation period.

(v) A performance test was conducted that deviated from any emission limit in Table 1 or 2 to this subpart.

(vi) A continuous monitoring system was out of control.

(vii) You had a malfunction (e.g., continuous monitoring system malfunction) that caused or may have caused any applicable emission limit to be exceeded.

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

(3) For each deviation where you are using a continuous monitoring system to comply with an associated emission limit or operating limit, report the items described in paragraphs (e)(3)(i) through (e)(3)(viii) of this section.

(i) Company name, physical address, and mailing address.

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

(iii) The calendar dates and times your unit deviated from the emission limits, emission standards, or operating limits requirements.

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

(v) Duration and cause of each deviation from the following:

(A) Emission limits, emission standards, operating

limits, and your corrective actions.

(B) Bypass events and your corrective actions.

(vi) Dates, times, and causes for monitor downtime incidents.

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

(viii) If there were periods during which the continuous monitoring system malfunctioned or was out of control, you must include the following information for each deviation from an emission limit or operating limit:

(A) The date and time that each malfunction started and stopped.

(B) The date, time, and duration that each continuous monitoring system was inoperative, except for zero (low-level) and high-level checks.

(C) 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.

(D) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction, during a period when the system as out of control, or during another period.

(E) 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.

(F) 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.

(G) 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 SSI unit at which the continuous monitoring system downtime occurred during that reporting period.

(H) An identification of each parameter and pollutant that was monitored at the SSI unit.

(I) A brief description of the SSI unit.

(J) A brief description of the continuous monitoring system.

(K) The date of the latest continuous monitoring system certification or audit.

(L) A description of any changes in continuous monitoring system, processes, or controls since the last reporting period.

(4) For each deviation where you are not using a continuous monitoring system to comply with the associated emission limit or operating limit, report the following items:

(i) Company name, physical address, and mailing address.

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

(iii) The total operating time of each affected SSI during the reporting period.

(iv) The calendar dates and times your unit deviated from the emission limits, emission standards, or operating limits requirements.

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

(vi) Duration and cause of each deviation from the following:

(A) Emission limits, emission standard, and operating

limits, and your corrective actions.

(B) Bypass events and your corrective actions.

(vii) A copy of any performance test report that showed a deviation from the emission limits or standard.

(viii) A brief description of any malfunction reported in paragraph (e)(1)(vii) of this section, including a description of actions taken during the malfunction to minimize emissions in accordance with 60.11(d) and to correct the malfunction.

(f) Qualified operator deviation.

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

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

(A) A statement of what caused the deviation.

(B) A description of actions taken to ensure that a qualified operator is accessible.

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

(ii) Submit a status report to the Administrator every 4 weeks that includes the three items in paragraphs (f)(1)(ii)(A) through (f)(1)(ii)(C) of this section.

(A) A description of actions taken to ensure that a qualified operator is accessible.

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

(C) Request for approval from the Administrator to continue operation of the SSI unit.

(2) If your unit was shut down by the Administrator, under the provisions of §60.4835(b)(2)(i), due to a failure to provide an accessible qualified operator, you must notify the Administrator within 5 days of meeting §60.4835(b)(2)(ii) that you are resuming operation.

(g) Notification of a force majeure. If a force majeure is about to occur, occurs, or has occurred for which you intend to assert a claim of force majeure:

(1) You must notify the Administrator, in writing as soon as practicable following the date you first knew, or through due diligence should have known that the event may cause or caused a delay in conducting a performance test beyond the regulatory deadline, but the notification must occur before the performance test deadline unless the

initial force majeure or a subsequent force majeure event delays the notice, and in such cases, the notification must occur as soon as practicable.

(2) You must provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in conducting the performance test beyond the regulatory deadline to the force majeure; describe the measures taken or to be taken to minimize the delay; and identify a date by which you propose to conduct the performance test.

(h) Other notifications and reports required. You must submit other notifications as provided by §60.7 and as follows:

(1) You must notify the Administrator 1 month before starting or stopping use of a continuous monitoring system for determining compliance with any emission limit.

(2) You must notify the Administrator at least 30 days prior to any performance test conducted to comply with the provisions of this subpart, to afford the Administrator the opportunity to have an observer present.

(3) As specified in §60.4900(a)(8), you must notify the Administrator at least 7 days prior to the date of a

rescheduled performance test for which notification was previously made in paragraph (h)(2) of this section.

(i) Report submission form.

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

(2) 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/) 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. (j) Changing report dates. If the Administrator agrees, you may change the semi-annual or annual reporting dates. See §60.19(c) for procedures to seek approval to change your reporting date.

Title V Operating Permits

§60.4920 Am I required to apply for and obtain a Title V operating permit for my unit?

Yes, if you are subject to this subpart, you are required to apply for and obtain a Title V operating permit unless you meet the relevant requirements for an exemption specified in §60.4780.

§60.4925 When must I submit a title V permit application for my new SSI unit?

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

(1) For a SSI unit that commenced operation as a new SSI unit as of [INSERT THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER], then a complete title V permit application must be submitted not later than [INSERT THE DATE 1 YEAR AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

(2) For a SSI unit that does not commence operation

as a new SSI unit until after [INSERT THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER], then a complete title V permit application must be submitted not later than 12 months after the date the unit commences operation as a new source.

(b) If your new SSI unit subject to this subpart is subject to title V as a result of some triggering requirement(s) other than this subpart (for example, a unit subject to this subpart may be a major source or part of a major source), then your unit may be required to apply for a title V permit prior to the deadlines specified in paragraph (a) of this section. If more than one requirement triggers a source's obligation to apply for a title V permit, the 12-month timeframe for filing a title V permit application is triggered by the requirement that first causes the source to be subject to title V. (See section 503(c) of the Clean Air Act and 40 CFR 70.3(a) and (b), 40 CFR 70.5(a)(1)(i), 40 CFR 71.3(a) and (b), and 40 CFR 71.5(a)(1)(i).)

(c) A "complete" title V permit application is one that has been determined or deemed complete by the relevant permitting authority under section 503(d) of the Clean Air

Act and 40 CFR 70.5(a)(2) or 40 CFR 71.5(a)(2). You must submit a complete permit application by the relevant application deadline in order to operate after this date in compliance with federal law. (See sections 503(d) and 502(a) of the Clean Air Act and 40 CFR 70.7(b) and 40 CFR 71.7(b).)

Definitions

§60.4930 What definitions must I know?

Terms used but not defined in this subpart are defined in the Clean Air Act and §60.2.

Affected source means a sewage sludge incineration unit as defined in §60.4930.

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.

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

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

Bypass stack means a device used for discharging combustion gases to avoid severe damage to the air pollution control device or other equipment.

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

Continuous automated sampling system means the total equipment and procedures for automated sample collection and sample recovery/analysis to determine a pollutant concentration or emission rate by collecting a single integrated sample(s) or multiple integrated sample(s) of the pollutant (or diluent gas) for subsequent on-or off-site analysis; integrated sample(s) collected are representative of the emissions for the sample time as specified by the applicable requirement.

Continuous emissions monitoring system means a monitoring system for continuously measuring and recording the emissions of a pollutant from an affected facility.

Continuous monitoring system (CMS) means a continuous emissions monitoring system, continuous automated sampling system, continuous parameter monitoring system, or other manual or automatic monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by this subpart. The term refers to the total equipment used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters.

Continuous parameter monitoring system means a monitoring system for continuously measuring and recording operating conditions associated with air pollution control device systems (e.g., operating temperature, pressure, and power).

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 limit, 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 octachlorinated dibenzo-p-dioxins and dibenzofurans.

Electrostatic precipitator or wet electrostatic precipitator means an air pollution control device that uses both electrical forces and, if applicable, water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

Existing sewage sludge incineration unit means a sewage sludge incineration unit the construction of which is commenced on or before October 14, 2010.

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

Fluidized bed incinerator means an enclosed device in which organic matter and inorganic matter in sewage sludge are combusted in a bed of particles suspended in the combustion chamber gas.

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

Modification means a change to an existing SSI unit later than [INSERT THE DATE 6 MONTHS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER] and that meets one of two criteria:

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

(2) Any physical change in the SSI 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.

Modified sewage sludge incineration (SSI) unit means an existing SSI unit that undergoes a modification, as defined in this section.

Multiple hearth incinerator means a circular steel furnace that contains a number of solid refractory hearths and a central rotating shaft; rabble arms that are designed to slowly rake the sludge on the hearth are attached to the rotating shaft. Dewatered sludge enters at the top and proceeds downward through the furnace from hearth to hearth, pushed along by the rabble arms.

New sewage sludge incineration unit means a SSI unit the construction of which is commenced after October 14, 2010 which would be applicable to such unit or a modified solid waste incineration unit.

Operating day means a 24-hour period between 12:00 midnight and the following midnight during which any amount of sewage sludge is combusted at any time in the SSI unit.

Particulate matter means filterable particulate matter emitted from SSI units as measured by Method 5 at 40 CFR part 60, appendix A-3 or Methods 26A or 29 at 40 CFR part 60, appendix A-8.

Power input to the electrostatic precipitator means the product of the test-run average secondary voltage and the test-run average secondary amperage to the electrostatic precipitator collection plates.

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:

(1) A change in the process employed at the wastewater treatment facility associated with the affected SSI unit (e.g., the addition of tertiary treatment at the facility, which changes the method used for disposing of process solids and processing of the sludge prior to incineration).

(2) A change in the air pollution control devices used to comply with the emission limits for the affected SSI unit (e.g., change in the sorbent used for activated carbon injection).

Sewage sludge means solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incineration unit or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

Sewage sludge feed rate means the rate at which sewage sludge is fed into the incinerator unit.

Sewage sludge incineration (SSI) unit means an incineration unit combusting sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter. Sewage sludge incineration unit designs include fluidized bed and multiple hearth. A SSI unit also includes, but is not limited to, the sewage sludge feed system, auxiliary fuel feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The SSI unit includes all ash handling systems connected to the bottom ash handling system. The combustion unit bottom ash system ends at the truck loading station or similar equipment that transfers the ash to final disposal. The SSI unit does not include air pollution control equipment or the stack.

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

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

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

Startup means the period of time between the activation, including the firing of fuels (e.g., natural gas or distillate oil), of the system and the first feed to the unit.

Toxic equivalency means the product of the concentration of an individual dioxin isomer in an environmental mixture and the corresponding estimate of the compound-specific toxicity relative to tetrachlorinated dibenzo-p-dioxin, referred to as the toxic equivalency factor for that compound. Table 4 to this subpart lists the toxic equivalency factors.

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

You means the owner or operator of a SSI unit that meets the criteria in §60.4770.

Table 1 to Subpart LLLL of Part 60—Emission Limits and Standards for New Fluidized Bed Sewage Sludge Incineration Units

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Particulate matter	9.6 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters per run)	Performance test (Method 5 at 40 CFR part 60, appendix A-3; Method 26A or Method 29 at 40 CFR part 60, appendix A-8).
Hydrogen chloride	0.24 parts per million by dry volume	3-run average (Collect a minimum volume of 1 dry standard cubic meters per run)	Performance test (Method 26A at 40 CFR part 60, appendix A-8).

For the air pollutant	**You must meet this emission limit[a]**	**Using these averaging methods and minimum sampling volumes or durations**	**And determining compliance using this method**
Carbon monoxide	27 parts per million by dry volume	24-hour block average (using 1-hour averages of data). For determining compliance with the carbon monoxide concentration limit using carbon monoxide CEMS, the correction to 7 percent oxygen does not apply during periods of startup or shutdown. Use the measured carbon monoxide concentration without correcting for oxygen concentration in averaging with other carbon monoxide concentrations (corrected to 7 percent oxygen) to determine the 24-hour average value.	Continuous emissions monitoring system. (Performance Specification 4B of this part, using a low-range span of 100 ppm and a high-range span of 1000 ppm, and a RA of 0.5 ppm instead of 5 ppm specified in section 13.2. For the cylinder gas audit of Procedure 1, +/- 15% or 0.5 whichever is greater)

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Dioxins/furans (total mass basis); or Dioxins/furans (toxic equivalency basis)[b]	0.013 nanograms per dry standard cubic meter (total mass basis); or 0.0044 nanograms per dry standard cubic meter (toxic equivalency basis)	3-run average (collect a minimum volume of 3 dry standard cubic meters per run)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).

For the air pollutant	**You must meet this emission limit**[a]	**Using these averaging methods and minimum sampling volumes or durations**	**And determining compliance using this method**
Mercury	0.0010 milligrams per dry standard cubic meter	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008)[c], collect a minimum volume of 3 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-8)	Performance test (Method 29 at 40 CFR part 60, appendix A-8; Method 30B at 40 CFR part 60, appendix A-8; or ASTM D6784-02 (Reapproved 2008)[c] .
Oxides of nitrogen	30 parts per million by dry volume	3-run average (Collect sample for a minimum duration of one hour per run)	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Sulfur dioxide	5.3 parts per million by dry volume	3-run average (For Method 6, collect a minimum volume of 100 liters per run. For Method 6C, sample for a minimum duration of one hour per run)	Performance test (Method 6 or 6C at 40 CFR part 40, appendix A-4; or ANSI/ASME PTC 19.10-1981.[c]
Cadmium	0.0011 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use GFAAS or ICP/MS for the analytical finish.
Lead	0.00062 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 3 dry standard cubic meters per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8. Use GFAAS or ICP/MS for the analytical finish.

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Fugitive emissions from ash handling	Visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) for no more than 5 percent of the hourly observation period	Three 1-hour observation periods	Visible emission test (Method 22 of appendix A-7 of this part).

[a] All emission limits are measured at 7 percent oxygen, dry basis at standard conditions.

[b] You have the option to comply with either the dioxin/furan emission limit on a total mass basis or the dioxin/furan emission limit on a toxic equivalency basis.

[c] Incorporated by reference, see §60.17.

Table 2 to Subpart LLLL of Part 60—Emission Limits and Standards for New Multiple Hearth Sewage Sludge Incineration Units

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Particulate matter	60 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 0.75 dry standard cubic meters per run)	Performance test (Method 5 at 40 CFR part 60, appendix A-3; Method 26A or Method 29 at 40 CFR part 60, appendix A-8).
Hydrogen chloride	1.2 parts per million by dry volume	3-run average (For Method 26, collect a minimum volume of 200 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meters per run)	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A-8).

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Carbon monoxide	52 parts per million by dry volume	24-hour block average (using 1-hour averages of data)	Continuous emissions monitoring system. (Performance Specification 4B of this part, using a low-range span of 100 ppm and a high-range span of 1000 ppm, and a relative accuracy of 0.5 ppm instead of 5 ppm specified in section 13.2. For the cylinder gas audit of Procedure 1, +/- 15% or 0.5 whichever is greater).

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Dioxins/furans (total mass basis); or Dioxins/furans (toxic equivalency basis)[b]	0.045 nanograms per dry standard cubic meter (total mass basis); or 0.0022 nanograms per dry standard cubic meter (toxic equivalency basis)	3-run average (collect a minimum volume of 3 dry standard cubic meters per run)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Mercury	0.15 milligrams per dry standard cubic meter	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008)[c] , collect a minimum volume of 1 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-8)	Performance test (Method 29 at 40 CFR part 60, appendix A-8; Method 30B at 40 CFR part 60, appendix A-8; or ASTM D6784-02 (Reapproved 2008)[c], .
Oxides of nitrogen	210 parts per million by dry volume	3-run average (Collect sample for a minimum duration of one hour per run)	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).

For the air pollutant	**You must meet this emission limit**[a]	**Using these averaging methods and minimum sampling volumes or durations**	**And determining compliance using this method**
Sulfur dioxide	26 parts per million by dry volume	3-run average (For Method 6, collect a minimum volume of 200 liters per run. For Method 6C, collect sample for a minimum duration of one hour per run)	Performance test (Method 6 or 6C at 40 CFR part 40, appendix A-4; or ANSI/ASME PTC 19.10-1981.[c]
Cadmium	0.0024 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use GFAAS or ICP/MS for the analytical finish.
Lead	0.0035 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8. Use GFAAS or ICP/MS for the analytical finish.

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Fugitive emissions from ash handling	Visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) for no more than 5 percent of the hourly observation period	Three 1-hour observation periods	Visible emission test (Method 22 of appendix A-7 of this part).

[a]All emission limits are measured at 7 percent oxygen, dry basis at standard conditions.

[b]You have the option to comply with either the dioxin/furan emission limit on a total mass basis or the dioxin/furan emission limit on a toxic equivalency basis.

[c] Incorporated by reference, see §60.17.

Table 3 to Subpart LLLL of Part 60—Operating Parameters for New Sewage Sludge Incineration Units[a]

For these operating	You must establish	And monitor using these minimum frequencies

parameters	these operating limits	Data measurement	Data recording[b]	Data averaging period for compliance
All sewage sludge incineration units				
Combustion chamber operating temperature or afterburner temperature	Minimum combustion chamber operating temperature or afterburner temperature	Continuous	Every 15 minutes	12-hour block.
Fugitive emissions from ash handling	Site-specific operating requirements	Not applicable	No applicable	Not applicable
Scrubber				
Pressure drop across each wet scrubber	Minimum pressure drop	Continuous	Every 15 minutes	12-hour block.
Scrubber liquid flow rate	Minimum flow rate	Continuous	Every 15 minutes	12-hour block.
Scrubber liquid pH	Minimum pH	Continuous	Every 15 minutes	3-hour block.
Fabric Filter				

For these operating parameters	You must establish these operating limits	And monitor using these minimum frequencies		
		Data measurement	Data recording[b]	Data averaging period for compliance
Alarm time of the bag leak detection system alarm	Maximum alarm time of the bag leak detection system alarm (this operating limit is provided in §60.4850 and is not established on a site-specific basis)			

For these operating parameters	You must establish these operating limits	And monitor using these minimum frequencies		
		Data measurement	Data recording[b]	Data averaging period for compliance
Electrostatic precipitator				
Secondary voltage of the electrostatic precipitator collection plates	Minimum power input to the electrostatic precipitator collection plates	Continuous	Hourly	12-hour block
Secondary amperage of the electrostatic precipitator collection plates				
Effluent water flow rate at the outlet of the electrostatic precipitator	Minimum effluent water flow rate at the outlet of the electrostatic precipitator	Hourly	Hourly	12-hour block
Activated carbon injection				

For these operating parameters	You must establish these operating limits	And monitor using these minimum frequencies		
		Data measurement	Data recording[b]	Data averaging period for compliance
Mercury sorbent injection rate	Minimum mercury sorbent injection rate	Hourly	Hourly	12-hour block
Dioxin/furan sorbent injection rate	Minimum dioxin/furan sorbent injection rate			
Carrier gas flow rate or carrier gas pressure drop	Minimum carrier gas flow rate or minimum carrier gas pressure drop	Continuous	Every 15 minutes	12-hour block

[a]As specified in §60.4870, you may use a continuous emissions monitoring system or continuous automated sampling system in lieu of establishing certain operating limits.

[b]This recording time refers to the minimum frequency that the continuous monitor or other measuring device initially records data. For all data recorded every 15 minutes, you must calculate hourly arithmetic averages. For all parameters, you use hourly averages to calculate the 12-hour or 3-hour block average specified in this table for demonstrating compliance. You maintain records of 1-hour averages.

Table 4 to Subpart LLLL of Part 60—Toxic Equivalency Factors

Dioxin/furan isomer	Toxic equivalency factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin	1
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
octachlorinated dibenzo-p-dioxin	0.0003
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.3
1,2,3,7,8-pentachlorinated dibenzofuran	0.03
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01

Dioxin/furan isomer	Toxic equivalency factor
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
octachlorinated dibenzofuran	0.0003

Table 5 to Subpart LLLL of Part 60—Summary of Reporting Requirements for New Sewage Sludge Incineration Units[a]

Report	Due date	Contents	Reference
Notification of construction	Prior to commencing construction	1. Statement of intent to construct 2. Anticipated date of commencement of construction 3. Documentation for siting requirements 4. Anticipated date of initial startup	§60.4915(a)
Notification of initial startup	Prior to initial startup	1. Maximum design dry sewage sludge burning capacity 2. Anticipated and permitted maximum feed rate 3. If applicable, the petition for site-specific operating limits 4. Anticipated date of initial startup	§60.4915(b)

Report	Due date	Contents	Reference
		5. Site-specific monitoring plan 6. The site-specific monitoring plan for your ash handling system	
Initial compliance report	No later than 60 days following the initial performance test	1. Company name and address 2. Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report 3. Date of report 4. Complete test report for the initial performance test 5. Results of CMS[b] performance evaluation 6. The values for the site-specific operating limits and the calculations and methods, as applicable, used to establish each operating limit 7. Documentation of installation of bag leak detection system for	§60.4915(c)

Report	Due date	Contents	Reference
		fabric filter 8. Results of initial air pollution control device inspection, including a description of repairs	
Annual compliance report	No later than 12 months following the submission of the initial compliance report; subsequent reports are to be submitted no more than 12 months following the previous report	1. Company name and address 2. Statement and signature by responsible official 3. Date and beginning and ending dates of report 4. If a performance test was conducted during the reporting period, the results of the test, including any new operating limits and associated calculations and the type of activated carbon used, if applicable 5. For each pollutant and operating parameter recorded using a CMS, the highest	§§60.4915(d)

Report	Due date	Contents	Reference
		recorded 3-hour average and the lowest recorded 3-hour average, as applicable 6. If no deviations from emission limits, emission standards, or operating limits occurred, a statement that no deviations occurred 7. If a fabric filter is used, the date, time, and duration of alarms 8. If a performance evaluation of a CMS was conducted, the results, including any new operating limits and their associated calculations 9. If you met the requirements of §60.4885(a)(3) and did not conduct a performance test, include the dates of the last three performance tests, a	

Report	Due date	Contents	Reference
		comparison to the 50 percent emission limit threshold of the emission level achieved in the last three performance tests, and a statement as to whether there have been any process changes 10. Documentation of periods when all qualified SSI unit operators were unavailable for more than 8 hours but less than 2 weeks 11. Results of annual pollutions control device inspections, including description of repairs 12. If there were no periods during which your CMSs had malfunctions, a statement that there were no periods during which your CMSs had malfunctions 13. If there were no periods	

Report	Due date	Contents	Reference
		during which your CMSs were out of control, a statement that there were no periods during which your CMSs were out of control 14. If there were no operator training deviations, a statement that there were no such deviations 15. Information on monitoring plan revisions, including a copy of any revised monitoring plan	
Deviation report (deviations from emission limits, emission standards, or operating limits, as specified in §60.4915(e)(1))	By August 1 of a calendar year for data collected during the first half of the calendar year; by February 1 of a calendar year for data collected during the second half of the calendar year	<u>If using a CMS:</u> 1. Company name and address 2. Statement by a responsible official 3. The calendar dates and times your unit deviated from the emission limits or operating limits 4. The averaged and recorded data for those dates 5. Duration and cause of each	§60.4915(e)

Report	Due date	Contents	Reference
		deviation 6. Dates, times, and causes for monitor downtime incidents 7. A copy of the operating parameter monitoring data during each deviation and any test report that documents the emission levels 8. For periods of CMS malfunction or when a CMS was out of control, you must include the information specified in §60.4915(e)(3)(viii) If not using a CMS: 1. Company name and address 2. Statement by a responsible official 3. The total operating time of each affected SSI 4. The calendar dates and times your unit deviated from the emission limits, emission	

Report	Due date	Contents	Reference
		standard, or operating limits 5. The averaged and recorded data for those dates 6. Duration and cause of each deviation 7. A copy of any performance test report that showed a deviation from the emission limits or standards 8. A brief description of any malfunction, a description of actions taken during the malfunction to minimize emissions, and corrective action taken	
Notification of qualified operator deviation (if all qualified operators are not accessible for 2 weeks or more)	Within 10 days of deviation	1. Statement of cause of deviation 2. Description of actions taken to ensure that a qualified operator will be available 3. The date when a qualified operator will be accessible	§60.4915(f)

Report	**Due date**	**Contents**	**Reference**
Notification of status of qualified operator deviation	Every 4 weeks following notification of deviation	1. Description of actions taken to ensure that a qualified operator is accessible 2. The date when you anticipate that a qualified operator will be accessible 3. Request for approval to continue operation	§60.4915(f)
Notification of resumed operation following shutdown (due to qualified operator deviation and as specified in §60.4835(b)(2)(i)	Within 5 days of obtaining a qualified operator and resuming operation	**1.** Notification that you have obtained a qualified operator and are resuming operation	§60.4915(f)
Notification of a force majeure	As soon as practicable following the date you first knew, or through due diligence should have known that the	**1.** Description of the force majeure event **2.** Rationale for attributing the delay in conducting the performance test beyond the regulatory deadline to the force majeure	§60.4915(g)

Report	Due date	Contents	Reference
	event may cause or caused a delay in conducting a performance test beyond the regulatory deadline; the notification must occur before the performance test deadline unless the initial force majeure or a subsequent force majeure event delays the notice, and in such cases, the notification must occur as soon as practicable	**3.** Description of the measures taken or to be taken to minimize the delay **4.** Identification of the date by which you propose to conduct the performance test	
Notification of intent to start or stop use of a CMS	1 month before starting or stopping use of a CMS	**1.** Intent to start or stop use of a CMS	§60.4915(h)
Notification of intent to	At least 30 days prior to the	**1.** Intent to conduct a performance	

Report	**Due date**	**Contents**	**Reference**
conduct a performance test	performance test	test to comply with this subpart	
Notification of intent to conduct a rescheduled performance test	At least 7 days prior to the date of a rescheduled performance test	**1.** Intent to conduct a rescheduled performance test to comply with this subpart	

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

[b]CMS means continuous monitoring system.

Subpart MMMM--Emission Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units

Sec.

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Introduction

§60.5000 What is the purpose of this subpart?

This subpart establishes emission guidelines and compliance schedules for the control of emissions from sewage sludge incineration (SSI) units. The pollutants addressed by these emission guidelines are listed in Tables 2 and 3 to 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. To the extent any requirement of this subpart is inconsistent with the requirements of subpart A of this part, the requirements of this subpart will apply.

§60.5005 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 SSI units that commenced construction on or before October 14, 2010, you must submit a state plan to U.S. Environmental Protection Agency (EPA) that implements the emission guidelines contained in this subpart.

(b) You must submit the state plan to EPA by [INSERT THE DATE 12 MONTHS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

§60.5010 Is a state plan required for all states?

No. You are not required to submit a state plan if there are no SSI units for which construction commenced on or before October 14, 2010 in your state, and you submit a negative declaration letter in place of the state plan.

§60.5015 What must I include in my state plan?

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

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

(2) Inventory of emissions from affected SSI units in your state.

(3) Compliance schedules for each affected SSI unit.

(4) Emission limits, emission standards, operator training and qualification requirements, and operating limits for affected SSI units that are at least as protective as the emission guidelines contained in this subpart.

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

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

(7) Provision for state progress reports to EPA.

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

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

(b) Your state plan may deviate from the format and content of the emission guidelines contained in this subpart. However, if your state plan does deviate in content, you must demonstrate that your state plan is at least as protective as the emission guidelines contained in this subpart. Your state plan must address regulatory applicability, increments of progress for retrofit, operator training and qualification, emission limits and standards, performance testing, operating limits, monitoring, and recordkeeping and reporting.

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

<u>§60.5020 Is there an approval process for my state plan?</u>

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

<u>§60.5025 What if my state plan is not approvable?</u>

If you do not submit an approvable state plan (or a negative declaration letter) by [<u>INSERT THE DATE 24 MONTHS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE</u>

FEDERAL REGISTER], EPA will develop a federal plan according to §60.27 to implement the emission guidelines contained in this subpart. Owners and operators of SSI units not covered by an approved state plan must comply with the federal plan. The federal plan is an interim action and will be automatically withdrawn when your state plan is approved.

§60.5030 Is there an approval process for a negative declaration letter?

No. The EPA has no formal review process for negative declaration letters. Once your negative declaration letter has been received, EPA will place a copy in the public docket and publish a notice in the Federal Register. If, at a later date, a SSI unit for which construction commenced on or before October 14, 2010 is found in your state, the federal plan implementing the emission guidelines contained in this subpart would automatically apply to that SSI unit until your state plan is approved.

§60.5035 What compliance schedule must I include in my state plan?

(a) For SSI units that commenced construction on or before October 14, 2010, your state plan must include compliance schedules that require SSI 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 (a)(2) of this section.

(1) [INSERT THE DATE 5 YEARS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

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

(b) For compliance schedules that extend more than 1 year following the effective date of state plan approval, state plans must include dates for enforceable increments of progress as specified in §60.5090.

§60.5040 Are there any state plan requirements for this subpart that apply instead of the requirements specified in subpart B?

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

(a) State plans developed to implement this subpart must be as protective as the emission guidelines contained in this subpart. State plans must require all SSI units to comply by the dates specified in §60.5035. This applies instead of the option for case-by-case less stringent emission standards and longer compliance schedules in §60.24(f).

(b) State plans developed to implement this subpart are required to include two increments of progress for the affected SSI units. These two minimum increments are the final control plan submittal date and final compliance date in §60.21(h)(1) and (5). This applies instead of the requirement of §60.24(e)(1) that would require a state plan to include all five increments of progress for all SSI units.

§60.5045 In lieu of a state plan submittal, are there other acceptable option(s) for a state to meet its 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 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 §60.5015(a)(1), (a)(2), and (a)(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 that 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 SSI 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, provided 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.

§60.5050 What authorities will not be delegated to state, local, or tribal agencies?

The authorities that will not be delegated to state, local, or tribal agencies are specified in paragraphs (a) through (g) of this section.

(a) Approval of alternatives to the emission limits and standards in Tables 2 and 3 to this subpart and operating limits established under §60.5175 or §60.5190.

(b) Approval of major alternatives to test methods.

(c) Approval of major alternatives to monitoring.

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

(e) The requirements in §60.5175.

(f) The requirements in §60.5155(b)(2).

(g) Performance test and data reduction waivers under §60.8(b).

§60.5055 Does this subpart directly affect SSI unit owners and operators in my state?

(a) No. This subpart does not directly affect SSI unit owners and operators in your state. However, SSI unit owners and operators must comply with the state plan you develop to implement the emission guidelines contained in this subpart. States may choose to incorporate the model rule text directly in their state plan.

(b) If you do not submit an approvable plan to implement and enforce the guidelines contained in this subpart by [INSERT THE DATE 12 MONTHS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER], EPA will implement and enforce a federal plan, as provided in §60.5025, to ensure that each unit within your state that commenced construction on or before October 14, 2010 reaches compliance with all the provisions of this subpart by the dates specified in §60.5035.

Applicability of State Plans

§60.5060 What SSI units must I address in my state plan?

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

(1) SSI units in your state that commenced construction on or before October 14, 2010.

(2) SSI units that meet the definition of a SSI unit as defined in §60.5250.

(3) SSI units not exempt under §60.5065.

(b) If the owner or operator of a SSI unit makes changes that meet the definition of modification after [INSERT THE DATE 6 MONTHS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER], the SSI unit becomes subject to subpart LLLL of this part and the state plan no longer applies to that unit.

(c) If the owner or operator of a SSI unit makes physical or operational changes to a SSI unit for which construction commenced on or before [INSERT THE DATE 6 MONTHS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER] primarily to comply with your state plan, subpart LLLL of this part does not apply to that unit. Such changes do not qualify as modifications under subpart LLLL of this part.

§60.5065 What SSI units are exempt from my state plan?

This subpart exempts combustion units that incinerate sewage sludge and are not located at a wastewater treatment facility designed to treat domestic sewage sludge. These units may be subject to another subpart of this part (e.g., subpart CCCC of this part). The owner or operator of such a combustion unit must notify the Administrator of an exemption claim under this section.

Use of Model Rule

§60.5070 What is the "model rule" in this subpart?

(a) The model rule is the portion of these emission guidelines (§§60.5085 through 60.5250) that addresses the regulatory requirements applicable to SSI units. The model rule provides these requirements in regulation format. You must develop a state plan that is at least as protective as the model rule. You may use the model rule language as part of your state plan. Alternative language may be used in your state plan if you demonstrate that the alternative language is at least as protective as the model rule contained in this subpart.

(b) In the model rule of §§60.5085 through 60.5250, "you" and "Administrator" have the meaning specified in

§60.5250.

§60.5075 How does the model rule relate to the required elements of my state plan?

Use the model rule to satisfy the state plan requirements specified in §60.5015(a)(3) through (a)(5).

§60.5080 What are the principal components of the model rule?

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

(a) Increments of progress toward compliance.

(b) Operator training and qualification.

(c) Emission limits, emission standards, and operating limits.

(d) Initial compliance requirements.

(e) Continuous compliance requirements.

(f) Performance testing, monitoring, and calibration requirements.

(g) Recordkeeping and reporting.

(h) Definitions.

(i) Tables.

Model Rule—Increments of Progress

§60.5085 What are my requirements for meeting increments of progress and achieving final compliance?

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

(a) Submit a final control plan.

(b) Achieve final compliance.

§60.5090 When must I complete each increment of progress?

Table 1 to this subpart specifies compliance dates for each increment of progress.

§60.5095 What must I include in the notifications of achievement of increments of progress?

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

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

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

(c) Signature of the owner or operator of the SSI unit.

§60.5100 When must I submit the notifications of achievement of increments of progress?

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

§60.5105 What if I do not meet an increment of progress?

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

§60.5110 How do I comply with the increment of progress for submittal of a control plan?

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

(a) Submit the final control plan that includes the four items described in paragraphs (a)(1) through (a)(4) of this section.

(1) A description of the devices for air pollution control and process changes that you will use to comply

with the emission limits and standards and other requirements of this subpart.

(2) The type(s) of waste to be burned, if waste other than sewage sludge is burned in the unit.

(3) The maximum design sewage sludge burning capacity.

(4) If applicable, the petition for site-specific operating limits under §60.5175.

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

§60.5115 How do I comply with the increment of progress for achieving final compliance?

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

§60.5120 What must I do if I close my SSI unit and then restart it?

(a) If you close your SSI unit but will restart it prior to the final compliance date in your state plan, you must meet the increments of progress specified in §60.5085.

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

§60.5125 What must I do if I plan to permanently close my SSI unit and not restart it?

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

Model Rule—Operator Training and Qualification

§60.5130 What are the operator training and qualification requirements?

(a) A SSI unit cannot be operated unless a fully trained and qualified SSI unit operator is accessible, either at the facility or can be at the facility within 1 hour. The trained and qualified SSI unit operator may operate the SSI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified SSI unit operators are temporarily not accessible, you must follow the procedures in §60.5155.

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

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

(1) Training on the 10 subjects listed in paragraphs (c)(1)(i) through (c)(1)(x) of this section.

(i) Environmental concerns, including types of emissions.

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

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

(iv) Combustion controls and monitoring.

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

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

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

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

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

(x) Pollution prevention.

(2) An examination designed and administered by the state-approved program.

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

§60.5135 When must the operator training course be completed?

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

(a) The final compliance date (Increment 2).

(b) Six months after your SSI unit startup.

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

§60.5140 How do I obtain my operator qualification?

(a) You must obtain operator qualification by completing a training course that satisfies the criteria under §60.5130(b).

(b) Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under §60.5130(c)(2).

§60.5145 How do I maintain my operator qualification?

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

(a) Update of regulations.

(b) Incinerator operation, including startup and shutdown procedures, sewage sludge feeding, and ash handling.

(c) Inspection and maintenance.

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

(e) Discussion of operating problems encountered by attendees.

§60.5150 How do I renew my lapsed operator qualification?

You must renew a lapsed operator qualification before you begin operation of a SSI unit by one of the two methods specified in paragraphs (a) and (b) of this section.

(a) For a lapse of less than 3 years, you must complete a standard annual refresher course described in §60.5145.

(b) For a lapse of 3 years or more, you must repeat the initial qualification requirements in §60.5140(a).

§60.5155 What if all the qualified operators are temporarily not accessible?

If a qualified operator is not at the facility and cannot be at the facility within 1 hour, you must meet the criteria specified in either paragraph (a) or (b) of this section, depending on the length of time that a qualified operator is not accessible.

(a) When a qualified operator is not accessible for more than 8 hours, the SSI unit may be operated for less than 2 weeks by other plant personnel who are familiar with the operation of the SSI unit and who have completed a review of the information specified in §60.5160 within the past 12 months. However, you must record the period when a qualified operator was not accessible and include this deviation in the annual report as specified under §60.5235(d).

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

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

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

(i) If the Administrator notifies you that your request to continue operation of the SSI unit is disapproved, the SSI unit may continue operation for 30 days, and then must cease operation.

(ii) Operation of the unit may resume if a qualified operator is accessible as required under §60.5130(a). You must notify the Administrator within 5 days of having resumed operations and of having a qualified operator accessible.

§60.5160 What site-specific documentation is required and how often must it be reviewed by qualified SSI operators and other plant personnel who may operate the unit according to the provisions of §60.5155(a)?

(a) You must maintain at the facility the documentation of the operator training procedures specified under §60.5230(c)(1) and make the documentation readily accessible to all SSI unit operators.

(b) You must establish a program for reviewing the information listed in §60.5230(c)(1) with each qualified incinerator operator and other plant personnel who may operate the unit according to the provisions of §60.5155(a), according to the following schedule:

(1) The initial review of the information listed in §60.5230(c)(1) must be conducted within 6 months after the

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

(2) Subsequent annual reviews of the information listed in §60.5230(c)(1) must be conducted no later than 12 months following the previous review.

Model Rule—Emission Limits, Emission Standards, and Operating Limits and Requirements

§60.5165 What emission limits and standards must I meet and by when?

You must meet the emission limits and standards specified in Table 2 or 3 to this subpart by the final compliance date under the approved state plan, federal plan, or delegation, as applicable. The emission limits and standards apply at all times the unit is operating and during periods of malfunction. The emission limits and standards apply to emissions from a bypass stack or vent while sewage sludge is in the combustion chamber (i.e., until the sewage sludge feed to the combustor has been cut off for a period of time not less than the sewage sludge incineration residence time.

§60.5170 What operating limits and requirements must I meet and by when?

You must meet, as applicable, the operating limits and requirements specified in paragraphs (a) through (d) and (h) of this section, according to the schedule specified in paragraph (e) of this section. The operating parameters for which you will establish operating limits for a wet scrubber, fabric filter, electrostatic precipitator, or activated carbon injection are listed in Table 4 to this subpart. You must comply with the operating requirements in paragraph (f) of this section and the requirements in paragraph (g) of this section for meeting any new operating limits, re-established in §60.5210. The operating limits apply at all times that sewage sludge is in the combustion chamber (i.e., until the sewage sludge feed to the combustor has been cut off for a period of time not less than the sewage sludge incineration residence time).

(a) You must meet a site-specific operating limit for minimum operating temperature of the combustion chamber (or afterburner combustion chamber) that you establish in §60.5190.

(b) If you use a wet scrubber, electrostatic precipitator, activated carbon injection, or afterburner to comply with an emission limit, you must meet the site-specific operating limits that you establish in §60.5190 for each operating parameter associated with each air pollution control device.

(c) If you use a fabric filter to comply with the emission limits, you must install the bag leak detection system specified in §§60.5200(b) and 60.5225(b)(3)(i) and operate the bag leak detection system such that the alarm does not sound more than 5 percent of the operating time during a 6-month period. You must calculate the alarm time as specified in §60.5210(a)(2)(i).

(d) You must meet the operating requirements in your site-specific fugitive emission monitoring plan, submitted as specified in §60.5200(d) to ensure that your ash handling system will meet the emission standard for fugitive emissions from ash handling.

(e) You must meet the operating limits and requirements specified in paragraphs (a) through (d) of this section by the final compliance date under the approved state plan, federal plan, or delegation, as applicable.

(f) You must monitor the feed rate and moisture content of the sewage sludge fed to the sewage sludge incinerator, as specified in paragraphs (f)(1) and (f)(2) of this section.

(1) Continuously monitor the sewage sludge feed rate and calculate a daily average for all hours of operation during each 24-hour period. Keep a record of the daily average feed rate, as specified in §60.5230(f)(3)(ii).

(2) Take at least one grab sample per day of the sewage sludge fed to the sewage sludge incinerator. If you take more than one grab sample in a day, calculate the daily average for the grab samples. Keep a record of the daily average moisture content, as specified in §60.5230(f)(3)(ii).

(g) For the operating limits and requirements specified in paragraphs (a) through (d) and (h) of this section, you must meet any new operating limits and requirements, re-established according to §60.5210(d).

(h) If you use an air pollution control device other than a wet scrubber, fabric filter, electrostatic precipitator, or activated carbon injection to comply with the emission limits in Table 2 or 3 to this subpart, you must meet any site-specific operating limits or requirements that you establish as required in §60.5175.

§60.5175 How do I establish operating limits if I do not use a wet scrubber, fabric filter, electrostatic precipitator, activated carbon injection, or afterburner, or if I limit emissions in some other manner, to comply with the emission limits?

If you use an air pollution control device other than a wet scrubber, fabric filter, electrostatic precipitator, activated carbon injection, or afterburner, or limit emissions in some other manner (e.g., materials balance) to comply with the emission limits in §60.5165, you must meet the requirements in paragraphs (a) and (b) of this section.

(a) Meet the applicable operating limits and requirements in §60.4850, and establish applicable operating limits according to §60.5190.

(b) Petition the Administrator for specific operating parameters, operating limits, and averaging periods to be established during the initial performance test and to be monitored continuously thereafter.

(1) You are responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test.

You must not conduct the initial performance test until after the petition has been approved by the Administrator, and you must comply with the operating limits as written, pending approval by the Administrator. Neither submittal of an application, nor the Administrator's failure to approve or disapprove the application relieves you of the responsibility to comply with any provision of this subpart.

(2) Your petition must include the five items listed in paragraphs (b)(2)(i) through (b)(2)(v) of this section.

(i) Identification of the specific parameters you propose to monitor.

(ii) 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.

(iii) A discussion of how you will establish the upper and/or lower values for these parameters that will establish the operating limits on these parameters, including a discussion of the averaging periods associated with those parameters for determining compliance.

(iv) 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.

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

§60.5180 Do the emission limits, emission standards, and operating limits apply during periods of startup, shutdown, and malfunction?

The emission limits and standards apply at all times and during periods of malfunction. The operating limits apply at all times that sewage sludge is in the combustion chamber (i.e., until the sewage sludge feed to the combustor has been cut off for a period of time not less than the sewage sludge incineration residence time). For determining compliance with the CO concentration limit using CO CEMS, the correction to 7 percent oxygen does not apply during periods of startup or shutdown. Use the measured CO concentration without correcting for oxygen concentration in averaging with other CO concentrations (corrected to 7 percent O_2) to determine the 24-hour average value.

§60.5181 How do I establish an affirmative defense for exceedance of an emission limit or standard during malfunction?

In response to an action to enforce the numerical emission standards set forth in paragraph §60.5165, you may assert an affirmative defense to a claim for civil penalties for exceedances of emission limits that are caused by malfunction, as defined in §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 the conditions in paragraphs (a)(1) through (a)(9) of this section are met.

(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 limits 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 monitoring and 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 affected 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) The owner or operator of the SSI unit 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 2 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 §60.5165 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.

Model Rule—Initial Compliance Requirements

§60.5185 How and when do I demonstrate initial compliance with the emission limits and standards?

To demonstrate initial compliance with the emission limits and standards in Table 2 or 3 to this subpart, use the procedures specified in paragraph (a) of this section. In lieu of using the procedures specified in paragraph (a) of this section, you have the option to demonstrate initial compliance using the procedures specified in paragraph (b) of this section for particulate matter, hydrogen chloride, carbon monoxide, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, lead, and fugitive emissions from ash handling. You must meet the requirements of paragraphs (a) and (b) of this section, as applicable, and paragraphs (c) through (e) of this section, according to the performance testing, monitoring, and calibration requirements in §60.5220(a) and (b).

(a) Demonstrate initial compliance using the performance test required in §60.8. You must demonstrate that your SSI unit meets the emission limits and standards specified in Table 2 or 3 to this subpart for particulate matter, hydrogen chloride, carbon monoxide, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, lead, and fugitive emissions from ash handling using the performance test. The initial performance test must be conducted using the test methods, averaging methods, and minimum sampling volumes or durations specified in Table 2 or 3 to this subpart and according to the testing, monitoring, and calibration requirements specified in §60.5220(a).

(1) Except as provided in paragraph (e) of this section, you must demonstrate that your SSI unit meets the emission limits and standards specified in Table 2 or 3 to this subpart by your final compliance date (see Table 1 to this subpart).

(2) You may use the results from a performance test conducted within the 2 previous years that was conducted under the same conditions and demonstrated compliance with the emission limits and standards in Table 2 or 3 to this subpart, provided no process changes have been made since you conducted that performance test. However, you must continue to meet the operating limits established during the most recent performance test that demonstrated compliance with the emission limits and standards in Table 2 or 3 to this subpart. The performance test must have used the test methods specified in Table 2 or 3 to this subpart.

(b) Demonstrate initial compliance using a continuous emissions monitoring system or continuous automated sampling system. The option to use a continuous emissions monitoring system for hydrogen chloride, dioxins/furans, cadmium, or lead takes effect on the date a final performance specification applicable to hydrogen chloride, dioxins/furans, cadmium, or lead is published in the Federal Register. The option to use a continuous automated sampling system for dioxins/furans takes effect on the date a final performance specification for such a continuous automated sampling system is published in the Federal Register. Collect data as specified in §60.5220(b)(6) and use the following procedures:

(1) To demonstrate initial compliance with the emission limits specified in Table 2 or 3 to this subpart for particulate matter, hydrogen chloride, carbon monoxide, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, and lead, you may substitute the use of a continuous monitoring system in lieu of conducting the initial performance test required in paragraph (a) of this section, as follows:

(i) You may substitute the use of a continuous emissions monitoring system for any pollutant specified in paragraph (b)(1) of this section in lieu of conducting the initial performance test for that pollutant in paragraph (a) of this section. For determining compliance with the carbon monoxide concentration limit using carbon monoxide CEMS, the correction to 7 percent oxygen does not apply during periods of startup or shutdown. Use the measured carbon monoxide concentration without correcting for oxygen concentration in averaging with other carbon monoxide concentrations (corrected to 7 percent oxygen) to determine the 24-hour average value.

(ii) You may substitute the use of a continuous automated sampling system for mercury or dioxins/furans in lieu of conducting the annual mercury or dioxin/furan performance test in paragraph (a) of this section.

(2) If you use a continuous emissions monitoring system to demonstrate compliance with an applicable emission limit in Table 2 or 3 to this subpart, as described in paragraph (b)(1) of this section, you must use the continuous emissions monitoring system and follow the requirements specified in §60.5220(b). You must measure emissions according to §60.13 to calculate 1-hour arithmetic averages, corrected to 7 percent oxygen (or carbon dioxide). You must demonstrate initial compliance

using a 24-hour block average of these 1-hour arithmetic average emission concentrations, calculated using Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7.

(3) If you use a continuous automated sampling system to demonstrate compliance with an applicable emission limit in Table 2 or 3 to this subpart, as described in paragraph (b)(1) of this section, you must:

(i) Use the continuous automated sampling system specified in §60.58b(p) and (q), and measure and calculate average emissions corrected to 7 percent oxygen (or carbon dioxide) according to §60.58b(p) and your monitoring plan.

(A) Use the procedures specified in §60.58b(p) to calculate 24-hour block averages to determine compliance with the mercury emission limit in Table 2 to this subpart.

(B) Use the procedures specified in §60.58b(p) to calculate 2-week block averages to determine compliance with the dioxin/furan (total mass basis or toxic equivalency basis) emission limit in Table 2 to this subpart.

(ii) Comply with the provisions in §60.58b(q) to develop a monitoring plan. For mercury continuous automated sampling systems, you must use Performance Specification 12B of appendix B of part 75 and Procedure 5 of appendix F of this part.

(4) Except as provided in paragraph (e) of this section, you must complete your initial performance evaluations required under your monitoring plan for any continuous emissions monitoring systems and continuous automated sampling systems by your final compliance date (see Table 1 to this subpart). Your performance evaluation must be conducted using the procedures and acceptance criteria specified in §60.5200(a)(3).

(c) To demonstrate initial compliance with the dioxins/furans toxic equivalency emission limit in Table 2 or 3 to this subpart, determine dioxins/furans toxic equivalency as follows:

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

(2) Multiply the concentration of each dioxin/furan (tetra- through octa-chlorinated) isomer by its corresponding toxic equivalency factor specified in Table 5 to this subpart. (3) Sum the products calculated in

accordance with paragraph (c)(2) of this section to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

(d) Submit an initial compliance report, as specified in §60.5235(b).

(e) If you demonstrate initial compliance using the performance test specified in paragraph (a) of this section, then the provisions of this paragraph (e) apply. If a force majeure is about to occur, occurs, or has occurred for which you intend to assert a claim of force majeure, you must notify the Administrator in writing as specified in §60.5235(g). You must conduct the initial performance test as soon as practicable after the force majeure occurs. The Administrator will determine whether or not to grant the extension to the initial performance test deadline, and will notify you in writing of approval or disapproval of the request for an extension as soon as practicable. Until an extension of the performance test deadline has been approved by the Administrator, you remain strictly subject to the requirements of this subpart.

§60.5190 How do I establish my operating limits?

(a) You must establish the site-specific operating limits specified in paragraphs (b) through (h) of this section or established in §60.5175, as applicable, during your initial performance tests required in §60.5185. You must meet the requirements in §60.5210(d) to confirm these operating limits or re-establishre-establish new operating limits using operating data recorded during any performance tests or performance evaluations required in §60.5205. You must follow the data measurement and recording frequencies and data averaging times specified in Table 4 to this subpart or as established in §60.5175, and you must follow the testing, monitoring, and calibration requirements specified in §§60.5220 and 60.5225 or established in §60.5175. You are not required to establish operating limits for the operating parameters listed in Table 4 to this subpart for a control device if you use a continuous monitoring system to demonstrate compliance with the emission limits in Table 2 or 3 to this subpart for the applicable pollutants, as follows:

(1) For a scrubber designed to control emissions of hydrogen chloride or sulfur dioxide, you are not required to establish an operating limit and monitor scrubber liquid flow rate or scrubber liquid pH if you use the continuous

monitoring system specified in §§60.4865(b) and 60.4885(b) to demonstrate compliance with the emission limit for hydrogen chloride or sulfur dioxide.

(2) For a scrubber designed to control emissions of particulate matter, cadmium, and lead, you are not required to establish an operating limit and monitor pressure drop across the scrubber or scrubber liquid flow rate if you use the continuous monitoring system specified in §§60.4865(b) and 60.4885(b) to demonstrate compliance with the emission limit for particulate matter, cadmium, and lead.

(3) For an electrostatic precipitator designed to control emissions of particulate matter, cadmium, and lead, you are not required to establish an operating limit and monitor secondary voltage of the collection plates, secondary amperage of the collection plates, or effluent water flow rate at the outlet of the electrostatic precipitator if you use the continuous monitoring system specified in §§60.4865(b) and 60.4885(b) to demonstrate compliance with the emission limit for particulate matter, lead, and cadmium.

(4) For an activated carbon injection system designed to control emissions of mercury, you are not required to

establish an operating limit and monitor sorbent injection rate and carrier gas flow rate (or carrier gas pressure drop) if you use the continuous monitoring system specified in §§60.4865(b) and 60.4885(b) to demonstrate compliance with the emission limit for mercury.

(5) For an activated carbon injection system designed to control emissions of dioxins/furans, you are not required to establish an operating limit and monitor sorbent injection rate and carrier gas flow rate (or carrier gas pressure drop) if you use the continuous monitoring system specified in §§60.4865(b) and 60.4885(b) to demonstrate compliance with the emission limit for dioxins/furans (total mass basis or toxic equivalency basis).

(b) Minimum pressure drop across each wet scrubber used to meet the particulate matter, lead, and cadmium emission limits in Table 2 or 3 to this subpart, equal to the lowest 4-hour average pressure drop across each such wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter, lead, and cadmium emission limits..

(c) Minimum scrubber liquid flow rate (measured at the inlet to each wet scrubber), equal to the lowest 4-hour average liquid flow rate measured during the most recent performance test demonstrating compliance with all applicable emission limits. (d) Minimum scrubber liquid pH for each wet scrubber used to meet the sulfur dioxide or hydrogen chloride emission limits in Table 2 or 3 to this subpart, equal to the lowest 1-hour average scrubber liquid pH measured during the most recent performance test demonstrating compliance with the sulfur dioxide and hydrogen chloride emission limits.

(e) Minimum combustion chamber operating temperature (or minimum afterburner temperature), equal to the lowest 4-hour average combustion chamber operating temperature (or afterburner temperature) measured during the most recent performance test demonstrating compliance with all applicable emission limits.

(f) Minimum power input to the electrostatic precipitator collection plates, equal to the lowest 4-hour average secondary electric power measured during the most recent performance test demonstrating compliance with the particulate matter, lead, and cadmium emission limits. Power input must be calculated as the product of the secondary voltage and secondary amperage to the electrostatic precipitator collection plates. Both the secondary voltage and secondary amperage must be recorded during the performance test. (g) Minimum effluent water flow rate at the outlet of the electrostatic precipitator, equal to the lowest 4-hour average effluent water flow rate at the outlet of the electrostatic precipitator measured during the most recent performance test demonstrating compliance with the particulate matter, lead, and cadmium emission limits. (h) For activated carbon injection, establish the site-specific operating limits specified in paragraphs (h)(1) through (h)(3) of this section.

(1) Minimum mercury sorbent injection rate, equal to the lowest 4-hour average mercury sorbent injection rate measured during the most recent performance test demonstrating compliance with the mercury emission limit.

(2) Minimum dioxin/furan sorbent injection rate, equal to the lowest 4-hour average dioxin/furan sorbent injection rate measured during the most recent performance test demonstrating compliance with the dioxin/furan (total mass basis or toxic equivalency basis) emission limit.

(3) Minimum carrier gas flow rate or minimum carrier

gas pressure drop, as follows:

(i) Minimum carrier gas flow rate, equal to the lowest 4-hour average carrier gas flow rate measured during the most recent performance test demonstrating compliance with the applicable emission limit..

(ii) Minimum carrier gas pressure drop, equal to the lowest 4-hour average carrier gas flow rate measured during the most recent performance test demonstrating compliance with the applicable emission limit.§60.5195 By what date must I conduct the initial air pollution control device inspection and make any necessary repairs?

(a) You must conduct an air pollution control device inspection according to §60.5220(c) by the final compliance date under the approved state plan, federal plan, or delegation, as applicable. For air pollution control devices installed after the final compliance date, you must conduct the air pollution control device inspection within 60 days after installation of the control device.

(b) Within 10 operating days following the air pollution control device inspection under paragraph (a) of this section, all necessary repairs must be completed unless you obtain written approval from the Administrator establishing a date whereby all necessary repairs of the SSI unit must be completed.

§60.5200 How do I develop a site-specific monitoring plan for my continuous monitoring systems, bag leak detection system, and ash handling system, and by what date must I conduct an initial performance evaluation of my continuous monitoring systems and bag leak detection system?

You must develop and submit to the Administrator for approval a site-specific monitoring plan for each continuous monitoring system required under this subpart, according to the requirements in paragraphs (a) through (c) of this section. This requirement also applies to you if you petition the Administrator for alternative monitoring parameters under §60.13(i) and paragraph (e) of this section. If you use a continuous automated sampling system to comply with the mercury or dioxin/furan (total mass basis or toxic equivalency basis) emission limits, you must develop your monitoring plan as specified in §60.58b(q), and you are not required to meet the requirements in paragraphs (a) and (b) of this section. You must also submit a site-specific monitoring plan for your ash handling system, as specified in paragraph (d) of this section. You must submit and update your monitoring plans as specified in paragraphs (f) through (h) of this section.

(a) For each continuous monitoring system, your monitoring plan must address the elements and requirements specified in paragraphs (a)(1) through (a)(8) of this section. You must operate and maintain the continuous monitoring system in continuous operation according to the site-specific monitoring plan.

(1) 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).

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

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

(i) For continuous emissions monitoring systems, your performance evaluation and acceptance criteria must include, but is not limited to, the following:

(A) The applicable requirements for continuous emissions monitoring systems specified in §60.13.

(B) The applicable performance specifications (e.g., relative accuracy tests) in appendix B of this part.

(C) The applicable procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) in appendix F of this part.

(D) A discussion of how the occurrence and duration of out-of-control periods will affect the suitability of CEMS data, where out-of-control has the meaning given in section (a)(7)(i) of this section.

(ii) For continuous parameter monitoring systems, your performance evaluation and acceptance criteria must include, but is not limited to, the following:

(A) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (a)(3)(ii)(A)(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.

(B) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (a)(3)(ii)(B)(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., particulate matter 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.

(C) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (a)(3)(ii)(C)(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 operating limit pH level) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than quarterly.

(D) If you have an operating limit that requires the use of a temperature measurement device, you must meet the requirements in paragraphs (a)(3)(ii)(D)(1) through (4) of this section.

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

(2) Use a temperature sensor with a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit), or 1.0 percent of the temperature value, whichever is larger, for a noncryogenic temperature range.

(3) Use a temperature sensor with a minimum tolerance

of 2.8 degrees Celsius (5 degrees Fahrenheit), or 2.5 percent of the temperature value, whichever is larger, for a cryogenic temperature range.

(4) Conduct a temperature measurement device performance evaluation at the time of each performance test but no less frequently than annually.

(E) 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 (a)(3)(ii)(E)(1) and (2) of this section.

(1) Install sensors to measure (secondary) voltage and current to the electrostatic 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.

(F) 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 (a)(3)(ii)(F)(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.

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

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

(6) 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).

(7) Provisions for periods when the continuous monitoring system is out of control, as follows:

(i) A continuous monitoring system is out of control if the conditions of paragraph (a)(7)(i)(A) or (a)(7)(i)(B) of this section are met.

(A) 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.

(B) 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.

(ii) When the continuous monitoring system is out of control as specified in paragraph (a)(7)(i) of this section, you must take the necessary corrective action and must repeat all necessary tests that indicate that the system is out of control. You must take corrective action and conduct retesting until the performance requirements are below the applicable limits. The beginning of the out-of-control period is the hour you conduct a performance check (e.g., calibration drift) that indicates an exceedance of the performance requirements established under this part. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits.

(8) Schedule for conducting initial and periodic performance evaluations of your continuous monitoring

systems.

(b) If a bag leak detection system is used, your monitoring plan must include a description of the following items:

(1) Installation of the bag leak detection system in accordance with paragraphs (b)(1)(i) and (ii) of this section.

(i) Install the 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.

(ii) 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.

(2) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established. Use a bag leak detection system equipped with a system that will sound an alarm when the system detects an increase in relative particulate matter emissions over a preset level. The alarm must be located where it is

observed readily and any alert is detected and recognized easily by plant operating personnel.

(3) Evaluations of the performance of the bag leak detection system, performed in accordance with your monitoring plan and consistent with the guidance provided in Fabric Filter Bag Leak Detection Guidance, EPA-454/R-98-015, September 1997 (incorporated by reference, see §60.17).

(4) Operation of the bag leak detection system, including quality assurance procedures.

(5) Maintenance of the bag leak detection system, including a routine maintenance schedule and spare parts inventory list.

(6) Recordkeeping (including record retention) of the bag leak detection system data. Use a bag leak detection system equipped with a device to continuously record the output signal from the sensor. (c) You must conduct an initial performance evaluation of each continuous monitoring system and bag leak detection system, as applicable, in accordance with your monitoring plan and to §60.13(c). For the purpose of this subpart, the provisions of §60.13(c) also apply to the bag leak detection system.

You must conduct the initial performance evaluation of each continuous monitoring system within 60 days of installation of the monitoring system

(d) You must submit a monitoring plan specifying the ash handling system operating procedures that you will follow to ensure that that your meet the fugitive emissions limit specified in Table 2 or 3 to this subpart.

(e) You may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the standards of this subpart, subject to the provisions of paragraphs (e)(1) through (e)(6) of this section.

(1) The Administrator will not approve averaging periods other than those specified in this section, unless you document, using data or information, that the longer averaging period will ensure that emissions do not exceed levels achieved over the duration of three performance test runs.

(2) If the application to use an alternate monitoring requirement is approved, you must continue to use the original monitoring requirement until approval is received to use another monitoring requirement.

(3) You must submit the application for approval of alternate monitoring requirements no later than the notification of performance test. The application must contain the information specified in paragraphs (e)(3)(i) through (e)(3)(iii) of this section:

(i) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach.

(ii) A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach and technique, the averaging period for the limit, and how the limit is to be calculated.

(iii) Data or information documenting that the alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard.

(4) The Administrator will notify you of the approval or denial of the application within 90 calendar days after receipt of the original request, or within 60 calendar days of the receipt of any supplementary information, whichever is later. The Administrator will not approve an alternate

monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard. Before disapproving any alternate monitoring application, the Administrator will provide the following:

(i) Notice of the information and findings upon which the intended disapproval is based.

(ii) Notice of opportunity for you to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for you to provide additional supporting information.

(5) You are responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test. Neither submittal of an application, nor the Administrator's failure to approve or disapprove the application relieves you of the responsibility to comply with any provision of this subpart.

(6) The Administrator may decide at any time, on a case-by-case basis, that additional or alternative operating limits, or alternative approaches to establishing

operating limits, are necessary to demonstrate compliance with the emission standards of this subpart.

(f) You must submit your monitoring plans required in paragraphs (a) and (b) of this section at least 60 days before your initial performance evaluation of your continuous monitoring system(s).

(g) You must submit your monitoring plan for your ash handling system, as required in paragraph (d) of this section, at least 60 days before your initial compliance test date.

(h) You must update and resubmit your monitoring plan if there are any changes or potential changes in your monitoring procedures or if there is a process change, as defined in §60.5250.

Model Rule—Continuous Compliance Requirements

§60.5205 How and when do I demonstrate continuous compliance with the emission limits and standards?

To demonstrate continuous compliance with the emission limits and standards specified in Table 2 or 3 to this subpart, use the procedures specified in paragraph (a) of this section. In lieu of using the procedures specified in paragraph (a) of this section, you have the option to demonstrate initial compliance using the procedures specified in paragraph (b) of this section for particulate matter, hydrogen chloride, carbon monoxide, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, lead, and fugitive emissions from ash handling. You must meet the requirements of paragraphs (a) and (b) of this section, as applicable, and paragraphs (c) through (e) of this section, according to the performance testing, monitoring, and calibration requirements in §60.5220(a) and (b). You may also petition the Administrator for alternative monitoring parameters as specified in paragraph (f) of this section.

(a) Demonstrate continuous compliance using a performance test. Except as provided in paragraphs (a)(3) and (e) of this section, following the date that the initial performance test for each pollutant in Table 2 or 3 to this subpart is completed, you must conduct a performance test for each such pollutant on an annual basis (between 11 and 13 calendar months following the previous performance test). The performance test must be conducted using the test methods, averaging methods, and minimum sampling volumes or durations specified in Table 2 or 3 to this subpart and according to the testing, monitoring, and calibration requirements specified in §60.5220(a).

(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. 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 §60.5250.

(3) Except as specified in paragraphs (a)(1) and (2) of this section, you can conduct performance tests less often for a given pollutant, as specified in paragraphs (a)(3)(i) through (iii) of this section.

(i) You can conduct performance tests less often if your performance tests for the pollutant for at least 2 consecutive years show that your emissions are at or below 75 percent of the emission limit specified in Table 2 or 3 to this subpart, and there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case, you do not have to conduct a performance test for that pollutant for the next 2 years. You must conduct a performance test during the third year and no more than 37 months after the previous performance test.(ii) If your SSI unit continues to meet the emission limit for the pollutant, you may choose to conduct performance tests for the pollutant every third year if your emissions are at or below 75 percent of the emission limit, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions, but each such performance test must be conducted no more than 37 months after the previous performance test.

(iii) If a performance test shows emissions exceeded 75 percent of the emission limit for a pollutant, you must conduct annual performance tests for that pollutant until all performance tests over 2 consecutive years show compliance.

(b) Demonstrate continuous compliance using a continuous emissions monitoring system or continuous automated sampling system. The option to use a continuous emissions monitoring system for hydrogen chloride, dioxins/furans, cadmium, or lead takes effect on the date a final performance specification applicable to hydrogen chloride, dioxins/furans, cadmium, or lead is published in the Federal Register. The option to use a continuous automated sampling system for dioxins/furans takes effect on the date a final performance specification for such a continuous automated sampling system is published in the Federal Register. Collect data as specified in §60.5220(b)(6) and use the following procedures:

(1) To demonstrate continuous compliance with the emission limits for particulate matter, hydrogen chloride, carbon monoxide, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, and lead, you may substitute the use of a continuous monitoring system in lieu of conducting the annual performance test required in paragraph (a) of this section, as follows:

(i) You may substitute the use of a continuous emissions monitoring system for any pollutant specified in paragraph (b)(1) of this section in lieu of conducting the annual performance test for that pollutant in paragraph (a) of this section. For determining compliance with the carbon monoxide concentration limit using carbon monoxide CEMS, the correction to 7 percent oxygen does not apply during periods of startup or shutdown. Use the measured carbon monoxide concentration without correcting for oxygen concentration in averaging with other carbon monoxide concentrations (corrected to 7 percent oxygen) to determine the 24-hour average value.

(ii) You may substitute the use of a continuous automated sampling system for mercury or dioxins/furans in lieu of conducting the annual mercury or dioxin/furan performance test in paragraph (a) of this section.

(2) If you use a continuous emissions monitoring system to demonstrate compliance with an applicable emission limit in paragraph (b)(1) of this section, you must use the continuous emissions monitoring system and follow the requirements specified in §60.5220(b). You must measure emissions according to §60.13 to calculate 1-hour arithmetic averages, corrected to 7 percent oxygen (or carbon dioxide). You must demonstrate initial compliance using a 24-hour block average of these 1-hour arithmetic average emission concentrations, calculated using Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7.

(3) If you use a continuous automated sampling system to demonstrate compliance with an applicable emission limit in paragraph (b)(1) of this section, you must:

(i) Use the continuous automated sampling system specified in §60.58b(p) and (q), and measure and calculate average emissions corrected to 7 percent oxygen (or carbon dioxide) according to §60.58b(p) and your monitoring plan.

(A) Use the procedures specified in §60.58b(p) to calculate 24-hour averages to determine compliance with the mercury emission limit in Table 2 to this subpart.

(B) Use the procedures specified in §60.58b(p) to calculate 2-week averages to determine compliance with the dioxin/furan (total mass basis or toxic equivalency basis) emission limits in Table 2 to this subpart.

(ii) Update your monitoring plan as specified in §60.4880(e). For mercury continuous automated sampling systems, you must use Performance Specification 12B of appendix B of part 75 and Procedure 5 of appendix F of this part.

(4) Except as provided in paragraph (e) of this section, you must complete your periodic performance evaluations required in your monitoring plan for any continuous emissions monitoring systems and continuous automated sampling systems, according to the schedule specified in your monitoring plan. If you were previously

determining compliance by conducting an annual performance test (or according to the less frequent testing for a pollutant as provided in paragraph (a)(3) of this section), you must complete the initial performance evaluation required under your monitoring plan in §60.5200 for the continuous monitoring system prior to using the continuous emissions monitoring system to demonstrate compliance or continuous automated sampling system. Your performance evaluation must be conducted using the procedures and acceptance criteria specified in §60.5200(a)(3).

(c) To demonstrate compliance with the dioxins/furans toxic equivalency emission limit in paragraph (a) or (b) of this section, you must determine dioxins/furans toxic equivalency as follows:

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

(2) For each dioxin/furan (tetra- through octachlorinated) isomer measured in accordance with paragraph (c)(1) of this section, multiply the isomer concentration by its corresponding toxic equivalency factor specified in Table 5 to this subpart.

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

(d) You must submit an annual compliance report as specified in §60.5235(c). You must submit a deviation report as specified in §60.5235(d) for each instance that you did not meet each emission limit in Table 2 to this subpart.

(e) If you demonstrate continuous compliance using a performance test, as specified in paragraph (a) of this section, then the provisions of this paragraph (e) apply. If a force majeure is about to occur, occurs, or has occurred for which you intend to assert a claim of force majeure, you must notify the Administrator in writing as specified in §60.5235(g). You must conduct the performance test as soon as practicable after the force majeure occurs. The Administrator will determine whether or not to grant the extension to the performance test deadline, and will notify you in writing of approval or disapproval of the request for an extension as soon as practicable. Until an extension of the performance test deadline has been approved by the Administrator, you remain strictly subject to the requirements of this subpart.

(f) After any initial requests in §60.5200 for alternative monitoring requirements for initial compliance, you may subsequently petition the Administrator for alternative monitoring parameters as specified in §§60.13(i) and 60.5200(e).

§60.5210 How do I demonstrate continuous compliance with my operating limits?

You must continuously monitor your operating parameters as specified in paragraph (a) of this section and meet the requirements of paragraphs (b) and (c) of this section, according to the monitoring and calibration requirements in §60.5225. You must confirm and re-establish your operating limits as specified in paragraph (d) of this section.

(a) You must continuously monitor the operating parameters specified in paragraphs (a)(1) and (a)(2) of this section using the continuous monitoring equipment and according to the procedures specified in §60.5225 or established in §60.5175. To determine compliance, you must use the data averaging period specified in Table 4 to this subpart (except for alarm time of the baghouse leak detection system) unless a different averaging period is established under §60.5175.

(1) You must demonstrate that the SSI unit meets the operating limits established according to §§60.5175 and 60.5190 and paragraph (d) of this section for each applicable operating parameter.

(2) You must demonstrate that the SSI unit meets the operating limit for bag leak detection systems as follows:

(i) For a bag leak detection system, you must calculate the alarm time as follows:

(A) If inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted.

(B) If corrective action is required, each alarm time shall be counted as a minimum of 1 hour.

(C) If you take longer than 1 hour to initiate corrective action, each alarm time (i.e., time that the alarm sounds) is counted as the actual amount of time taken by you to initiate corrective action.

(ii) Your maximum alarm time is equal to 5 percent of the operating time during a 6-month period, as specified in

§60.5170(c).

(b) 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. You must submit the deviation report specified in §60.5235(d) for each instance that you did not meet one of your operating limits established under this subpart.

(c) You must submit the annual compliance report specified in §60.5235(c) to demonstrate continuous compliance.

(d) You must confirm your operating limits according to paragraph (d)(1) of this section or re-establish operating limits according to paragraph (d)(2) of this section. Your operating limits must be established so as to assure ongoing compliance with the emission limits. These requirements also apply to your operating requirements in your fugitive emissions monitoring plan specified in §60.5170(d).

(1) Your operating limits must be based on operating data recorded during any performance test required in §60.5205(a) or any performance evaluation required in §60.5205(b)(4).

(2) You may conduct a repeat performance test at any time to establish new values for the operating limits to apply from that point forward.

§60.5215 By what date must I conduct annual air pollution control device inspections and make any necessary repairs?

(a) You must conduct an annual inspection of each air pollution control device used to comply with the emission limits, according to §60.5220(c), no later than 12 months following the previous annual air pollution control device inspection.

(b) Within 10 operating days following an air pollution control device inspection, all necessary repairs must be completed unless you obtain written approval from the Administrator establishing a date whereby all necessary repairs of the affected SSI unit must be completed.

Model Rule—Performance Testing, Monitoring, and Calibration Requirements

§60.5220 What are the performance testing, monitoring, and

<u>calibration requirements for compliance with the emission limits and standards?</u>

You must meet, as applicable, the performance testing requirements specified in paragraph (a) of this section, the monitoring requirements specified in paragraph (b) of this section, the air pollution control device inspections requirements specified in paragraph (c) of this section, and the bypass stack provisions specified in paragraph (d) of this section.

(a) <u>Performance testing requirements</u>.

(1) All performance tests must consist of a minimum of three test runs conducted under conditions representative of normal operations, as specified in §60.8(c). Emissions in excess of the emission limits or standards during periods of startup, shutdown, and malfunction are considered deviations from the applicable emission limits or standards.

(2) You must document that the dry sludge burned during the performance test is representative of the sludge burned under normal operating conditions by:

(i) Maintaining a log of the quantity of sewage sludge burned during the performance test by continuously monitoring and recording the average hourly rate that sewage sludge is fed to the incinerator.

(ii) Maintaining a log of the moisture content of the sewage sludge burned during the performance test by taking grab samples of the sewage sludge fed to the incinerator for each 8 hour period that testing is conducted.

(3) All performance tests must be conducted using the test methods, minimum sampling volume, observation period, and averaging method specified in Table 2 or 3 to this subpart.

(4) Method 1 at 40 CFR part 60, appendix A must be used to select the sampling location and number of traverse points.

(5) Method 3A or 3B at 40 CFR part 60, appendix A-2 must be used for gas composition analysis, including measurement of oxygen concentration. Method 3A or 3B at 40 CFR part 60, appendix A-2 must be used simultaneously with each method.

(6) All pollutant concentrations must be adjusted to 7 percent oxygen using Equation 1 of this section:

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

Where:

C_{adj} = Pollutant concentration adjusted to 7 percent oxygen.

C_{meas} = Pollutant concentration measured on a dry basis.

(20.9–7) = 20.9 percent oxygen -7 percent oxygen (defined oxygen correction basis).

20.9 = Oxygen concentration in air, percent.

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

(7) Performance tests must be conducted and data reduced in accordance with the test methods and procedures contained in this subpart unless the Administrator does one of the following.

(i) Specifies or approves, in specific cases, the use of a method with minor changes in methodology.

(ii) Approves the use of an equivalent method.

(iii) Approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

(iv) Waives the requirement for performance tests because you have demonstrated by other means to the Administrator's satisfaction that the affected SSI unit is in compliance with the standard.

(v) Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph is construed to abrogate the Administrator's authority to require testing under section 114 of the Clean Air Act.

(8) You must provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, you must notify the Administrator as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator by mutual agreement.

(9) You must provide, or cause to be provided, performance testing facilities as follows:

(i) Sampling ports adequate for the test methods applicable to the SSI unit, as follows:

(A) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures.

(B) Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

(ii) Safe sampling platform(s).

(iii) Safe access to sampling platform(s).

(iv) Utilities for sampling and testing equipment.

(10) Unless otherwise specified in this subpart, each performance test must consist of three separate runs using the applicable test method. Each run must be conducted for the time and under the conditions specified in the applicable standard. Compliance with each emission limit must be determined by calculating the arithmetic mean of the three runs. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond your control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

(11) During each test run specified in paragraph (a)(1) of this section, you must operate your sewage sludge incinerator at a minimum of 85 percent of your maximum permitted capacity.

(b) Continuous monitor requirements. You must meet the following requirements, as applicable, when using a continuous monitoring system to demonstrate compliance with the emission limits in Table 2 or 3 to this subpart. The option to use a continuous emissions monitoring system for hydrogen chloride, dioxins/furans, cadmium, or lead takes effect on the date a final performance specification applicable to hydrogen chloride, dioxins/furans, cadmium, or lead is published in the Federal Register. If you elect to use a continuous emissions monitoring system instead of conducting annual performance testing, you must meet the requirements of paragraphs (b)(1) through (b)(6) of this section. If you elect to use a continuous automated sampling system instead of conducting annual performance testing, you must meet the requirements of paragraph (b)(7) of this section. The option to use a continuous automated sampling system for dioxins/furans takes effect on the date a final performance specification for such a continuous automated sampling system is published in the Federal Register.

(1) You must notify the Administrator 1 month before starting use of the continuous emissions monitoring system.

(2) You must notify the Administrator 1 month before stopping use of the continuous emissions monitoring system, in which case you must also conduct a performance test within prior to ceasing operation of the system.

(3) You must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the emissions to the atmosphere in accordance with the following:

(i) Section 60.13 of subpart A of this part.

(ii) The following performance specifications of appendix B of this part, as applicable:

(A) For particulate matter, Performance Specification 11 of appendix B of this part.

(B) For hydrogen chloride, Performance Specification 15 of appendix B of this part.

(C) For carbon monoxide, Performance Specification 4B of appendix B of this part with spans appropriate to the applicable emission limit.

(D) [Reserved]

(E) For mercury, Performance Specification 12A of appendix B of this part.

(F) For nitrogen oxides, Performance Specification 2 of appendix B of this part.

(G) For sulfur dioxide, Performance Specification 2 of appendix B of this part.

(iii) For continuous emissions monitoring systems, the quality assurance procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) of appendix F of this part specified in paragraphs (b)(3)(iii)(A) through (b)(3)(iii)(G) of this section. For each pollutant, the span value of the continuous emissions monitoring system is two times the applicable emission limit, expressed as a concentration.

(A) For particulate matter, Procedure 2 in appendix F of this part.

(B) For hydrogen chloride, Procedure 1 in appendix F of this part except that the Relative Accuracy Test Audit requirements of Procedure 1 shall be replaced with the validation requirements and criteria of sections 11.1.1 and 12.0 of Performance Specification 15 of appendix B of this part.

(C) For carbon monoxide, Procedure 1 in appendix F of this part.

(D) [Reserved]

(E) For mercury, Procedures 5 in appendix F of this part.

(F) For nitrogen oxides, Procedure 1 in appendix F of this part.

(G) For sulfur dioxide, Procedure 1 in appendix F of this part.

(iv) If your monitoring system has a malfunction or out-of-control period, you must complete repairs and resume operation of your monitoring system as expeditiously as possible.

(4) During each relative accuracy test run of the continuous emissions monitoring system using the performance specifications in paragraph (b)(3)(ii) of this section, emission data for each regulated pollutant and oxygen (or carbon dioxide as established in (b)(5) of this section) must be collected concurrently (or within a 30- to 60-minute period) by both the continuous emissions monitoring systems and the test methods specified in

paragraph (b)(4)(i) through (b)(4)(viii) of this section. Relative accuracy testing must be at representative operating conditions while the SSI unit is charging sewage sludge.

(i) For particulate matter, Method 5 at 40 CFR part 60, appendix A-3 or Method 26A or 29 at 40 CFR part 60, appendix A-8 shall be used.

(ii) For hydrogen chloride, Method 26 or 26A at 40 CFR part 60, appendix A-8, shall be used, as specified in Tables 1 and 2 to this subpart.

(iii) For carbon monoxide, Method 10, 10A, or 10B at 40 CFR part 60, appendix A-4, shall be used.

(iv) For dioxins/furans, Method 23 at 40 CFR part 60, appendix A-7, shall be used.

(v) For mercury, cadmium, and lead, Method 29 at 40 CFR part 60, appendix A-8, shall be used. Alternatively for mercury, either Method 30B at 40 CFR part 60, appendix A-8 or ASTM D6784-02 (Reapproved 2008)(incorporated by reference, see §60.17), may be used.

(vi) For nitrogen oxides, Method 7 or 7E at 40 CFR part 60, appendix A-4, shall be used.

(vii) For sulfur dioxide, Method 6 or 6C at 40 CFR part 60, appendix A-4, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17) must be used. For sources that have actual inlet emissions less than 100 parts per million dry volume, the relative accuracy criterion for the inlet of the sulfur dioxide continuous emissions monitoring system should be no greater than 20 percent of the mean value of the 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 method and the continuous emissions monitoring system, whichever is greater.

(viii) For oxygen (or carbon dioxide as established in (b)(5) of this section), Method 3A or 3B at 40 CFR part 60, appendix A-2, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17), as applicable, must be used.

(5) You may request that compliance with the emission limits 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 (b)(5)(i) through (b)(5)(iv) of this section. This relationship may be re-established during subsequent performance tests.

(i) The fuel factor equation in Method 3B at 40 CFR part 60, appendix A-2 must be used to determine the relationship between oxygen and carbon dioxide at a sampling location. Method 3A or 3B at 50 CFR part 60, appendix A-2, 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.

(6) You must operate the continuous monitoring system and collect data with the continuous monitoring system as follows:

(i) You must collect data using the continuous monitoring system at all times the affected SSI unit is operating and at the intervals specified in paragraph (b)(6)(ii) of this section, except for periods of monitoring system malfunctions that occur during periods specified in §60.5200(a)(7)(i), repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). Any such periods that you do not collect data using the continuous monitoring system constitute a deviation from the monitoring requirements and must be reported in a deviation report.

(ii) You must collect continuous emissions monitoring system data in accordance with §60.13(e)(2).

(iii) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities must not be included in calculations used to report emissions or operating levels. Any such periods must be reported in a deviation report.

(iv) Any data collected during periods when the monitoring system is out of control as specified in §60.4880(a)(7)(i), repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out-of-control periods must not be included in calculations used to report emissions or operating levels. Any such periods that do not coincide with a monitoring system malfunction as defined in §60.5250, constitute a deviation from the monitoring requirements and must be reported in a deviation report.

(v) You must use all the data collected during all periods except those periods specified in paragraphs (b)(6)(iii) and (b)(6)(iv) of this section in assessing the operation of the control device and associated control system.

(7) If you elect to use a continuous automated sampling system instead of conducting annual performance testing, you must:

(i) Install, calibrate, maintain, and operate a continuous automated sampling system according to the site-specific monitoring plan developed in §60.58b(p)(1) through (p)(6), (p)(9), (p)(10), and (q).

(ii) Collect data according to §60.58b(p)(5) and paragraph (b)(6) of this section.

(c) <u>Air pollution control device inspections</u>. You must conduct air pollution control device inspections that include, at a minimum, the following:

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

(2) Generally observe that the equipment is maintained in good operating condition.

(3) Develop a site-specific monitoring plan according to the requirements in §60.5200. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under §60.13(i). (d) Bypass stack. Use of the bypass stack at any time that sewage sludge is being charged to the SSI unit is an emissions standards deviation for all pollutants listed in Table 2 or 3 to this subpart. The use of the bypass stack during a performance test invalidates the performance test.

§60.5225 What are the monitoring and calibration requirements for compliance with my operating limits?

(a) You must install, operate, calibrate, and maintain the continuous parameter monitoring systems according to the requirements in paragraphs (a)(1) and (2) of this section.

(1) Meet the following general requirements for flow,

pressure, pH, and operating temperature measurement devices:

(i) You must collect data using the continuous monitoring system at all times the affected SSI unit is operating and at the intervals specified in paragraph (a)(1)(ii) of this section, except for periods of monitoring system malfunctions that occur during periods specified defined in §60.5200(a)(7)(i), repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). Any such periods that you do not collect data using the continuous monitoring system constitute a deviation from the monitoring requirements and must be reported in a deviation report.

(ii) You must collect continuous parameter monitoring system data in accordance with §60.13(e)(2).

(iii) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities must not be included in calculations used to report emissions or operating levels. Any such periods must be reported in your annual deviation report.

(iv) Any data collected during periods when the monitoring system is out of control as specified in §60.5200(a)(7)(i) must not be included in calculations used to report emissions or operating levels. Any such periods that do not coincide with a monitoring system malfunction, as defined in §60.5250, constitute a deviation from the monitoring requirements and must be reported in a deviation report.

(v) You must use all the data collected during all periods except those periods specified in paragraphs (a)(1)(iii) and (a)(1)(iv) of this section in assessing the operation of the control device and associated control system.

(vi) Record the results of each inspection, calibration, and validation check.

(2) Operate and maintain your continuous monitoring system according to your monitoring plan required under §60.4880. Additionally:

(i) For carrier gas flow rate monitors (for activated carbon injection), during the performance test conducted pursuant to §60.4885, you must demonstrate that the system is maintained within +/-5 percent accuracy, according to the procedures in appendix A to part 75 of this chapter.

(ii) For carrier gas pressure drop monitors (for activated carbon injection), during the performance test conducted pursuant to §60.4885, you must demonstrate that the system is maintained within +/-5 percent accuracy.

(b) You must operate and maintain your bag leak detection system in continuous operation according to your monitoring plan required under §60.4880. Additionally:

(1) For positive pressure fabric filter systems that do not duct all compartments of cells to a common stack, a bag leak detection system must be installed in each baghouse compartment or cell.

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

(3) You must initiate procedures to determine the cause of every alarm within 8 hours of the alarm, and you must alleviate the cause of the alarm within 24 hours of

the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:

(i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in particulate matter emissions.

(ii) Sealing off defective bags or filter media.

(iii) Replacing defective bags or filter media or otherwise repairing the control device.

(iv) Sealing off a defective fabric filter compartment.

(v) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system.

(vi) Shutting down the process producing the particulate matter emissions.

(c) You must operate and maintain the continuous parameter monitoring systems specified in paragraphs (a) and (b) of this section in continuous operation according to your monitoring plan required under §60.4880.

(d) If your SSI unit has a bypass stack, you must 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.

Model Rule—Recordkeeping and Reporting

§60.5230 What records must I keep?

You must maintain the items (as applicable) specified in paragraphs (a) through (n) of this section for a period of at least 5 years. All records must be available on site in either paper copy or computer-readable format that can be printed upon request, unless an alternative format is approved by the Administrator.

(a) Date. Calendar date of each record.

(b) Increments of progress. Copies of the final control plan and any additional notifications, reported under §60.5235.

(c) Operator Training. Documentation of the operator training procedures and records specified in paragraphs (c)(1) through (c)(4) of this section. You must make available and readily accessible at the facility at all times for all SSI unit operators the documentation specified in paragraph (c)(1) of this section.

(1) Documentation of the following operator training procedures and information:

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

(ii) Procedures for receiving, handling, and feeding sewage sludge.

(iii) Incinerator startup, shutdown, and malfunction preventative and corrective procedures.

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

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

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

(vii) Reporting and recordkeeping procedures.

(viii) Procedures for handling ash.

(ix) A list of the materials burned during the performance test, if in addition to sewage sludge.

(x) For each qualified operator and other plant personnel who may operate the unit according to the provisions of §60.5155(a), the phone and/or pager number at which they can be reached during operating hours.

(2) Records showing the names of SSI unit operators and other plant personnel who may operate the unit

according to the provisions of §60.5155(a), as follows:

(i) Records showing the names of SSI unit operators and other plant personnel who have completed review of the information in paragraph (c)(1) of this section as required by §60.5160(b), including the date of the initial review and all subsequent annual reviews.

(ii) Records showing the names of the SSI operators who have completed the operator training requirements under §60.5130, met the criteria for qualification under §60.5140, and maintained or renewed their qualification under §60.5145 or §60.5150. Records must include documentation of training, including the dates of their initial qualification and all subsequent renewals of such qualifications.

(3) Records showing the periods when no qualified operators were accessible for more than 8 hours, but less than 2 weeks, as required in §60.5155(a).

(4) Records showing the periods when no qualified operators were accessible for 2 weeks or more along with copies of reports submitted as required in §60.5155(b).

(d) Air pollution control device inspections. Records of the results of initial and annual air pollution control device inspections conducted as specified in §§60.5195 and 60.5220(c), including any required maintenance and any repairs not completed within 10 days of an inspection or the timeframe established by the Administrator.

(e) Performance test reports.

(1) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and standards and/or to establish operating limits, as applicable.

(2) Retain a copy of the complete performance test report, including calculations.

(3) Keep a record of the hourly dry sludge feed rate measured during performance test runs as specified in §60.5220(a)(2)(i).

(4) Keep any necessary records to demonstrate that the performance test was conducted under conditions representative of normal operations, including a record of the moisture content measured as required in §60.5220(a)(2)(ii) for each grab sample taken of the sewage sludge burned during the performance test.

(f) Continuous monitoring data. Records of the following data, as applicable:

(1) For continuous emissions monitoring systems, all 1-hour average concentrations of particulate matter, hydrogen chloride, carbon monoxide, dioxins/furans total mass basis, mercury, nitrogen oxides, sulfur dioxide, cadmium, and lead emissions.

(2) For continuous automated sampling systems, all average concentrations measured for mercury and dioxins/furans total mass basis at the frequencies specified in your monitoring plan.

(3) For continuous parameter monitoring systems:

(i) All 1-hour average values recorded for the following operating parameters, as applicable:

(A) Combustion chamber operating temperature (or afterburner temperature).

(B) If a wet scrubber is used to comply with the rule, pressure drop across each wet scrubber system and liquid flow rate to each wet scrubber used to comply with the emission limit in Table 2 or 3 to this subpart for particulate matter, cadmium, or lead, and scrubber liquid flow rate and scrubber liquid pH for each wet scrubber used to comply with an emission limit in Table 2 or 3 to this subpart for sulfur dioxide or hydrogen chloride.

(C) If an electrostatic precipitator is used to comply with the rule, secondary voltage of the electrostatic precipitator collection plates and secondary amperage of the electrostatic precipitator collection plates, and effluent water flow rate at the outlet of the wet electrostatic precipitator.

(D) If activated carbon injection is used to comply with the rule, sorbent flow rate and carrier gas flow rate or pressure drop, as applicable.

(ii) All daily average values recorded for the feed rate and moisture content of the sewage sludge fed to the sewage sludge incinerator, monitored and calculated as specified in §60.5170(f).

(iii) If a fabric filter is used to comply with the rule, the date, time, and duration of each alarm and the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. You must also record the percent of operating time during each 6-month period that the alarm sounds, calculated as specified in §60.5210.

(iv) For other control devices for which you must establish operating limits under §60.5175, you must maintain data collected for all operating parameters used to determine compliance with the operating limits, at the frequencies specified in your monitoring plan.

(g) Other records for continuous monitoring systems. You must keep the following records, as applicable:

(1) Keep records of any notifications to the Administrator in §60.4915(h)(1) of starting or stopping use of a continuous monitoring system for determining compliance with any emissions limit.

(2) Keep records of any requests under §60.5220(b)(5) that compliance with the emission limits be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen.

(3) If activated carbon injection is used to comply with the rule, the type of sorbent used and any changes in the type of sorbent used.

(h) Deviation Reports. Records of any deviation reports submitted under §60.5235(e) and (f).

(i) Equipment specifications and operation and maintenance requirements. Equipment specifications and related operation and maintenance requirements received from vendors for the incinerator, emission controls, and monitoring equipment.

(j) Inspections, calibrations, and validation checks of monitoring devices. Records of inspections, calibration, and validation checks of any monitoring devices as required under §§60.5220 and 60.5225.

(k) Monitoring plan and performance evaluations for continuous monitoring systems. Records of the monitoring plans required under §60.5200, and records of performance evaluations required under §60.5205(b)(5).(l) Less frequent testing. If, consistent with 60.5205(a)(3), you elect to conduct performance tests less frequently than annually, you must keep annual records that document that your emissions in the two previous consecutive years were at or below 75 percent of the applicable emission limit in Table 1 or 2 to this subpart, and document that there were no changes in source operations or air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past 2 years.

(m) Use of bypass stack. Records indicating use of the bypass stack, including dates, times, and durations as required under §60.5225(d).

(n) If a malfunction occurs, you must keep a record of the information submitted in your annual report in §60.5235(c)(16).

§60.5235 What reports must I submit?

You must submit the reports specified in paragraphs (a) through (i) of this section. See Table 6 to this subpart for a summary of these reports.

(a) Increments of progress report. If you plan to achieve compliance more than 1 year following the effective date of state plan approval, you must submit the following reports, as applicable:

(1) A final control plan as specified in §§60.5085(a) and 60.5110.

(2) You must submit your notification of achievement of increments of progress no later than 10 business days after the compliance date for the increment as specified in §§60.5095 and 60.5100.

(3) If you fail to meet an increment of progress, you must submit a notification to the Administrator postmarked within 10 business days after the date for that increment, as specified in §60.5105.

(4) If you plan to close your SSI unit rather than

comply with the state plan, submit a closure notification as specified in §60.5125.

(b) Initial compliance report. You must submit the following information no later than 60 days following the initial performance test.

(1) Company name, physical address, and mailing address.

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

(3) Date of report.

(4) The complete test report for the initial performance test results obtained by using the test methods specified in Table 2 or 3 to this subpart.

(5) If an initial performance evaluation of a continuous monitoring system was conducted, the results of that initial performance evaluation.

(6) The values for the site-specific operating limits established pursuant to §§60.5170 and 60.5175 and the calculations and methods, as applicable, used to establish each operating limit.

(7) If you are using a fabric filter to comply with

the emission limits, documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by §60.5170(b).

(8) The results of the initial air pollution control device inspection required in §60.5195, including a description of repairs.

(9) The site-specific monitoring plan required under §60.5200, at least 60 days before your initial performance evaluation of your continuous monitoring system.

(10) The site-specific monitoring plan for your ash handling system required under §60.5200, at least 60 days before your initial performance test to demonstrate compliance with your fugitive ash emission limit.

(c) Annual compliance report. You must submit an annual compliance report that includes the items listed in paragraphs (c)(1) through (c)(16) of this section for the reporting period specified in paragraph (c)(3) of this section. You must submit your first annual compliance report no later than 12 months following the submission of the initial compliance report in paragraph (b) of this section. You must submit subsequent annual compliance reports no more than 12 months following the previous annual compliance report. (You may be required to submit these reports (or additional compliance information) more frequently by the title V operating permit required in §60.5240.)

(1) Company name, physical address, and mailing address.

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

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

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

(i) If operating limits were established during the performance test, include the value for each operating limit and, as applicable, the method used to establish each operating limit, including calculations.

(ii) If activated carbon is used during the performance test, include the type of activated carbon used.

(5) For each pollutant and operating parameter recorded using a continuous monitoring system, the highest

average value and lowest average value recorded during the reporting period, as follows:

(i) For continuous emission monitoring systems and continuous automated sampling systems, report the highest and lowest 24-hour average emission value.

(ii) For continuous parameter monitoring systems, report the following values:

(A) For all operating parameters except scrubber liquid pH, the highest and lowest 12-hour average values.

(B) For scrubber liquid pH, the highest and lowest 3-hour average values.

(6) If there are no deviations during the reporting period from any emission limit, emission standard, or operating limit that applies to you, a statement that there were no deviations from the emission limits, emission standard, or operating limits.

(7) Information for bag leak detection systems recorded under §60.5230(f)(3)(iii).

(8) If a performance evaluation of a continuous monitoring system was conducted, the results of that performance evaluation. If new operating limits were established during the performance evaluation, include your

calculations for establishing those operating limits.

(9) If you elect to conduct performance tests less frequently as allowed in §60.5205(a)(3) and did not conduct a performance test during the reporting period, you must include the dates of the last two performance tests, a comparison of the emission level you achieved in the last two performance tests to the 75 percent emission limit threshold specified in §60.5205(a)(3), and a statement as to whether there have been any process changes and whether the process change resulted in an increase in emissions.

(10) Documentation of periods when all qualified sewage sludge incineration unit operators were unavailable for more than 8 hours, but less than 2 weeks.

(11) Results of annual air pollution control device inspections recorded under §60.5230(d) for the reporting period, including a description of repairs.

(12) If there were no periods during the reporting period when your continuous monitoring systems had a malfunction, a statement that there were no periods during which your continuous monitoring systems had a malfunction.

(13) If there were no periods during the reporting period when a continuous monitoring system was out of

control§, a statement that there were no periods during which your continuous monitoring systems were out of control.

(14) If there were no operator training deviations, a statement that there were no such deviations during the reporting period.

(15) If you did not make revisions to your site-specific monitoring plan during the reporting period, a statement that you did not make any revisions to your site-specific monitoring plan during the reporting period. If you made revisions to your site-specific monitoring plan during the reporting period, a copy of the revised plan.

(16) 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.

(d) Deviation reports.

(1) You must submit a deviation report if:

(i) Any recorded operating parameter level, based on the averaging time specified in Table 4 to this subpart, is above the maximum operating limit or below the minimum operating limit established under this subpart.

(ii) The bag leak detection system alarm sounds for more than 5 percent of the operating time for the 6-month reporting period.

(iii) Any recorded 24-hour block average emissions level is above the emission limit, if a continuous monitoring system is used to comply with an emission limit.

(iv) There are visible emissions of combustion ash from an ash conveying system for more than 5 percent of the hourly observation period.

(v) A performance test was conducted that deviated from any emission limit in Table 2 or 3 to this subpart.

(vi) A continuous monitoring system was out of control.

(vii) You had a malfunction (e.g., continuous monitoring system malfunction) that caused or may have caused any applicable emission limit to be exceeded.

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

(3) For each deviation where you are using a continuous monitoring system to comply with an associated emission limit or operating limit, report the items described in paragraphs (d)(3)(i) through (d)(3)(viii) of this section.

(i) Company name, physical address, and mailing address.

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

(iii) The calendar dates and times your unit deviated from the emission limits, emission standards, or operating limits requirements.

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

(v) Duration and cause of each deviation from the following:

(A) Emission limits, emission standards, operating

limits, and your corrective actions.

(B) Bypass events and your corrective actions.

(vi) Dates, times, and causes for monitor downtime incidents.

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

(viii) If there were periods during which the continuous monitoring system malfunctioned or was out of control, you must include the following information for each deviation from an emission limit or operating limit:

(A) The date and time that each malfunction started and stopped.

(B) The date, time, and duration that each continuous monitoring system was inoperative, except for zero (low-level) and high-level checks.

(C) 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.

(D) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction, during a period when the system as out of control, or during another period.

(E) 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.

(F) 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.

(G) 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 SSI unit at which the continuous monitoring system downtime occurred during that reporting period.

(H) An identification of each parameter and pollutant that was monitored at the SSI unit.

(I) A brief description of the SSI unit.

(J) A brief description of the continuous monitoring system.

(K) The date of the latest continuous monitoring system certification or audit.

(L) A description of any changes in continuous monitoring system, processes, or controls since the last reporting period.

(4) For each deviation where you are not using a continuous monitoring system to comply with the associated emission limit or operating limit, report the following items:.

(i) Company name, physical address, and mailing address.

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

(iii) The total operating time of each affected source during the reporting period.

(iv) The calendar dates and times your unit deviated from the emission limits, emission standards, or operating limits requirements.

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

(vi) Duration and cause of each deviation from the following:

(A) Emission limits, emission standards, operating

limits, and your corrective actions.

(B) Bypass events and your corrective actions.

(vii) A copy of any performance test report that showed a deviation from the emission limits or standards.

(viii) A brief description of any malfunction reported in paragraph (d)(1)(vii) of this section, including a description of actions taken during the malfunction to minimize emissions in accordance with §60.11(d) and to correct the malfunction.

(e) Qualified operator deviation.

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

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

(A) A statement of what caused the deviation.

(B) A description of actions taken to ensure that a qualified operator is accessible.

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

(ii) Submit a status report to the Administrator every 4 weeks that includes the three items in paragraphs (e)(1)(ii)(A) through (e)(1)(ii)(C) of this section.

(A) A description of actions taken to ensure that a qualified operator is accessible.

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

(C) Request for approval from the Administrator to continue operation of the SSI unit.

(2) If your unit was shut down by the Administrator, under the provisions of §60.5155(b)(2)(i), due to a failure to provide an accessible qualified operator, you must notify the Administrator within five days of meeting §60.5155(b)(2)(ii) that you are resuming operation.

(f) Notification of a force majeure. If a force majeure is about to occur, occurs, or has occurred for which you intend to assert a claim of force majeure:

(1) You must notify the Administrator, in writing as soon as practicable following the date you first knew, or through due diligence, should have known that the event may cause or caused a delay in conducting a performance test beyond the regulatory deadline, but the notification must occur before the performance test deadline unless the

initial force majeure or a subsequent force majeure event delays the notice, and in such cases, the notification must occur as soon as practicable.

(2) You must provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in conducting the performance test beyond the regulatory deadline to the force majeure; describe the measures taken or to be taken to minimize the delay; and identify a date by which you propose to conduct the performance test.

(g) Other notifications and reports required. You must submit other notifications as provided by §60.7 and as follows:

(1) You must notify the Administrator 1 month before starting or stopping use of a continuous monitoring system for determining compliance with any emission limit.

(2) You must notify the Administrator at least 30 days prior to any performance test conducted to comply with the provisions of this subpart, to afford the Administrator the opportunity to have an observer present.

(3) As specified in §60.5220(a)(8), you must notify the Administrator at least 7 days prior to the date of a

rescheduled performance test for which notification was previously made in paragraph (g)(2) of this section.

(h) Report submission form.

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

(2) 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/) 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.

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

Model Rule—Title V Operating Permits

§60.5240 Am I required to apply for and obtain a Title V operating permit for my existing SSI unit?

Yes, if you are subject to an applicable EPA-approved and effective CAA section 111(d)/129 state or tribal plan or an applicable and effective federal plan, you are required to apply for and obtain a Title V operating permit for your existing SSI unit unless you meet the relevant requirements for an exemption specified in §60.5065.

§60.5245 When must I submit a title V permit application for my existing SSI unit?

(a) If your existing SSI unit is not subject to an earlier permit application deadline, a complete title V permit application must be submitted on or before the earlier of the dates specified in paragraphs (a)(1) through (a)(3) of this section. (See sections 129 (e), 503(c), 503(d), and 502(a) of the Clean Air Act and 40 CFR 70.5(a)(1)(i) and 40 CFR 71.5(a)(1)(i)).

(1) 12 months after the effective date of any applicable EPA-approved Clean Air Act section 111(d)/129 state or tribal plan.

(2) 12 months after the effective date of any applicable federal plan.

(3) [INSERT THE DATE 3 YEARS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

(b) For any existing unit not subject to an earlier permit application deadline, the application deadline of 36 months after the promulgation of this subpart applies regardless of whether or when any applicable federal plan is effective, or whether or when any applicable Clean Air Act section 111(d)/129 state or tribal plan is approved by EPA and becomes effective.

(c) If your existing unit is subject to title V as a result of some triggering requirement(s) other than those specified in paragraphs (a) and (b) of this section (for example, a unit may be a major source or part of a major source), then your unit may be required to apply for a title V permit prior to the deadlines specified in paragraphs (a) and (b). If more than one requirement triggers a source's obligation to apply for a title V permit, the 12-month timeframe for filing a title V permit application is triggered by the requirement which first causes the source to be subject to title V. (See section

503(c) of the Clean Air Act and 40 CFR 70.3(a) and (b), 40 CFR 70.5(a)(1)(i), 40 CFR 71.3(a) and (b), and 40 CFR 71.5(a)(1)(i).)

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

Model Rule—Definitions

§60.5250 What definitions must I know?

Terms used but not defined in this subpart are defined in the Clean Air Act and §60.2.

Administrator means:

(1) For units covered by the federal plan, the Administrator of the EPA or his/her authorized representative.

(2) For units covered by an approved state plan, the director of the state air pollution control agency or

his/her authorized representative.

Affected source means a sewage sludge incineration unit as defined in §60.5250.

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.

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

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

Bypass stack means a device used for discharging combustion gases to avoid severe damage to the air pollution control device or other equipment.

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

Continuous automated sampling system means the total equipment and procedures for automated sample collection and sample recovery/analysis to determine a pollutant concentration or emission rate by collecting a single integrated sample(s) or multiple integrated sample(s) of the pollutant (or diluent gas) for subsequent on-or off-site analysis; integrated sample(s) collected are representative of the emissions for the sample time as specified by the applicable requirement.

Continuous emissions monitoring system means a monitoring system for continuously measuring and recording the emissions of a pollutant from an affected facility.

Continuous monitoring system (CMS) means a continuous emissions monitoring system, continuous automated sampling system, continuous parameter monitoring system or other manual or automatic monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by this subpart. The term refers to the total equipment used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters.

Continuous parameter monitoring system means a monitoring system for continuously measuring and recording operating conditions associated with air pollution control device systems (e.g., operating temperature, pressure, and power).

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 limit, 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.

Electrostatic precipitator or wet electrostatic precipitator means an air pollution control device that uses both electrical forces and, if applicable, water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

Existing sewage sludge incineration unit means a sewage sludge incineration unit the construction of which is commenced on or before October 14, 2010.

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

Fluidized bed incinerator means an enclosed device in which organic matter and inorganic matter in sewage sludge are combusted in a bed of particles suspended in the combustion chamber gas.

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

Modification means a change to an existing SSI unit later than [INSERT THE DATE 6 MONTHS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER] and that meets one of two criteria:

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

(2) Any physical change in the SSI 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.

Modified sewage sludge incineration unit means an existing SSI unit that undergoes a modification, as defined in this section.

Multiple hearth incinerator means a circular steel furnace that contains a number of solid refractory hearths and a central rotating shaft; rabble arms that are designed to slowly rake the sludge on the hearth are attached to the rotating shaft. Dewatered sludge enters at the top and proceeds downward through the furnace from hearth to hearth, pushed along by the rabble arms.

Operating day means a 24-hour period between 12:00

midnight and the following midnight during which any amount of sewage sludge is combusted at any time in the SSI unit.

Particulate matter means filterable particulate matter emitted from SSI units as measured by Method 5 at 40 CFR part 60, appendix A-3 or Methods 26A or 29 at 40 CFR part 60, appendix A-8.

Power input to the electrostatic precipitator means the product of the test-run average secondary voltage and the test-run average secondary amperage to the electrostatic precipitator collection plates.

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:

(1) A change in the process employed at the wastewater treatment facility associated with the affected SSI unit (e.g., the addition of tertiary treatment at the facility, which changes the method used for disposing of process solids and processing of the sludge prior to incineration).

(2) A change in the air pollution control devices used to comply with the emission limits for the affected

SSI unit (e.g., change in the sorbent used for activated carbon injection).

Sewage sludge means solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incineration unit or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

Sewage sludge feed rate means the rate at which sewage sludge is fed into the incinerator unit.

Sewage sludge incineration (SSI) unit means an incineration unit combusting sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter. Sewage sludge incineration unit designs include fluidized bed and multiple hearth. A SSI unit also includes, but is not limited to, the sewage sludge feed system, auxiliary fuel feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The SSI unit includes all ash handling systems connected to the bottom ash handling system. The combustion unit bottom ash system ends at the truck loading station or similar equipment that transfers the ash to final disposal. The SSI unit does not include air pollution control equipment or the stack.

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

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

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

Startup means the period of time between the activation, including the firing of fuels (e.g., natural gas or distillate oil), of the system and the first feed to the unit.

Toxic equivalency means the product of the concentration of an individual dioxin isomer in an environmental mixture and the corresponding estimate of the compound-specific toxicity relative to tetrachlorinated dibenzo-p-dioxin, referred to as the toxic equivalency factor for that compound. Table 5 to this subpart lists the toxic equivalency factors.

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

You means the owner or operator of an affected SSI unit.

Table 1 to Subpart MMMM of Part 60—Model Rule—Increments of

Progress and Compliance Schedules for Existing Sewage Sludge Incineration Units

Comply with these increments of progress	By these dates[a]
Increment 1—Submit final control plan	(Dates to be specified in state plan)
Increment 2—Final compliance	(Dates to be specified in state plan)[b]

[a]Site-specific schedules can be used at the discretion of the state.

[b]The date can be no later than 3 years after the effective date of state plan approval or [INSERT THE DATE 5 YEARS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER] for SSI units that commenced construction on or before October 14, 2010.

Table 2 to Subpart MMMM of Part 60—Model Rule—Emission Limits and Standards for Existing Fluidized Bed Sewage Sludge Incineration Units

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Particulate matter	18 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters sample per run)	Performance test (Method 5 at 40 CFR part 60, appendix A-3; Method 26A or Method 29 at 40 CFR part 60, appendix A-8).

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Hydrogen chloride	0.51 parts per million by dry volume	3-run average (Collect a minimum volume of 1 dry standard cubic meters per run)	Performance test (Method 26A at 40 CFR part 60, appendix A-8).
Carbon monoxide	64 parts per million by dry volume	3-run average (collect sample for a minimum duration of one hour per run)	Performance test (Method 10, 10A, or 10B at 40 CFR part 60, appendix A-4).
Dioxins/furans (total mass basis); or Dioxins/furans (toxic equivalency basis)[b]	1.2 nanograms per dry standard cubic meter(total mass basis); or 0.10 nanograms per dry standard cubic meter (toxic equivalency basis)	3-run average (collect a minimum volume of 1 dry standard cubic meters per run)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Mercury	0.037 milligrams per dry standard cubic meter	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008)[c], collect a minimum volume of 1 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-8)	Performance test (Method 29 at 40 CFR part 60, appendix A-8; Method 30B at 40 CFR part 60, appendix A-8; or ASTM D6784-02 (Reapproved 2008)[c].
Oxides of nitrogen	150 parts per million by dry volume	3-run average (Collect sample for a minimum duration of one hour per run)	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Sulfur dioxide	15 parts per million by dry volume	3-run average (For Method 6, collect a minimum volume of 60 liters per run. For Method 6C, collect sample for a minimum duration of one hour per run)	Performance test (Method 6 or 6C at 40 CFR part 40, appendix A-4; or ANSI/ASME PTC-19.10-1981.[c]
Cadmium	0.0016 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use GFAAS or ICP/MS for the analytical finish.
Lead	0.0074 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters sample per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8. Use GFAAS or ICP/MS for the analytical finish.

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Fugitive emissions from ash handling	Visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) for no more than 5 percent of the hourly observation period	Three 1-hour observation periods	Visible emission test (Method 22 of appendix A-7 of this part).

[a] All emission limits are measured at 7 percent oxygen, dry basis at standard conditions.

[b] You have the option to comply with either the dioxin/furan emission limit on a total mass basis or the dioxin/furan emission limit on a toxic equivalency basis.

[c] Incorporated by reference, see §60.17.

Table 3 to Subpart MMMM of Part 60—Model Rule—Emission Limits and Standards for Existing Multiple Hearth Sewage Sludge Incineration Units

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Particulate matter	80 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 0.75 dry standard cubic meters per run)	Performance test (Method 5 at 40 CFR part 60, appendix A-3; Method 26A or Method 29 at 40 CFR part 60, appendix A-8).
Hydrogen chloride	1.2 parts per million by dry volume	3-run average (For Method 26, collect a minimum volume of 200 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meters per run)	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A-8).

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Carbon monoxide	3,800 parts per million by dry volume	3-run average (collect sample for a minimum duration of one hour per run)	Performance test (Method 10, 10A, or 10B at 40 CFR part 60, appendix A-4).
Dioxins/furans (total mass basis) Dioxins/furans (toxic equivalency basis)[b]	5.0 nanograms per dry standard cubic meter; or 0.32 nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters per run)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Mercury	0.28 milligrams per dry standard cubic meter	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008)[c], collect a minimum volume of 1 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-8)	Performance test (Method 29 at 40 CFR part 60, appendix A-8; Method 30B at 40 CFR part 60, appendix A-8; or ASTM D6784-02 (Reapproved 2008)[c] .
Oxides of nitrogen	220 parts per million by dry volume	3-run average (Collect sample for a minimum duration of one hour per run)	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Sulfur dioxide	26 parts per million by dry volume	3-run average (For Method 6, collect a minimum volume of 200 liters per run. For Method 6C, collect sample for a minimum duration of one hour per run)	Performance test (Method 6 or 6C at 40 CFR part 40, appendix A-4; or ANSI/ASME PTC 19.10-1981.[c]
Cadmium	0.095 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8).
Lead	0.30 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8.

For the air pollutant	You must meet this emission limit[a]	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
Fugitive emissions from ash handling	Visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) for no more than 5 percent of the hourly observation period	Three 1-hour observation periods	Visible emission test (Method 22 of appendix A-7 of this part).

[a]All emission limits are measured at 7 percent oxygen, dry basis at standard conditions.

[b]You have the option to comply with either the dioxin/furan emission limit on a total mass basis or the dioxin/furan emission limit on a toxic equivalency basis.

[c] **Incorporated by reference, see §60.17.**

Table 4 to Subpart MMMM of Part 60—Model Rule—Operating Parameters for Existing Sewage Sludge Incineration Units[a]

For these operating parameters	You must establish these operating limits	And monitor using these minimum frequencies		
		Data measurement	Data recording[b]	Data averaging period for compliance
All sewage sludge incineration units				
Combustion chamber operating temperature (not required if afterburner temperature is monitored)	Minimum combustion chamber operating temperature or afterburner temperature	Continuous	Every 15 minutes	12-hour block.
Fugitive emissions from ash handling	Site-specific operating requirements	Not applicable	No applicable	Not applicable
Scrubber				
Pressure drop across each wet scrubber	Minimum pressure drop	Continuous	Every 15 minutes	12-hour block
Scrubber liquid flow rate	Minimum flow rate	Continuous	Every 15 minutes	12-hour block

For these operating parameters	You must establish these operating limits	And monitor using these minimum frequencies		
		Data measurement	Data recording[b]	Data averaging period for compliance
Scrubber liquid pH	Minimum pH	Continuous	Every 15 minutes	3-hour block
Fabric Filter				
Alarm time of the bag leak detection system alarm	Maximum alarm time of the bag leak detection system alarm (this operating limit is provided in §60.4850 and is not established on a site-specific basis)			

For these operating parameters	You must establish these operating limits	And monitor using these minimum frequencies		
		Data measurement	**Data recording[b]**	**Data averaging period for compliance**
Electrostatic precipitator				
Secondary voltage of the electrostatic precipitator collection plates	Minimum power input to the electrostatic precipitator collection plates	Continuous	Hourly	12-hour block
Secondary amperage of the electrostatic precipitator collection plates				
Effluent water flow rate at the outlet of the electrostatic precipitator	Minimum effluent water flow rate at the outlet of the electrostatic precipitator	Hourly	Hourly	12-hour block
Activated carbon injection				

For these operating parameters	**You must establish these operating limits**	**And monitor using these minimum frequencies**		
		Data measurement	**Data recording**[b]	**Data averaging period for compliance**
Mercury sorbent injection rate	Minimum mercury sorbent injection rate	Hourly	Hourly	12-hour block
Dioxin/furan sorbent injection rate	Minimum dioxin/furan sorbent injection rate			
Carrier gas flow rate or carrier gas pressure drop	Minimum carrier gas flow rate or minimum carrier gas pressure drop	Continuous	Every 15 minutes	12-hour block
Afterburner				
Temperature of the afterburner combustion chamber	Minimum temperature of the afterburner combustion chamber	Continuous	Every 15 minutes	12-hour block

[a]As specified in §60.5190, you may use a continuous emissions monitoring system or continuous automated sampling system in lieu of establishing certain operating limits.
[b]This recording time refers to the minimum frequency that the continuous monitor or other measuring device initially records data. For all data recorded every 15 minutes, you must calculate hourly arithmetic averages. For all parameters, you use hourly averages to calculate the 12-hour or 3-hour block average specified in this table for demonstrating compliance. You maintain records of 1-hour averages.

Table 5 to Subpart MMMM of Part 60—Model Rule—Toxic Equivalency Factors

Dioxin/furan isomer	Toxic equivalency factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin	1
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
octachlorinated dibenzo-p-dioxin	0.0003
2,3,7,8-tetrachlorinated dibenzofuran	0.1

Dioxin/furan isomer	Toxic equivalency factor
2,3,4,7,8-pentachlorinated dibenzofuran	0.3
1,2,3,7,8-pentachlorinated dibenzofuran	0.03
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
octachlorinated dibenzofuran	0.0003

Table 6 to Subpart MMMM of Part 60—Model Rule—Summary of Reporting Requirements for Existing Sewage Sludge Incineration Units[a]

Report	Due date	Contents	Reference
Increments of progress report	No later than 10 business days after the compliance date for the increment	1. Final control plan including air pollution control device descriptions, process changes, type of waste to be burned, and the maximum design sewage sludge burning capacity	§60.5235(a)

Report	**Due date**	**Contents**	**Reference**
		2. Notification of any failure to meet an increment of progress 3. Notification of any closure	
Initial compliance report	No later than 60 days following the initial performance test	1. Company name and address 2. Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report 3. Date of report 4. Complete test report for the initial performance test 5. Results of CMS[b] performance evaluation 6. The values for the site-specific operating limits and the calculations and methods used to establish each operating limit 7. Documentation of installation of bag leak detection system for	§60.5235(b)

Report	Due date	Contents	Reference
		fabric filter 8. Results of initial air pollution control device inspection, including a description of repairs 9. The site-specific monitoring plan required under §60.5200 10. The site-specific monitoring plan for your ash handling system required under §60.5200	
Annual compliance report	No later than 12 months following the submission of the initial compliance report; subsequent reports are to be submitted no more than 12 months following the previous report	1. Company name and address 2. Statement and signature by responsible official 3. Date and beginning and ending dates of report 4. If a performance test was conducted during the reporting period, the results of the test, including any new operating limits and associated	§60.5235(c)

Report	Due date	Contents	Reference
		calculations and the type of activated carbon used, if applicable 5. For each pollutant and operating parameter recorded using a CMS, the highest recorded 3-hour average and the lowest recorded 3-hour average, as applicable 6. If no deviations from emission limits, emission standards, or operating limits occurred, a statement that no deviations occurred **7.** If a fabric filter is used, the date, time, and duration of alarms **8.** If a performance evaluation of a CMS was conducted, the results, including any new operating limits and their associated	

Report	Due date	Contents	Reference
		calculations **9.** If you met the requirements of §60.5205(a)(3) and did not conduct a performance test, include the dates of the last three performance tests, a comparison to the 50 percent emission limit threshold of the emission level achieved in the last three performance tests, and a statement as to whether there have been any process changes **10.** Documentation of periods when all qualified SSI unit operators were unavailable for more than 8 hours but less than 2 weeks **11.** Results of annual pollutions control device inspections, including description of repairs **12.** If there	

Report	Due date	Contents	Reference
		were no periods during which your CMSs had malfunctions, a statement that there were no periods during which your CMSs had malfunctions **13.** If there were no periods during which your CMSs were out of control, a statement that there were no periods during which your CMSs were out of control **14.** If there were no operator training deviations, a statement that there were no such deviations **15.** Information on monitoring plan revisions, including a copy of any revised monitoring plan	
Deviation report (deviations from emission limits, emission standards, or	By August 1 of a calendar year for data collected during the first half	<u>If using a CMS:</u> **1.** Company name and address **2.** Statement by a responsible official **3.** The calendar	§60.5235(d)

Report	Due date	Contents	Reference
operating limits, as specified in §60.5235(e)(1))	of the calendar year; by February 1 of a calendar year for data collected during the second half of the calendar year	dates and times your unit deviated from the emission limits or operating limits **4.** The averaged and recorded data for those dates **5.** Duration and cause of each deviation **6.** Dates, times, and causes for monitor downtime incidents **7.** A copy of the operating parameter monitoring data during each deviation and any test report that documents the emission levels **8.** For periods of CMS malfunction or when a CMS was out of control, you must include the information specified in §60.5235(d)(3)(viii) If not using a CMS: **1.** Company name and address **2.** Statement by a	

Report	Due date	Contents	Reference
		responsible official **3.** The total operating time of each affected SSI **4.** The calendar dates and times your unit deviated from the emission limits, emission standard, or operating limits **5.** The averaged and recorded data for those dates **6.** Duration and cause of each deviation **7.** A copy of any performance test report that showed a deviation from the emission limits or standards **8.** A brief description of any malfunction, a description of actions taken during the malfunction to minimize emissions, and corrective action taken	

Report	Due date	Contents	Reference
Notification of qualified operator deviation (if all qualified operators are not accessible for 2 weeks or more)	Within 10 days of deviation	1. Statement of cause of deviation 2. Description of actions taken to ensure that a qualified operator will be available 3. The date when a qualified operator will be accessible	§60.5235(e)
Notification of status of qualified operator deviation	Every 4 weeks following notification of deviation	1. Description of actions taken to ensure that a qualified operator is accessible 2. The date when you anticipate that a qualified operator will be accessible 3. Request for approval to continue operation	§60.5235(e)
Notification of resumed operation following shutdown (due to qualified operator deviation and as specified in §60.5155(b)(2)(i	Within five days of obtaining a qualified operator and resuming operation	1. Notification that you have obtained a qualified operator and are resuming operation	§60.5235(e)

Report	Due date	Contents	Reference
)			
Notification of a force majeure	As soon as practicable following the date you first knew, or through due diligence should have known that the event may cause or caused a delay in conducting a performance test beyond the regulatory deadline; the notification must occur before the performance test deadline unless the initial force majeure or a subsequent force majeure event delays the notice, and in such cases, the notification	1. Description of the force majeure event 2. Rationale for attributing the delay in conducting the performance test beyond the regulatory deadline to the force majeure 3. Description of the measures taken or to be taken to minimize the delay 4. Identification of the date by which you propose to conduct the performance test	§60.5235(f)

Report	Due date	Contents	Reference
	must occur as soon as practicable		
Notification of intent to start or stop use of a CMS	1 month before starting or stopping use of a CMS	1. Intent to start or stop use of a CMS	§60. 5235(g)
Notification of intent to conduct a performance test	At least 30 days prior to the performance test	1. Intent to conduct a performance test to comply with this subpart	
Notification of intent to conduct a rescheduled performance test	At least 7 days prior to the date of a rescheduled performance test	1. Intent to conduct a rescheduled performance test to comply with this subpart	

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

[b]CMS means continuous monitoring system.