

ORAL ARGUMENT NOT YET SCHEDULED

In The  
**United States Court of Appeals**  
For The District of Columbia Circuit

**NATIONAL ASSOCIATION OF  
CLEAN WATER AGENCIES, *et al.*,**

*Petitioners,*

v.

**ENVIRONMENTAL PROTECTION AGENCY, *et al.*,**

*Respondents.*

**ON PETITIONS FOR REVIEW OF RULES OF THE  
U.S. ENVIRONMENTAL PROTECTION AGENCY**

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**PAGE PROOF BRIEF OF MUNICIPAL PETITIONERS**

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The petitioners in these cases are:

1. National Association of Clean Water Agencies and Hatfield Township  
Municipal Authority (“Municipal Petitioners”)
2. Sierra Club

Respondents:

The respondents in these cases are the U.S. Environmental Protection Agency (“EPA”) and Lisa P. Jackson, Administrator.

Intervenors:

The intervenors in these cases are:

1. National Association of Clean Water Agencies and Hatfield Township  
Municipal Authority (Intervenors for Respondents in 11-1185)
2. Sierra Club (Intervenor for Respondents in 11-1131 and 11-1167)
3. MaxWest Environmental Systems (Intervenor for Petitioner in 11-1131)

**(iii) Amici in this Case**

There are no *amici curiae*.

**(iv) Circuit Rule 26.1 Disclosures for Petitioners**

Rule 26.1 statements are contained within this brief.

**(B) Rulings Under Review**

These consolidated petitions seek review of the EPA final actions

- (1) promulgating emission limitations and other requirements for sewage sludge

incinerators (“SSI”) under CAA §129, 42 U.S.C. §7429, 76 Fed. Reg. 15372 (Mar. 21, 2011), (the “SSI Rule”) and (2) denying NACWA’s petition for reconsideration of the SSI Rule, 77 Fed. Reg. 25086 (Apr. 27, 2012) (“Denial of Recon.”).

### (C) Related Cases

The following related cases have been consolidated for briefing:

1. *National Association of Clean Water Agencies v. EPA* (No. 11-131)
2. *Hatfield Township Municipal Authority v. EPA* (No. 11-1167)
3. *Sierra Club v. EPA* (No. 11-1185)
4. *National Association of Clean Water Agencies v. EPA* (No. 12-1236)
5. *Sierra Club v. EPA* (No. 12-1237)
6. *Waste Management, Inc. v. EPA* (No. 11-1148 and consolidated cases)

(petitions challenging EPA’s Non-Hazardous Secondary Materials rule, 76 Fed. Reg. 15456 (Mar. 21, 2011), defining certain materials, including sewage sludge, as solid waste when incinerated).

Respectfully submitted,

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2. NACWA's purpose and general nature is to provide a forum for collaboratively addressing issues affecting POTWs and to advocate on behalf of its members regarding legislative, regulatory and legal matters.
3. NACWA has no parent company, and no publicly held company has a 10 percent or greater ownership interest in NACWA.
4. NACWA has no outstanding shares or debt securities in the hands of the public and has no parent, subsidiary or affiliate that has issued shares or debt securities to the public.

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## **GLOSSARY OF TERMS**

CAA – Clean Air Act, 42 U.S.C. §§7401, *et seq.*

Cd – Cadmium

CDD-CDF – Mono- to Tri-Chlorinated Dibenzodioxins and Dibenzofurans

CO – Carbon Monoxide

CWA – Clean Water Act, 33 U.S.C. §§1251, *et seq.*

DSE – Domestic Sewage Exclusion

EPA – U.S. Environmental Protection Agency

FBI – Fluidized Bed Incinerator

HCl – Hydrogen Chloride

MACT – Maximum Achievable Control Technology

MHI – Multiple Hearth Incinerator

NACWA – National Association of Clean Water Agencies

HAP – Hazardous Air Pollutant

Hg – Mercury

NESHAPs – National Emission Standards for Hazardous Air Pollutants

NHSM Rule – Identification of Non-Hazardous Secondary Materials That Are  
Solid Waste, 76 Fed. Reg. 15456 (Mar. 21, 2011)

NO<sub>x</sub> – Nitrogen Oxides

Pb – Lead

PM – Particulate Matter

POTWs – Publicly-Owned Treatment Works

PRA – Paperwork Reduction Act, 44 U.S.C. §§3501, *et seq.*

RCRA – Solid Waste Disposal Act, 42 U.S.C. §§6901, *et seq.* as amended

RIA – Regulatory Impact Analysis

SO<sub>2</sub> – Sulfur Dioxide

SSI – Sewage Sludge Incinerator



SSI Rule – Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Sewage Sludge Incineration Units; Final Rule, 76 Fed. Reg. 15372 (Mar. 21, 2011),

UPL – Upper Predictive Limit statistical analysis

## **JURISDICTIONAL STATEMENT**

**A. Agency.** EPA has jurisdiction to regulate emissions from sewage sludge incinerators (“SSIs”) under the Clean Air Act (“CAA”).

**B. Court.** This Court has exclusive jurisdiction under CAA §§307(b)(1) and 307(d)(7)(B), 42 U.S.C. §§7607(b)(1) and 7607(d)(7)(B), to review final EPA actions (1) promulgating standards affecting SSIs under CAA §129, 42 U.S.C. §7429, 76 Fed. Reg. 15372 (Mar. 21, 2011) (“SSI Rule”), and (2) denying NACWA’s petition for reconsideration under CAA §307(d)(7)(B), 77 Fed. Reg. 25086 (Apr. 27, 2012) (“Denial of Recon.”).

**C. Timeliness.** NACWA and Hatfield filed petitions for review on May 6, 2011 and May 19, 2011 respectively, within the 60-day period under CAA §307(b)(1). NACWA’s petition challenging EPA’s denial of reconsideration was filed on May 30, 2012, within the 60-day period.

## **ISSUES PRESENTED**

1. Whether EPA acted in excess of statutory authority by regulating SSIs under CAA §129 instead of §112.
2. Whether EPA acted in excess of statutory authority or arbitrarily by setting maximum achievable control technology (“MACT”) floors based on data from fewer than the best-performing 12% of SSIs and without properly accounting for variability in sewage sludge characteristics.
3. Whether EPA acted arbitrarily by failing to establish appropriate subcategories of SSIs.

## **STATUTES AND REGULATIONS**

Pertinent statutes and regulations marked with asterisks in the table of authorities are provided in an addendum.

## **STATEMENT OF THE FACTS**

### **I. INTRODUCTION**

The need to use or dispose of sewage sludge is an unavoidable reality of modern life, presenting both challenges and opportunities for municipalities with publicly-owned treatment works (“POTWs”). Congress began addressing POTWs in the 1970s and 1980s through the Federal Water Pollution Control Act, 33 U.S.C. §§1251, *et seq.*, (“CWA”), with the intent that the CWA would provide the primary regulatory framework for all POTW operations. These amendments

culminated in the Water Quality Act of 1987, when Congress created the comprehensive risk-based CWA program still in place today for use and disposal of sewage sludge – including the air quality issues presented by sewage sludge incineration.

Central to the current case are two CAA provisions – §§112 and 129 – that Congress passed in 1990, shortly after the Water Quality Act of 1987. A pivotal question is whether Congress intended to supplement the existing CWA program for sewage sludge incineration using CAA §112 (with its express focus on POTWs), or to fundamentally alter the CWA framework using CAA §129 (with its focus on incineration generally).

## II. POTWS AND SEWAGE SLUDGE

Approximately 16,000 POTWs in the U.S. collect and treat approximately 40 billion gallons of domestic sewage daily. *See* NACWA comments (EPA-HQ-OAR-2009-0559-0127) Att. A at 2 (JA:\_\_\_). POTWs are owned directly by municipalities or regional authorities and serve a wide variety of communities, each with a unique mix of residences creating domestic sewage and commercial and/or industrial establishments. *Id.* at 25-26 (JA:\_\_\_).

As wastewater is received at the POTW, municipal waste (*i.e.*, trash and garbage) and grit are screened out and removed by the headworks prior to treating

the wastewater in the POTW. *Id.* at 8-9, 14 (JA:\_\_\_). Wastewater treatment in the POTW involves physical, chemical and biological processes that remove dissolved solids from wastewater. Microbes added to the wastewater consume dissolved wastes, grow, reproduce and die. As these microbes grow, they settle out of the treated wastewater, thereby creating sewage sludge. *Id.* Att. A at 4-7 (JA:\_\_\_). The resulting sludge is a biologically active material with a solids content 20-30 times greater than the untreated wastewater received by the POTW. *Id.* at 16.

Sewage sludge characteristics vary widely because POTWs use different wastewater treatment technologies and serve a variety of residential, commercial and industrial dischargers. POTWs also experience significant regional and seasonal variability that affects sludge characteristics. For example, high-flows during rainy seasons scour and dislodge sediment from the sewer system, which may elevate metals concentrations in the wastewater and sewage sludge. *Id.*

Some POTWs are able to use land application for sludge management. Currently, more than half of all sewage sludge is land-applied, although this option is limited or nonexistent for many cities and colder climates (due, for instance, to lack of agricultural areas to accept the material) and in areas where land application is prohibited. *Id.* at 17-18 (JA:\_\_\_).

Landfilling and incineration are the only options for POTWs that cannot land-apply sludge. Approximately 30% of all sewage sludge is landfilled, and this is often the choice of communities with space in the POTW for sludge drying/storage and nearby landfill capacity. *Id.* All remaining sludge – an estimated 4-6 million tons annually – is incinerated in SSIs. *See* NACWA Comments on NHSM Rule at 6 (attached to NACWA Comments on SSI Rule) (JA:\_\_\_).

By EPA's count there are 204 SSIs located at POTWs around the country. 76 Fed. Reg. 15387 (JA:\_\_\_). For many urban areas, incineration is the only sensible option due to costs, lack of space for sludge drying/storage, and state and local restrictions on land application and landfilling. NACWA at 17-18 (JA:\_\_\_). Incineration is also environmentally preferable for many communities because it eliminates odors, volatile pollutants and pathogens, and at some POTWs reduces reliance on fossil fuels. *Id.* at 17.

The two main types of SSIs are multiple hearth incinerators ("MHI") and fluidized bed incinerators ("FBI"). Regardless of incinerator technology, SSIs are integrated physically and operationally into the sewage sludge management process making them an essential part of the POTW. SSIs are designed and operated for the specific sludge volume, water removal capabilities and other

unique characteristics of a POTW. *Id.* at 8-9 (JA:\_\_\_). As discussed below, air emissions from SSIs have long been controlled through a mix of CWA and CAA regulations and state and local requirements.

### III. STATUTORY AND REGULATORY FRAMEWORK AFFECTING SSIs

#### A. CAA Requirements Affecting SSIs

The statutory provisions at issue in this case, CAA §§112 and 129, were added to the CAA in 1990. Congress added §112 to enhance the pre-existing CAA program related to control of hazardous air pollutants (“HAP”) from stationary sources generally and §129 to require controls for emissions of HAPs and other pollutants from certain specified categories of solid waste incineration. Section 112 requires EPA to promulgate standards for a wide variety of categories and subcategories of “major sources” of HAP identified in §112. EPA may also set standards for non-major (called “area”) sources of HAP using more flexible “generally available control technology.”

By contrast, CAA §129, which focuses exclusively on certain categories of incineration, imposes many more rigorous requirements. Section 129 requires EPA to promulgate MACT-level standards for all “solid waste incineration units” pursuant to CAA §111 (new sources) and §129 (existing sources). *See* CAA §§129(a)(1)-(2) and (b)(1). Unlike §112, §129 does not distinguish between major and area sources and, therefore, mandates MACT-level control for all solid waste

incineration units. Section 129 also requires EPA to set numeric emission limits for specified HAP and (unlike §112) for non-HAP combustion-related pollutants. *See* CAA §129(a)(4). In addition, §129 requires a siting review before new solid waste incineration units can be built. *See* CAA §129(a)(3). That review gives EPA power to prevent construction of such units.

The first CAA provision at issue, §112(e)(5), directs EPA to:

promulgate standards pursuant to [§112(d)] applicable to publicly owned treatment works (as defined in title II of the Federal Water Pollution Control Act [33 U.S.C.A. §1281, *et seq.*]) not later than 5 years after November 15, 1990.

The broad definition of “treatment works” in CWA §212(2)(A)-(B) encompasses all facilities and processes used to collect and treat sanitary wastewater and to dispose of sewage sludge, including SSIs. “Treatment works” include:

*any works*, including site acquisition of the land that will be an integral part of the treatment process (including land used for the storage of treated wastewater in land treatment systems prior to land application) or is *used for ultimate disposal of residues resulting from such treatment*.

In addition ... “treatment works” means *any other method or system for preventing, abating, reducing, storing, treating, separating, or disposing of municipal waste, including storm water runoff, or industrial waste, including waste in combined storm water and sanitary sewer systems*.

33 U.S.C. §1292(2)(A)-(B) (emphasis added); *see also* 40 C.F.R. §35.905.



The second pertinent provision is the definition of “solid waste incineration unit” in §129(g)(1), which means:

a distinct operating unit of any facility which combusts any solid waste material *from commercial or industrial establishments or the general public (including single and multiple residences, hotels, and motels).*

(Emphasis added.) Thus, §129 governs incinerators combusting a solid waste from one of the categories of facilities specified in §129(g)(1). According to §129(g)(6), the term “solid waste” has the meaning assigned to it by EPA pursuant to the Solid Waste Disposal Act, 42 U.S.C. §§6901, *et seq.* (“RCRA”).

Because CAA §129(h)(2) makes regulation of sources under §§112 and 129 mutually exclusive, the pivotal issue here is whether Congress gave EPA authority to regulate SSIs as part of POTWs under §112 or, alternatively, as solid waste incineration units under §129.

#### B. CWA Requirements Affecting SSIs

The shaping and enactment of CAA §§112 and 129 occurred only a short time after Congress overhauled §405(d) of the CWA, the primary authority for governing the use and disposal of sewage sludge, including through incineration. Sections 112 and 129 were enacted in late 1990, not long after the amendments to CWA §405(d) in early 1987 as part of the Water Quality Act. *See* Pub.L. No. 101-549, 104 Stat. 2399 (Nov. 15, 1990); Pub.L. No. 100-4, 101 Stat. 7 (Feb. 4, 1987).

EPA was mid-stride in implementing the amendments to §405(d) while Congress drafted and debated the 1990 CAA amendments.

The overhaul of CWA §405(d) was a milestone in the regulation of sewage sludge management. As EPA explained, these amendments to §405 “set forth for the first time a comprehensive program for reducing the environmental risks and maximizing beneficial use of sludge.” 54 Fed. Reg. 18716, 18717 (May 2, 1989). According to EPA, “[p]rior to the enactment of the Water Quality Act of 1987, the federal authorities and regulations related to the use and disposal of sewage sludge were scattered among various statutes and programs and did not provide States and municipalities with comprehensive guidelines on which to base sludge management decisions.” *Id.*

Since that time POTWs and SSIs have been subject to a comprehensive, risk-based program under CWA §405 for reducing potential risks from sewage sludge. Section 405(d) required EPA to establish numeric limits and management practices that protect public health and the environment from the adverse effects of pollutants in sewage sludge; and §405(e) prohibits any person from disposing of sewage sludge except in compliance with EPA’s implementing regulations, now contained in 40 C.F.R. Part 503.

The Part 503 regulations contain requirements governing all forms of sewage sludge management. For disposal by incineration, Part 503 incorporates existing CAA regulations controlling emissions of mercury (“Hg”) and beryllium and imposes new standards on other pollutants. Part 503 requires compliance with:

- a) National Emission Standards for Hazardous Air Pollutants (“NESHAPs”) for Hg and beryllium (40 C.F.R. Part 61, Subparts E and C) under the CAA;
- b) Risk-based limits for arsenic, cadmium (“Cd”), chromium, lead (“Pb”), and nickel content in the sewage sludge incinerated;
- c) Technology-based emission limits for total hydrocarbons or an alternative emission limit for carbon monoxide (“CO”); and
- d) Various management practices; monitoring and reporting requirements.

As required by CWA §405(d), the Part 503 regulations set standards that EPA found to be protective of human health and the environment. EPA has repeatedly emphasized its confidence that the Part 503 regulations are protective of public health and the environment. *See* NACWA at 6 and fn.5 (JA:\_\_\_).

#### IV. EPA’S HISTORY IMPLEMENTING THE CAA AS TO SSIs

##### A. Early Rulemaking Activity

EPA first addressed CAA regulation of SSIs in the initial list of major and area source categories under §112. *See* 57 Fed. Reg. 31576 (July 16, 1992) (JA:\_\_\_). EPA listed SSIs as a source category under §112 because “the Agency does not consider sewage sludge incineration units to be covered under Section 129 so it has authority to list and set standards for these units under Section 112.” *Id.* at 31584 (JA:\_\_\_). EPA reiterated that SSIs are regulated under §112 in a later listing decision. *See* 58 Fed. Reg. 9248, 9262, 9276-77 (Feb. 19, 1993) (JA:\_\_\_).

In 1997 EPA published a *Federal Register* notice stating that SSIs were subject to §129, instead of §112, and asking for comment. *See* 62 Fed. Reg. 1868, 1868 (Jan. 14, 1997) (JA:\_\_\_). EPA took no further action on that proposal, but when the Agency promulgated NESHAPs under §112 for the treatment plant portion of POTWs, EPA’s preamble to that rule stated without explanation that EPA believed SSIs were subject to CAA §129. *See* 64 Fed. Reg. 57572, 57575 (Oct. 26, 1999). However, after receiving negative public comments, EPA abandoned the 1997 proposal and reaffirmed its prior view that SSIs would be regulated under §112 and explained that SSIs are not subject to §129 because sewage sludge is not from commercial and industrial facilities or the general public. *See* 65 Fed. Reg. 23430, 23460 (Apr. 24, 2000) (JA:\_\_\_). EPA later deleted SSIs from the §112 list of major source categories after finding that no SSIs emitted HAPs at major source levels, *see* 67 Fed. Reg. 6521 (Feb. 12, 2002)

(JA:\_\_), and added SSIs to the list of area (*i.e.*, non-major) sources subject to regulation under §112. *See id.* at 43112 (June 26, 2002) (JA:\_\_); *id.* at 70427 (Nov. 22, 2002) (JA:\_\_).

B. Parallel Rulemaking: Definition of “Solid Waste” for Purposes of CAA §129

In parallel with the SSI Rule and other §129 rulemakings, EPA conducted a RCRA rulemaking titled “Identification of Non-Hazardous Secondary Materials That Are Solid Waste,” to define the term “solid waste” for purposes of §129. *See* 76 Fed. Reg. 15456 (Mar. 21, 2011) (“NHSM Rule”). EPA published the final SSI Rule and NHSM Rule on the same day.

In the NHSM Rule, EPA determined that sewage sludge when incinerated is a “solid waste” under RCRA, although the Agency was careful to say that it was leaving the question of whether SSIs fall under §112 or §129 to the SSI rulemaking. *Id.* at 15513-14 (JA:\_\_). Commenters argued that the Domestic Sewage Exclusion (“DSE”) in the RCRA definition of “solid waste” applies to sewage sludge and, consequently, it is not solid waste under RCRA. That definition states that “solid waste” includes “any garbage, refuse, sludge from a waste treatment plant ... [or] other discarded material ... but does not include solid or dissolved material in domestic sewage.” 42 U.S.C. §6903(27). RCRA defines “sludge” in relevant part as “any solid, semisolid, or liquid waste generated from a

municipal ... wastewater treatment plant.” *Id.* §6903(26A). In the NHSM Rule, EPA concluded that the DSE does not reach sewage sludge because, in its view, those two statutory definitions imply that Congress was distinguishing between domestic sewage and sewage sludge for purposes of RCRA, with domestic sewage being collected from various sources such as the general public while sewage sludge is produced in the POTW. *See* 76 Fed. Reg. 15513-14 (JA:\_\_\_).<sup>1</sup> In EPA’s main technical analysis underlying the NHSM Rule, EPA describes sewage sludge as consisting of suspended and dissolved solids that are “generated in the wastewater treatment process.” *See* EPA-HQ-RCRA-2008-0329-1828 at 1 (JA:\_\_\_). According to EPA, sewage sludge “includes materials generated after both primary and secondary treatment stages” and is comprised of “dead and alive micro-organisms.” *Id.*

### C. SSI Rulemaking at Issue

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<sup>1</sup> NACWA has petitioned this Court for review of the NHSM Rule, among other things challenging the determination that the DSE does not extend to sewage sludge. *See Waste Management, Inc. v. EPA*, No. 11-1148. Those consolidated cases are being held in abeyance pending EPA reconsideration of the NHSM Rule. The DSE was first created by Congress in the 1965 Solid Waste Disposal Act. While NACWA will argue the implications of the DSE in the NHSM Rule litigation, it is important to emphasize here that Congress has historically viewed sewage sludge differently from municipal and other types of waste materials. *See* NACWA at 12-13 (JA:\_\_\_). For purposes of the present challenge to the SSI Rule, the Municipal Petitioners are treating EPA’s decision in the NHSM Rule as a given – but without prejudice to NACWA’s challenges to the NHSM Rule.

By the time EPA started to develop the SSI Rule, the Agency had changed its position on SSIs once again, concluding that SSIs must be regulated under §129 because (a) sewage sludge is a solid waste under RCRA, and (b) in EPA's new view, sewage sludge "clearly originates from the general public." 76 Fed. Reg. 15383 (JA:\_\_\_).

Once EPA decided to proceed under §129, it promulgated separate numeric emission standards for FBIs and MHIs covering nine different §129 pollutants. The SSI Rule also requires owners proposing to construct new SSIs to submit a siting analysis for EPA or state approval analyzing environmental factors and the practicability of choosing alternatives to incineration. *Id.* at 15376-77 (JA:\_\_\_).

D. NACWA's Petition for Reconsideration

On May 25, 2011, NACWA submitted a Petition for Reconsideration to EPA objecting, among other things, to EPA's new argument regarding its authority to regulate SSIs under §129 and EPA's response to Part 503 data showing variability in sludge characteristics. *See* Pet. for Recon. at 6-18 (JA:\_\_\_).

EPA denied the petition on April 6, 2012 and published notice of the denial on April 27, 2012. *See* 77 Fed. Reg. 25086 (JA:\_\_\_). On the central issue of its authority to regulate SSIs, EPA argued that "[g]iven the broad definition of solid waste incineration in section 129, as well as the context of CAA section 112(e)(5),

which is a provision found in a subsection of CAA section 112 that governs the timing of emissions regulations, it is reasonable for the EPA to consider both provisions and to conclude that CAA section 129(g)'s all-encompassing definition of solid waste incineration unit requires regulation of SSI under CAA section 129." Denial of Recon. at 3 (JA:\_\_\_). Thus claiming to resolve a conflict in the statute, EPA concluded that "the CWA definition of publicly owned treatment works [as incorporated into §112(e)(5)] is not relevant, since [EPA's] interpretation does not depend on whether or not the SSI is within the scope of that definition." *Id.*

### **SUMMARY OF ARGUMENT**

EPA acted in excess of its CAA authority by regulating SSIs under CAA §129, rather than §112(d). Section 112(e)(5) directs EPA to set standards for POTWs, including SSIs, under §112(d), thereby preserving a more flexible regulatory scheme and local decisionmaking control over the means and methods of sewage sludge management, as called for by CWA §405(e). EPA's inconsistent and contrary interpretations of §§112 and 129 are not supported by the plain meaning of the CAA, create an unnecessary and avoidable conflict in the statute, and frustrate Congress' intention that local governments exercise control over management of sewage sludge.

EPA's interpretation that SSIs are "solid waste incineration units" fails both steps of analysis under *Chevron*. The plain language of §112(e)(5) requires EPA



to promulgate emission standards for SSIs under §112(d). Likewise, the plain language of §129(g)(1) is clear that SSIs are not solid waste incineration units because sewage sludge comes from the POTW itself, and not from the general public. Because CAA §129(h)(2) makes regulation of sources under §§112(d) and 129 mutually exclusive, EPA does not have authority to regulate SSIs under both §§112 and 129.

Even assuming *arguendo* that §129 applies to SSIs, EPA also violated the CAA mandate to set MACT floor standards using the required minimum number of SSIs and at levels consistently achievable by those best-performing SSIs. Finally, EPA irrationally failed to use critical data submitted during the comment period, and failed to give weight to information showing that the standards are not consistently achievable even for best-performing SSIs.

## STANDING

NACWA is an association whose members include 280 municipalities who own and operate approximately 110 SSIs subject to the SSI Rule. *See* Pet. for Recon. at 1 (JA:\_\_\_). Sound regulation of SSIs is germane to NACWA's purpose, which includes advocacy to maintain incineration as a viable option for communities. Adjudication of NACWA's challenges to the SSI Rule does not require participation of its members. Therefore, NACWA has standing to bring these challenges on behalf of its members.

Hatfield is a municipal authority located in eastern Pennsylvania that operates an SSI and, therefore, is directly subject to the SSI Rule.

### **STANDARD OF REVIEW**

Final agency actions under the CAA are reviewed to determine whether the actions are “in excess of statutory jurisdiction, authority, or limitations, or short of statutory right” or “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” CAA §307(d)(9)(A)-(C). An action is arbitrary and capricious if the agency “entirely failed to consider an important aspect of the problem,” *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983), or failed to “identif[y] and explain[] the reasoned basis for its decision.” *Transactive Corp. v. U.S.*, 91 F.3d 232, 236 (D.C. Cir. 1996). In particular, an action is arbitrary if the agency has not explained how the action comports with statutory requirements, *see Mountain Communications, Inc. v. FCC*, 355 F.3d 644, 648-49 (D.C. Cir. 2004), or has acted in a way that frustrates the purpose of a statute. *See BP West Coast Prods. v. FERC*, 374 F.3d 1263, 1274 (D.C. Cir. 2004).

EPA’s statutory interpretations are reviewed pursuant to *Chevron U.S.A. Inc. v. NRDC*, 467 U.S. 837 (1984). Under *Chevron*, a reviewing court is confronted with two questions. “First, always, is the question whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the

end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.” *Id.* at 842-43. If the statute is ambiguous, EPA’s interpretation must be upheld unless, among other things, EPA has not provided a reasoned explanation for its interpretation, or if the interpretation “frustrate[s] the policy that Congress sought to implement.” *Shays v. FEC*, 528 F.3d 914, 925 (D.C. Cir. 2008); *Vill. of Barrington v. Surface Transp. Bd.*, 636 F.3d 650, 660 (D.C. Cir. 2011).

## **ARGUMENT**

### **I. EPA ACTED CONTRARY TO THE CAA BY SETTING STANDARDS FOR SSIs UNDER §129 INSTEAD OF §112**

EPA’s rationale for regulating SSIs under CAA §129 centers on its mistaken view that SSIs are solid waste incineration units under §129(g)(1). EPA reaches this outcome by (a) improperly reading the word “from” in §129(g)(1) as referring to the “original source” of a waste, as opposed to the proximate source; (b) concluding that sewage sludge “originates” with the general public instead of the POTW; and (c) believing §§129 and 112(e)(5) to be in conflict and deciding that §112(e)(5) is merely a scheduling provision. *See* 76 Fed. Reg. 15383 (JA:\_\_); Denial of Recon. at 3 (JA:\_\_).

EPA’s interpretation suffers at least three major errors. Using traditional tools of statutory construction, the word “from” in §129(g)(1) on its face, and even

more clearly in context, refers to the proximate source of the waste material (here the POTW) and not EPA's "original source" reading. In any event, EPA is wrong that the original source of sewage sludge is the general public, instead of the POTW. Finally, using the plain reading of §129(g)(1), there is no conflict with §112 because SSIs, as parts of POTWs, are subject to regulation under §112 by virtue of §112(e)(5).

A. EPA's View of Its Authority to Regulate SSIs Is Contrary to the Plain Meaning of §§129(g)(1) and 112(e)(5) and Wrong on the Facts

Sections 129(a)(1)(A)-(b)(1) direct EPA to set emission standards for each of several listed categories of "solid waste incineration units." Section 129(g)(1) defines that term as:

a distinct operating unit of any facility which combusts any solid waste material *from commercial or industrial establishments or the general public (including single and multiple residences, hotels, and motels)*.

(Emphasis added). According to EPA, SSIs meet this definition because sewage sludge "clearly originates from the general public, including residential and commercial facilities." 76 Fed. Reg. 15383 (JA:\_\_). According to EPA: "Simply because the waste is treated at a POTW prior to combustion does not change the original source of the sewage sludge." *Id.*

Under traditional rules of construction, the first step is to determine whether the statutory language has a plain and unambiguous meaning based on ordinary usage. *See, e.g., Roberts v. Sea-Land Servs., Inc.*, 132 S. Ct. 1350, 1356 (2012). The language in question must be read in its “context and with a view to [its] place in the overall statutory scheme.” *See, e.g., id.* at 1357 (citation/quotations omitted); *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 132-33 (2000). *See also Am. Mining Congress v. EPA*, 824 F.2d 1177, 1185 (D.C. Cir. 1987) (“The statutory provision cannot properly be torn from the law of which it is a part; context and structure are, as in examining any legal instrument, of substantial import in the interpretative exercise.”). In analyzing the interplay between §§112(e)(5) and 129(g)(1), courts are “guided not by ‘a single sentence or member of a sentence, but [must] look[ ] to the provisions of the whole law, and to its object and policy.’” *John Hancock Mut. Life Ins. Co. v. Harris Trust & Sav. Bank*, 510 U.S. 86, 94-95 (1993) (quoting *Pilot Life Ins. Co. v. Dedeaux*, 481 U.S. 41, 51 (1987)).

EPA’s “original source” interpretation is contrary to §129(g)(1) on its face and also in light of the overall structure and purpose of the CAA and CWA.

1. EPA's Interpretation Is Impermissible Under the Plain Meaning of §129(g)(1)

Read alone, the word “from” does not reveal whether it refers to the proximate source of the material or whether it refers instead to a distant “original” source of the material.<sup>2</sup> However, with the surrounding words it is clear Congress must have intended “from ... the general public” to refer only to the proximate source of the solid waste material in question, as opposed to an “original” source. Otherwise the reference to “the general public” would be superfluous. Insofar as sanitary sewage and household garbage are concerned, all these wastes ultimately “originated” from the general public at some point in time. If Congress had intended such an expansive “original” source meaning, it could just as well have said “from any source” or dispensed with the prepositional phrase entirely. Instead, Congress gave a precise listing of the sources from which the waste material must come in order to be covered by §129; and the proper interpretation of §129(g)(1) must give meaning to the full phrase.

The only way to give meaning to the full phrase “any solid waste material from ... the general public” is to see it as referring to the waste that emerges

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<sup>2</sup> Merriam-Webster online dictionary defines “from” in relevant part as (a) “a starting point of a physical movement or a starting point in measuring or reckoning or in a statement of limits” (b) “the starting or focal point of an activity,” or (c) “the source, cause, agent, or basis.” Merriam-Webster Dictionary <http://www.merriam-webster.com/dictionary/from> (viewed 7/19/2012).

directly from the general public, as is the case with municipal garbage and trash destined for a municipal incinerator. *See Whitman v. Am. Trucking Ass'ns, Inc.*, 531 U.S. 457, 485 (2001) (EPA “may not construe the statute in a way that completely nullifies textually applicable provisions meant to limit its discretion”). When one applies that meaning, it is clear that sewage sludge is not a “solid waste material from ... the general public.” As explained in detail below, sewage sludge is not generated by the general public, unlike domestic sewage and household garbage which obviously are generated by the public. Rather, sewage sludge emerges uniquely and entirely from POTWs; and, consequently, SSIs are not a “solid waste incineration unit” within the meaning of §129(g)(1).

2. EPA’s Statement That Sewage Sludge Originates From the General Public Is Unsupported and Wrong

EPA is factually mistaken that sewage sludge originates with the general public. To the contrary, the record is clear that sewage sludge is generated in the POTW, not in homes or businesses. Sewage sludge is created from the treatment of wastewater after several stages of biological, chemical and/or physical treatment, and dewatering. EPA’s Regulatory Impact Analysis (“RIA”) for the proposed SSI Rule describes SSIs as incinerators that “combust the organic and inorganic solids and dissolved solids resulting from the wastewater treatment

process.” RIA (EPA-HQ-OAR-2009-0559-0165) at 2-1 (JA:\_\_\_). The RIA continues:

POTWs treat sewage in three steps: primary, secondary, and tertiary treatment. In the primary stage, heavy solids settle to the bottom while oil and light solids are skimmed from the top. The sludge removed during this step is known as primary sludge. During secondary treatment, biological treatment creates secondary sludge. Some plants may continue with a tertiary treatment of chemical disinfectant, which produces a tertiary or chemical sludge (EPA 2009). The three sludge types are then generally combined and disposed of or sent for further treatment.

*Id.* at 2-2. EPA makes similar statements in the related NHSM Rule, concluding that sewage sludge consists of solids that are “generated in the wastewater treatment process.” *See* EPA-HQ-RCRA-2008-0329-1828 at 1 (JA:\_\_\_). Thus, EPA has recognized that sewage sludge is generated in the POTW and is significantly different from the untreated domestic sewage from which it is created.

Indeed, even the CWA definition of POTW reveals Congressional awareness that sewage sludge comes from the POTW. Referring to the disposal of sewage sludge, CWA §212(2)(A)-(B) provides that the POTW includes land and equipment “used for ultimate disposal of residues resulting from such treatment.” Likewise, several of EPA’s own regulations recognize that sewage sludge is created in POTWs and does not “originate” elsewhere. For example, the SSI Rule defines sewage sludge as the “residue generated during the treatment of domestic sewage in a treatment works” through a variety of physical and biological



processes. 40 C.F.R. §§60.4930 and 60.5250; *see also* 55 Fed. Reg. 46354, 46364 (Nov. 2, 1990) (sludge is generated in the POTW).

Similarly, EPA based its decision in the NHSM Rule to define sewage sludge as a “solid waste” on the view that sewage sludge is unique and distinct from the domestic sewage from which sludge is generated in the POTW. There is no way to reconcile that conclusion with EPA’s argument in the SSI Rule that sewage sludge is from the general public.

### 3. EPA’s Interpretation Creates Conflict Between §§112 and 129

EPA’s interpretation also creates an unnecessary conflict between §§112(e)(5) and 129(g)(1) that can, and therefore must, be avoided. *See Roberts*, 132 S. Ct. at 1356 (“[O]ur task is to fit, if possible, all parts into an harmonious whole.”) (citation/quotations omitted); *Brown & Williamson*, 529 U.S. at 133 (same). Section 112(e)(5) states:

The Administrator shall promulgate standards pursuant to subsection (d) of this section [112] applicable to publicly owned treatment works (as defined in [the CWA]) not later than 5 years after November 15, 1990.

The CWA definition of POTW that Congress used clearly encompasses SSIs, *see* CWA §212(2)(A)-(B); and EPA has long acknowledged that SSIs are part of the POTW under this definition. *See* 58 Fed. Reg. 9359 (POTWs include incinerators) (JA:\_\_); 40 C.F.R. §122.2 (POTWs include sludge treatment systems).

Here EPA has not disputed that the CWA definition of POTW encompasses SSIs. However, recognizing that its reading of §129 creates conflict with §112(e)(5), EPA tries to reduce the significance of §112(e)(5) by labeling it “a subsection of CAA section 112 that governs the timing of emissions regulations.” Denial of Recon. at 3 (JA:\_\_\_). Thus, EPA reaches the remarkable conclusion that Congress intended the general phrase “any solid waste material from ... the general public” in §129(g)(1) to override the unambiguous reference to SSIs in §112(e)(5). Contrary to EPA’s reading, however, §112(e)(5) unequivocally directs EPA to take an action (*i.e.*, “[t]he Administrator shall promulgate standards” for POTWs under §112(d)) and in doing so forecloses authority to regulate SSIs under §129.

The legislative history of §112 also indicates that Congress meant for EPA to regulate POTWs under §112, and no other CAA authority. Sections 112 and 129 arose in conference out of Senate bill S.1630.<sup>3</sup> During the Senate debates on the bill, Senator Durenberger, a primary author of §112, described that section as governing POTWs:

Major sources of air toxics, like chemical plants, oil refineries, steel plants, and *wastewater treatment plants*, will be grouped into

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<sup>3</sup> See, *e.g.*, Conf. Rep. No. 101-952, at 338-42 (Oct. 26, 1990), Leg. Hist. CAAA-90 at 1788-92.

industrial categories. Over a 10-year period EPA will set standards for 200-250 categories of sources.

U.S. Senate, *A Legislative History of the Clean Air Act Amendments of 1990*

(S.Print 103-38) (Nov. 1993) (“Leg. Hist. CAAA-90”) at 5000 (emphasis added).

The Senate Report for S.1630 contains a similar description:

In addition to the list of pollutants, EPA is to establish a list of source categories for the purpose of promulgating standards. The emissions limitations will apply to sources in a category (refineries, smelters, boilers, incinerators, chemical plants, *wastewater treatment facilities*, coke ovens, etc.) rather than to pollutants individually. There may be 200-250 categories of major sources.

*Id.* at 8488 (emphasis added). Finally, that report explained §112(e)(5) as follows:

The subsection also defers regulation of emissions from publicly owned treatment works (POTWs) to a date not earlier or later than the date five years after enactment of the legislation. Again, the reason for the deferral is a lack of emissions and control technology information that would be useful to the Administrator *in establishing standards under subsection (d) of this section*.

*Id.* at 8515 (emphasis added).

Contrast the legislative history of §112 to that of §129, which contains no reference whatsoever to sewage sludge or SSIs.<sup>4</sup> Clearly, EPA’s authority to regulate POTWs, including SSIs, under the CAA rests with §112.

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<sup>4</sup> That silence is particularly noticeable in the section of the Conference Report focusing on the definitions of “solid waste incineration unit” and “municipal waste” in §129. Like the definitions themselves, the report reflects a high level of specificity with regard to the types of waste incineration covered by §129. *See* Leg. Hist. CAAA-90 at 1792. In fact, this passage notes that “segregated wastes ... in a separate waste stream” are excluded from municipal waste under §129,

4. EPA's Interpretation Is at Odds With the Purpose of the CAA and CWA With Respect to POTWs and SSIs

Finally, EPA's interpretation is at odds with the overall structure of the CAA and Congress' desire to maintain local control over the decision of how to manage sewage sludge. By placing SSIs under §112, Congress was advancing its objective, expressed in CWA §405(e), of maintaining local flexibility and control over the means for managing sewage sludge. That objective fits with the unique nature of POTWs and SSIs and their role in providing essential services under the CWA. Unlike the categories of incinerators identified in §129(a)(1), SSIs are publicly-owned and are physically and operationally integrated into the source of the material being combusted – the POTW. Also unlike other categories of incinerators, POTWs are statutorily obligated to manage all of the sewage entering into the sanitary sewer system, and so must treat a huge variety of sanitary wastes.

EPA's contrary view of Congress' intent is implausible. It is hard to imagine that through the word "from," without any reference to SSIs in §129, Congress meant for EPA to regulate sludge incineration under a different and more burdensome part of the statute than was intended for POTWs. Likewise, there is no reason apparent in the statute or the legislative history why Congress would have directed EPA to set standards for POTWs under §112 yet also intended to indicating that Congress was aware of segregated waste streams, such as domestic sewage, but did not identify sewage as covered elsewhere under §129.

usurp local control by giving EPA power through the §129 siting requirement to decide whether any new SSIs can be constructed. *See Am. Trucking*, 531 U.S. at 468 (“Congress ... does not alter fundamental details of a regulatory scheme in vague terms or ancillary provisions”).

In conclusion, EPA’s interpretation of its authority to regulate SSIs is not supported by the plain text of §§112(e)(5) and 129(g)(1), creates conflict between these two provisions, and undermines Congress’ goal of maintaining local decisionmaking control over the methods for use and disposal of sewage sludge. In any event, sewage sludge is not “from ... the general public,” and so SSIs are not solid waste incineration units under §129. Consequently, EPA exceeded its authority by setting standards for SSIs under §129, and the Court should vacate the SSI Rule.

B. EPA’s Interpretation Is Also Impermissible Under *Chevron* Step 2

In what appears to be another new interpretation of the CAA, EPA in its Denial of Reconsideration recasts its argument that §129 controls SSIs as “based on a reasonable interpretation of two provisions [sections 112 and 129] in the CAA, so as to give both meaning,” and concludes that “it is reasonable for EPA to consider both provisions” in reaching a decision. Denial of Recon. at 3 (JA:\_\_\_). This statement suggests that EPA now argues that §§112(e)(5) and 129(g)(1) are in conflict and ambiguous.

As explained above, EPA's interpretation that §129 controls SSIs is unlawful under *Chevron* Step 1. Therefore, EPA's apparent *Chevron* Step 2 argument is foreclosed by the statute. However, even assuming EPA's interpretation is not unlawful under *Chevron* Step 1, that interpretation is not entitled to deference under *Chevron* Step 2, nor is it a reasonable reading of allegedly ambiguous language.

1. EPA's Argument Is Not Entitled to Deference

According to the Supreme Court in *U.S. v. Mead Corp.*, 533 U.S. 218 (2001), "[t]he fair measure of deference to an agency administering its own statute has been understood to vary with circumstances, and courts have looked to the degree of the agency's care, its consistency, formality, and relative expertness, and to the persuasiveness of the agency's position." *Id.* at 228 (footnotes/citations omitted). The Court in *Chevron* gave EPA's interpretation deference because "the regulatory scheme is technical and complex, the agency considered the matter in a detailed and reasoned fashion, and the decision involves reconciling conflicting policies." 467 U.S. at 865 (footnotes omitted).

Here, EPA's interpretation does not have any of these hallmarks of sound decisionmaking. First, EPA's argument that §§112(e)(5) and 129(g)(1) are in conflict is raised for the first time in the Denial of Reconsideration and so was never subjected to the procedural protections of notice-and-comment rulemaking.

Second, the argument is merely a conclusory statement, without discussion of the policies and legislative histories underlying the provisions that might have warranted deference. Third, although EPA has expertise with the statutes it administers, it entirely failed to apply that expertise here. Specifically, it failed to analyze the importance of the other relevant provisions of the CAA, the CWA and RCRA, their implementing regulations, and underlying policies. This failure is exemplified by EPA's statement that whether SSIs are covered by the definition of POTW "is not relevant" to EPA's position. Denial of Recon. at 3 (JA:\_\_\_). Finally, as discussed above, EPA's current position is contrary to earlier positions, underscoring the Agency's failure to acknowledge and balance the purposes of all the relevant statutes.

In sum, EPA's interpretation is superficial, in strong contrast with the considered and participatory decisionmaking that warrants deference under *Chevron*.

## 2. EPA's Argument Is Not a Reasonable Construction of the CAA

EPA's interpretation also is unreasonable. EPA focused exclusively on its view that sewage sludge is a solid waste under §129, so much so that it misstates the coverage of §129(g)(1), asserting that “[s]ince sewage sludge is a solid waste, SSI units are clearly solid waste incineration units” under §129. *Id.* EPA's argument fails to address the heart of the matter – that only incinerators burning solid waste *from specified categories of sources* in §129(g)(1) qualify as solid waste incineration units under §129(g)(1). Through this unreasonably narrow focus on §129, EPA concluded that the unambiguous reference to SSIs in §112(e)(5) “is not relevant” to the authority Congress intended EPA to use. *Id.*

EPA's interpretation also ignores all the other evidence that Congress intended SSIs to be regulated under §112, such as the interplay of the CWA and CAA and the legislative histories of the relevant provisions. This is a fatal flaw making EPA's interpretation incomplete and unreasonable. *See Motor Vehicle Mfrs. Ass'n*, 463 U.S. at 43. As discussed above, the legislative history of §112 indicates that Congress intended SSIs to be regulated under §112(d), while the legislative history of §129 is silent on this issue. Had EPA considered the relevant policies underlying the CWA §405 program governing sewage sludge incineration, it could not have rationally avoided the conclusion that regulating SSIs under §112 dovetails with the goal of maintaining local options for sludge use and disposal,



while the siting requirements and more burdensome emission control requirements under §129 create obstacles to that goal.

Finally, EPA failed to examine the facts relating to whether sewage sludge originates from the POTW or the general public. The record contains no evidence that EPA investigated the issue and gathered facts supporting its position.

Meanwhile, it is clear from EPA's RIA and other materials in the SSI rulemaking record, as well as the record behind the NHSM Rule, that sewage sludge originates in the POTW. Therefore, EPA's position is unsupported and mistaken.

II. EPA ACTED CONTRARY TO THE CAA AND ARBITRARILY BY SETTING EMISSION STANDARDS USING AN INADEQUATE NUMBER OF SSIs IN THE MACT FLOOR CALCULATIONS

A. EPA's Failure to Use Data on the Required Number of SSIs is Contrary to CAA §129(a)(2)

Even if EPA had authority to regulate SSIs under CAA §129, it violated §129(a)(2) by setting the standards using data from fewer than the statutorily mandated number of units. In setting emission standards under §129, EPA is required to determine the level of standards ("MACT floors" in EPA's terminology), which for new units is the level of control "that is achieved in practice by the best controlled similar unit" and for existing units is "the average emissions limitation achieved by the best performing 12 percent of units in the

category.” EPA can set more stringent beyond-the-floor standards only after considering cost, energy and other factors.

Because EPA set the MACT floors on a pollutant-by-pollutant basis, it calculated 18 separate existing source MACT floors – one for each of the nine §129 pollutants in two categories of SSIs. *See* Revised MACT Floor Analysis (EPA-HQ-OAR-2009-0559-01571) (“MACT Memo”) at 6 (JA:\_\_\_). By EPA’s count, there are 60 FBIs and 144 MHIs. *See* 76 Fed. Reg. 15387. Therefore, the existing source MACT floor calculations must be based on data from 8 FBIs and 18 MHIs in order to meet the mandate of §129(a)(2). However, as shown on Table 1 below, EPA’s calculations for FBIs are based on as few as four units (for sulfur dioxide (“SO<sub>2</sub>”)), and in no case are more than six units used to set the floor for any pollutant. Table 2 shows that the MACT floors for MHIs are based on as few as five units and on fewer than 18 units for seven of nine pollutants.

TABLE 1-MACT FLOORS FOR EXISTING FBI  
(60 FBI x 12% = 8 FBI)

Pollutant(s)	#FBI in MACT floor	#FBI short of 12%	#FBI with 1 test	#POTW in MACT floor	States in MACT floor
Cd/Pb/Hg/CO	6	2	2	4	MI/MN/PA/NC
HCl/PM	6	2	3	4	MI/MN/PA/NC
NO <sub>x</sub>	6	2	4	4	MI/MN/PA/NC
SO <sub>2</sub>	4	4	4	3	MN/PA/NC
CDD-CDF	5	3	5	4	MI/MN/PA/NC

Source: MACT Memo, Att. A and E.

TABLE 2-MACT FLOORS FOR EXISTING MHI  
(144 MHI x 12% = 18 MHI)

Pollutant(s)	#MHI in MACT floor	#MHI short of 12%	#MHI with 1 test	#POTW in MACT floor	States in MACT floor
Cd/Pb	14	<b>4</b>	10	7	MA/MN/CT/NJ/VA/SC/CA
Hg	18	--	10	7	MA/CT/NJ/VA/SC/CA/IN
CO	9	<b>9</b>	4	6	MA/MN/NJ/VA/SC/CA
HCl	7	<b>11</b>	7	6	MA/MN/NJ/VA/SC/CA
NO <sub>x</sub>	8	<b>10</b>	5	6	MA/MN/NJ/VA/SC/CA
SO <sub>2</sub>	11	<b>7</b>	5	6	MA/MN/NJ/VA/SC/CA
PM	18	--	9	7	MA/CT/NJ/VA/SC/CA/IN
CDD-CDF	5	<b>13</b>	5	5	MA/MN/NJ/SC/CA

Source: MACT Memo, Att. B and F.

All told, 16 of the 18 MACT floors are based on as little as 3.4% (5 of 144 MHIs) and no more than 10% (6 of 60 FBIs) of the SSIs in a category.<sup>5</sup> Thus, even assuming the improbable – that all the data came from the top performing 12% MHIs and FBIs – EPA’s database falls far short of generating the minimum emissions information necessary to set standards.

EPA admits that its standards do not use data from the number of units required under §129(a)(2). 76 Fed. Reg. 15387. Seeking a way around this fatal flaw, EPA used a statistical method to manipulate the actual data it collected in

<sup>5</sup> EPA’s SSI count is also erroneous. Commenters submitted information from a 2009 survey that identified 234 SSIs. *See* NACWA at 9 fn.7 (JA:\_\_). EPA did not contact many POTWs to confirm its initial inventory. By undercounting approximately 30 SSIs, EPA’s MACT floor database is several more units short of the statutory minimum.

order to approximate what data from the missing SSIs might look like, had data from the required number of sources been collected. However, EPA's method is both plainly contrary to §129(a)(2) and irrational.

Unlike the MACT floor provision in §112(d), §129(a)(2) does not permit EPA to set floors using less than 12% of the category. Section 129(a)(2) requires EPA to set a MACT floor for existing sources at a level not less stringent than “the average emissions limitation achieved by the best performing 12 percent of units in the category.” Congress used nearly identical language in §§129(a)(2) and 112(d)(3) describing MACT floor calculations, with one important difference: In §112(d) Congress added a phrase that the floor is the average emission limitation achieved by the top 12% of sources “for which the Administrator has emissions information,” while §129(a)(2) has no such language. Thus, MACT floors developed under §112(d) may be based on fewer than the top 12% of units (when data from the required number of units are not available), while MACT floors under §129 must always be based on the top 12% of units in the category. *See* 75 Fed. Reg. 63260, 63270 (Oct. 14, 2010) (JA:\_\_); *Keene Corp. v. U.S.*, 508 U.S. 200, 208 (1993) (“Where Congress includes particular language in one section of a statute but omits it in another ... it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion.”) (quoting *Russello v. U.S.*, 464 U.S. 16, 23 (1983)).

EPA's approach, however, based the MACT floors on only 3-4 units and then used statistics to approximate what the databases might look like with data from a full 8 FBIs and 18 MHIs. Thus, EPA's approach is just another way of setting MACT floors on fewer than 12% of SSIs, an outcome that is not permitted given the differing language between §§112(d)(3) and 129(a)(2).

EPA rightly does not claim that impossibility justifies not complying with the statute. EPA had an inventory of hundreds of SSIs but chose to obtain data from only nine POTWs, with fewer SSIs than were needed to set the MACT floors, in order to reduce its own workload. According to EPA, gathering information on the statutorily required number of SSIs would have triggered a "time-consuming process" under the Paperwork Reduction Act, 44 U.S.C. §§3501, *et seq.* ("PRA"). *See* 76 Fed. Reg. 15386 (JA:\_\_\_). That EPA failed to manage its schedule as necessary to comply with both the PRA and the deadline in *Sierra Club v. Jackson*, No. 1:01CV01537 (D.D.C.), has no bearing on – and certainly cannot be used as justification to circumvent – the statutory requirements for setting standards under the CAA.

EPA's claim of too little time also rings hollow since more than three years passed between the decision in *NRDC v. EPA*, 489 F.3d 1250 (D.C. Cir. 2007) – the event EPA says changed its view that SSIs are covered by §112 – and the

February 2011 rulemaking deadline in the *Jackson* case. EPA could have initiated its SSI information collection at any time, but it chose to wait until it claims to have had too little time to gather the required data. EPA attempts to shift responsibility for this lack of data to the public by saying it requested additional stack testing in the proposed SSI rule but did not receive adequate sampling data. *See* 76 Fed. Reg. 15391 (JA:\_\_\_). However, EPA has the primary obligation to gather the data to comply with §129(a)(2), not the public. EPA also knew POTWs would not have the data EPA requested in the proposed rule because existing laws require SSI compliance demonstrations through means other than stack-tests. Finally, the 45-day comment period, which EPA refused to extend (*see* EPA-HQ-OAR-2009-0559-0140 (JA:\_\_\_)), made it impossible to identify the SSIs EPA deemed best-performing and to perform that testing within the comment period. *See* NACWA at 28-29 (JA:\_\_\_).

In sum, §129(a)(2) does not permit EPA to set existing source standards on fewer than the top 12% of SSIs. By EPA's count it should have used data from 8 FBIs and 18 MHIs to set the MACT floors, yet actually used as few as 4-5 SSIs for some standards. EPA's statistical manipulation of inadequate databases does not alter the fact that the standards are based on less than the statutorily required number of SSIs. Therefore, EPA's existing source standards are contrary to §129(a)(2).

B. The Standards Are Arbitrary Because EPA Cannot Demonstrate That the Data Represents the Performance of the Best-Performing SSIs

EPA's MACT floor approach is also fundamentally flawed because it never demonstrated that the small amount of data used to set the new and existing source MACT floors are representative of best-performing SSIs.

As summarized on Tables 1-2 above, EPA's MACT floors are based on only a handful of SSIs from as few as three and never more than seven POTWs. As shown in the fourth column on each table, several of these SSIs were tested only *one time*. In fact, the standards for SO<sub>2</sub> and mono- to tri-chlorinated dibenzodioxins and dibenzofurans ("CDD-CDF") from FBIs and those for hydrogen chloride ("HCl") and CDD-CDF from MHIs are based *solely on one test* from each SSI. More than half of the remaining MACT floors are based on only one test from each SSI.

Many commenters objected to the lack of representativeness of this flawed dataset, explaining that sewage sludge characteristics affect the performance of SSIs and that these characteristics vary significantly daily and seasonally within a POTW and also among POTWs due to differences in wastewater treatment technologies and differences in the sanitary wastes received from the communities they serve. *See* NACWA at 25-28 (JA:\_\_); Comments of Water Environment Federation (EPA-HQ-OAR-2009-0559-0134) ("WEF") at 11-13 (JA:\_\_).

Commenters argued that EPA's targeted selection of nine POTWs based solely on type of pollution control makes it impossible for EPA to assume that the data are representative of the best-performing SSIs across the entire category. *See* NACWA at 24-25 (JA:\_\_); WEF at 12-13 (JA:\_\_).

As discussed above, EPA admitted that the method it used to select SSIs aimed at "identifying the best-performing sources rather than selecting a representative sample of sources," and EPA used this method because it claimed there was not enough time to follow the "time-consuming" process under the PRA. *See* 76 Fed. Reg. 15386 (JA:\_\_). EPA tries to defend using this non-representative database by applying an Upper Predictive Limit ("UPL") statistical analysis to analyze for variability among the few SSIs for which it had data. *Id.* at 15389 (JA:\_\_). However, this approach is flawed because EPA gave no weight to the other significant factors that affect emissions performance of SSIs, and because the UPL cannot account for variability among SSIs unless the underlying data are representative of the category as a whole. Although using the UPL can be a useful method for determining variability within a dataset, that dataset must first accurately represent emissions of the top performing MHIs or FBIs under all foreseeable operating conditions in order for EPA to conclude that the UPL accounts for variability within the entire category the dataset is supposed to represent. *See* NACWA at 24-25 (JA:\_\_).



Although EPA admitted the data it used are not representative, it argued that the Agency's variability analysis is based on nine POTWs in nine states "located in a mix of northern, southern, eastern, and western states," and therefore represents "sufficient variation in regions, climates and populations." 76 Fed. Reg. 15391 (JA:\_\_). However, on close examination, EPA's analysis shows this is not the case. As summarized in the fifth and sixth columns on Tables 1-2 above, the MACT floors are based on as few as *three* POTWs in only *three* states and never more than *seven* POTWs in *seven* states. Moreover, the states represented are far from "a mix of northern, southern, eastern, and western states" as EPA claims. For example, *all* the MACT floors for FBIs are derived exclusively from SSIs at three or four POTWs – one each in Michigan, Minnesota, Pennsylvania and North Carolina. These states are clearly not a representative cross section of geographies and climates served by POTWs across the country. Likewise, EPA's claim that the data represent "sufficient variation in regions, climates and populations" is just as clearly exaggerated. In fact, a large majority of both FBIs and MHIs (and thus their corresponding POTWs and states) are represented in the databases by only one single test from the winter of 2010. One test from a 3-4 hour period is an inadequate basis for setting standards that must be achieved at all times.

Whatever else can be said about EPA's justification for not utilizing sewage sludge data in the SSI Rule, it thoroughly mischaracterizes and overstates the

quality and representativeness of the data underlying the SSI Rule. EPA's approach is particularly capricious given that it had a large amount of data showing sludge concentrations of metals and other pollutants for all the units it considered to be among the top performing 12%. Because these data show the great variability of these pollutants, commenters urged EPA to determine the emission rates achieved by the best-performing sources under the full range of operating conditions. However, EPA refused and claimed that it "did not receive adequate sampling data from the best-performing sources" to decide whether to incorporate variability in sludge feed into the rule. 76 Fed. Reg. 15391 (JA:\_\_\_).

EPA's claim is untrue. EPA had nearly 20 years of metals concentration data from all the POTWs it contends have the best-performing SSIs, dating back to the early 1990s. Under the Part 503 regulations, all POTWs are required to collect and submit these data directly to EPA or to state permitting authorities. NACWA and other commenters also submitted analyses of monthly Part 503 data showing the magnitude and impact of sludge variability. *See, e.g.*, NACWA at 25-26 (JA:\_\_\_). EPA's response to comments notes that it received sludge metals data from at least five separate commenters. *See* Response to Comments (EPA-HQ-OAR-2009-0559-0171) at 8-6 (JA:\_\_\_). Finally, in response to EPA's false claim that it did not have these data, NACWA's Petition for Reconsideration submitted an analysis of Part 503 data for the period January 2005 through December 2010

from 25 POTWs with SSIs, including 15 POTWs with SSIs that EPA considers to be among the best-performing 12%. *See* Pet. for Recon. at 9-14 (JA:\_\_\_). Together these analyses demonstrate that there is significant variability in metals concentrations among POTWs and within a POTW – including those EPA believes have best-performing SSIs – over relatively short time periods and refute EPA’s claim that a handful of tests from a 3-4 hour period adequately represent the emission performance of SSIs on a daily basis under all foreseeable conditions.

Similar to the Part 503 data, EPA also refused to consider stack-test data submitted by commenters who provided test results demonstrating that the proposed emission limits were not supported by sound data. EPA did not use these data simply because commenters did not also submit the stack-test report. 76 Fed. Reg. 15387 (JA:\_\_\_). Nothing in the record suggests that EPA tried to obtain the backup report information so it could verify these commenters’ data. Moreover, some of the nine POTWs targeted by EPA’s information collection request submitted their test results using EPA’s electronic reporting system, and thus did not submit test reports for the rulemaking record. Thus, EPA relied upon these test data – and only these data – without independently reviewing the POTW test reports to verify the information submitted. *See* Pet. for Recon. at 14 (JA:\_\_\_). It is arbitrary for EPA to use only the data it wants and to disregard contrasting information by selectively applying more stringent data validation requirements.

EPA's failure to use Part 503 data and test data submitted by commenters is a violation not only of the database requirements established by §129 for making MACT floor determinations, as acknowledged by EPA, but also of the fundamental requirement underlying §129 for rational decisionmaking. *See* CAA §307(d)(9); *Cement Kiln Recycling Coal. v. EPA*, 255 F.3d 855, 861-62 (D.C. Cir. 2001). *See generally* *NRDC v. EPA*, 194 F.3d 130, 136 (D.C. Cir. 1999).

### III. EPA ACTED ARBITRARILY IN FAILING TO EVALUATE ADDITIONAL SUBCATEGORIES OF SSIs

EPA's lack of understanding of SSIs and flawed data collection also undercuts the Agency's subcategorization approach. Section 129(a)(2) provides that EPA may subcategorize based on "classes, types (including mass-burn, refuse-derived fuel, modular and other types of units) and sizes of sources within a category" when establishing MACT standards.

EPA initially proposed subcategories for new and existing FBIs and for existing MHIs, and in the final SSI Rule added a subcategory for new MHIs. *See* 76 Fed. Reg. 15384 (JA\_\_). However, commenters also pointed out significant differences in operating time, size, and input among types of SSIs and asked EPA to create subcategories for (a) back-up SSIs that operate at only a small fraction of their annual capacity, (b) POTWs without space to expand their POTWs for add-on pollution controls, (c) SSIs that incinerate digested sludge versus non-digested

sludges that are thermally conditioned or chemically conditioned, and (d) POTWs that are located in areas so distant from landfills that they cannot practically or economically move away from sludge incineration. *See* NACWA at 31-33 (JA:\_\_\_). EPA's conclusory response was:

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.

76 Fed. Reg. 15384 (JA:\_\_\_).

To the contrary, NACWA's comments identified back-up and emergency SSIs as unique from other SSIs based on their frequent idle time, low emissions, and high ratio of startup/shutdown to steady-state operations. *See* NACWA at 31-33 (JA:\_\_\_). NACWA compared the characteristics of these SSIs to the subcategories for back-up and emergency units that EPA has created in other CAA rules. *See* 69 Fed. Reg. 55218, 55232 (Sept. 13, 2004) (subcategory for back-up boilers); 75 Fed. Reg. 9648 (Mar. 3, 2010) (subcategory for emergency engines). NACWA also commented that these SSIs cannot accommodate the SSI Rule testing obligations because they often run for less time than EPA's test methods require and run on unscheduled events (such as a primary SSI malfunction) and so would have trouble complying with the 30-day notice required before performance tests. NACWA at 32.

NACWA and other commenters provided examples of POTWs that do not have space to install add-on controls. *Id.* NACWA also gave similar information on variability in sewage sludge characteristics and treatment types and long distances to landfills justifying its request for subcategorization. *Id.* at 33.

EPA's non-responsive treatment of these issues is contrary to the mandate of CAA §307(d)(6)(B), requiring agency responses to all substantive comments. Furthermore, EPA's claim that it did not have information on additional subcategories – when it did have such information – is arbitrary and ignores the importance of proper subcategorization in setting achievable standards under §129(a)(2).

## CONCLUSION

For these reasons the Court should vacate the SSI Rule as exceeding EPA's statutory authority and because the standards are contrary to the CAA and arbitrary.

Respectfully submitted,

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**CERTIFICATE OF COMPLIANCE**

Undersigned counsel certify that this Page Proof Brief of Municipal Petitioners complies with the typeface and type-volume requirements of Fed.R. App.P. 32(a), because the brief contains 9,998 words which is less than 10,000 words as counted by counsel's word-processing system, in compliance with the Court's July 6, 2012 order.

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**CERTIFICATE OF SERVICE**

I hereby certify that on this 24th day of July, 2012, I caused this Page Proof Brief of Municipal Petitioners to be filed electronically with the Clerk of the Court using the CM/ECF System, which will send notice of such filing to the following registered CM/ECF users:

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# **ADDENDUM**

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NB: This unofficial compilation of the U.S. Code is current as of Jan. 4, 2012 (see <http://www.law.cornell.edu/uscode/uscpri.html>).

**TITLE 33 - NAVIGATION AND NAVIGABLE WATERS**  
**CHAPTER 26 - WATER POLLUTION PREVENTION AND CONTROL**  
**SUBCHAPTER I - RESEARCH AND RELATED PROGRAMS**

**§ 1251. Congressional declaration of goals and policy**

**(a) Restoration and maintenance of chemical, physical and biological integrity of Nation's waters; national goals for achievement of objective**

The objective of this chapter is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this chapter—

- (1) it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985;
- (2) it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983;
- (3) it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited;
- (4) it is the national policy that Federal financial assistance be provided to construct publicly owned waste treatment works;
- (5) it is the national policy that areawide waste treatment management planning processes be developed and implemented to assure adequate control of sources of pollutants in each State;
- (6) it is the national policy that a major research and demonstration effort be made to develop technology necessary to eliminate the discharge of pollutants into the navigable waters, waters of the contiguous zone, and the oceans; and
- (7) it is the national policy that programs for the control of nonpoint sources of pollution be developed and implemented in an expeditious manner so as to enable the goals of this chapter to be met through the control of both point and nonpoint sources of pollution.

**(b) Congressional recognition, preservation, and protection of primary responsibilities and rights of States**

It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator in the exercise of his authority under this chapter. It is the policy of Congress that the States manage the construction grant program under this chapter and implement the permit programs under sections 1342 and 1344 of this title. It is further the policy of the Congress to support and aid research relating to the prevention, reduction, and elimination of pollution and to provide Federal technical services and financial aid to State and interstate agencies and municipalities in connection with the prevention, reduction, and elimination of pollution.

**(c) Congressional policy toward Presidential activities with foreign countries**

It is further the policy of Congress that the President, acting through the Secretary of State and such national and international organizations as he determines appropriate, shall take such action as may be necessary to insure that to the fullest extent possible all foreign countries shall take meaningful action for the prevention, reduction, and elimination of pollution in their waters and in international waters and for the achievement of goals regarding the elimination of discharge of pollutants and the improvement of water quality to at least the same extent as the United States does under its laws.

**(d) Administrator of Environmental Protection Agency to administer chapter**

Except as otherwise expressly provided in this chapter, the Administrator of the Environmental Protection Agency (hereinafter in this chapter called "Administrator") shall administer this chapter.

NB: This unofficial compilation of the U.S. Code is current as of Jan. 4, 2012 (see <http://www.law.cornell.edu/uscode/uscpri.html>).

**(e) Public participation in development, revision, and enforcement of any regulation, etc.**

Public participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under this chapter shall be provided for, encouraged, and assisted by the Administrator and the States. The Administrator, in cooperation with the States, shall develop and publish regulations specifying minimum guidelines for public participation in such processes.

**(f) Procedures utilized for implementing chapter**

It is the national policy that to the maximum extent possible the procedures utilized for implementing this chapter shall encourage the drastic minimization of paperwork and interagency decision procedures, and the best use of available manpower and funds, so as to prevent needless duplication and unnecessary delays at all levels of government.

**(g) Authority of States over water**

It is the policy of Congress that the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated or otherwise impaired by this chapter. It is the further policy of Congress that nothing in this chapter shall be construed to supersede or abrogate rights to quantities of water which have been established by any State. Federal agencies shall co-operate with State and local agencies to develop comprehensive solutions to prevent, reduce and eliminate pollution in concert with programs for managing water resources.

(June 30, 1948, ch. 758, title I, § 101, as added Pub. L. 92–500, § 2, Oct. 18, 1972, 86 Stat. 816; amended Pub. L. 95–217, §§ 5(a), 26 (b), Dec. 27, 1977, 91 Stat. 1567, 1575; Pub. L. 100–4, title III, § 316(b), Feb. 4, 1987, 101 Stat. 60.)

## Amendments

1987—Subsec. (a)(7). Pub. L. 100–4 added par. (7).

1977—Subsec. (b). Pub. L. 95–217, § 26(b), inserted provisions expressing Congressional policy that the States manage the construction grant program under this chapter and implement the permit program under sections 1342 and 1344 of this title.

Subsec. (g). Pub. L. 95–217, § 5(a), added subsec. (g).

## Short Title of 2008 Amendment

Pub. L. 110–365, § 1, Oct. 8, 2008, 122 Stat. 4021, provided that: “This Act [amending sections 1268 and 1271a of this title] may be cited as the ‘Great Lakes Legacy Reauthorization Act of 2008’.”

Pub. L. 110–288, § 1, July 29, 2008, 122 Stat. 2650, provided that: “This Act [amending sections 1322, 1342, and 1362 of this title] may be cited as the ‘Clean Boating Act of 2008’.”

## Short Title of 2002 Amendment

Pub. L. 107–303, § 1(a), Nov. 27, 2002, 116 Stat. 2355, provided that: “This Act [enacting section 1271a of this title, amending sections 1254, 1266, 1268, 1270, 1285, 1290, 1324, 1329, 1330, and 1375 of this title, enacting provisions set out as notes under this section, section 1254 of this title, and section 1113 of Title 31, Money and Finance, and repealing provisions set out as a note under section 50 of Title 20, Education] may be cited as the ‘Great Lakes and Lake Champlain Act of 2002’.”

Pub. L. 107–303, title I, § 101, Nov. 27, 2002, 116 Stat. 2355, provided that: “This title [enacting section 1271a of this title and amending section 1268 of this title] may be cited as the ‘Great Lakes Legacy Act of 2002’.”

Pub. L. 107–303, title II, § 201, Nov. 27, 2002, 116 Stat. 2358, provided that: “This title [amending section 1270 of this title] may be cited as the ‘Daniel Patrick Moynihan Lake Champlain Basin Program Act of 2002’.”

## Short Title of 2000 Amendments

Pub. L. 106–457, title II, § 201, Nov. 7, 2000, 114 Stat. 1967, provided that: “This title [amending section 1267 of this title and enacting provisions set out as a note under section 1267 of this title] may be cited as the ‘Chesapeake Bay Restoration Act of 2000’.”

*NB: This unofficial compilation of the U.S. Code is current as of Jan. 4, 2012 (see <http://www.law.cornell.edu/uscode/uscp.html>).*

Pub. L. 106–457, title IV, § 401, Nov. 7, 2000, 114 Stat. 1973, provided that: “This title [amending section 1269 of this title] may be cited as the ‘Long Island Sound Restoration Act’.”

Pub. L. 106–457, title V, § 501, Nov. 7, 2000, 114 Stat. 1973, provided that: “This title [enacting section 1273 of this title] may be cited as the ‘Lake Pontchartrain Basin Restoration Act of 2000’.”

Pub. L. 106–457, title VI, § 601, Nov. 7, 2000, 114 Stat. 1975, provided that: “This title [enacting section 1300 of this title] may be cited as the ‘Alternative Water Sources Act of 2000’.”

Pub. L. 106–284, § 1, Oct. 10, 2000, 114 Stat. 870, provided that: “This Act [enacting sections 1346 and 1375a of this title and amending sections 1254, 1313, 1314, 1362, and 1377 of this title] may be cited as the ‘Beaches Environmental Assessment and Coastal Health Act of 2000’.”

### **Short Title of 1994 Amendment**

Pub. L. 103–431, § 1, Oct. 31, 1994, 108 Stat. 4396, provided that: “This Act [amending section 1311 of this title] may be cited as the ‘Ocean Pollution Reduction Act’.”

### **Short Title of 1990 Amendment**

Pub. L. 101–596, § 1, Nov. 16, 1990, 104 Stat. 3000, provided that: “This Act [enacting sections 1269 and 1270 of this title, amending sections 1268, 1324, and 1416 of this title, and enacting provisions set out as notes under this section and section 1270 of this title] may be cited as the ‘Great Lakes Critical Programs Act of 1990’.”

Pub. L. 101–596, title II, § 201, Nov. 16, 1990, 104 Stat. 3004, provided that: “This part [probably means title, enacting section 1269 of this title and amending section 1416 of this title] may be cited as the ‘Long Island Sound Improvement Act of 1990’.”

Pub. L. 101–596, title III, § 301, Nov. 16, 1990, 104 Stat. 3006, provided that: “This title [enacting section 1270 of this title, amending section 1324 of this title, and enacting provisions set out as a note under section 1270 of this title] may be cited as the ‘Lake Champlain Special Designation Act of 1990’.”

### **Short Title of 1988 Amendment**

Pub. L. 100–653, title X, § 1001, Nov. 14, 1988, 102 Stat. 3835, provided that: “This title [amending section 1330 of this title and enacting provisions set out as notes under section 1330 of this title] may be cited as the ‘Massachusetts Bay Protection Act of 1988’.”

### **Short Title of 1987 Amendment**

Section 1(a) of Pub. L. 100–4 provided that: “This Act [enacting sections 1254a, 1267, 1268, 1281b, 1329, 1330, 1377, 1381 to 1387, and 1414a of this title, amending this section and sections 1254, 1256, 1262, 1281, 1282 to 1285, 1287, 1288, 1291, 1311 to 1313, 1314, 1317 to 1322, 1324, 1342, 1344, 1345, 1361, 1362, 1365, 1369, 1375, and 1376 of this title, and enacting provisions set out as notes under this section, sections 1284, 1311, 1317, 1319, 1330, 1342, 1345, 1362, 1375, and 1414a of this title, and section 1962d–20 of Title 42, The Public Health and Welfare] may be cited as the ‘Water Quality Act of 1987’.”

### **Short Title of 1981 Amendment**

Pub. L. 97–117, § 1, Dec. 29, 1981, 95 Stat. 1623, provided that: “This Act [enacting sections 1298, 1299, and 1313a of this title, amending sections 1281 to 1285, 1287, 1291, 1292, 1296, 1311, and 1314 of this title, and enacting provisions set out as notes under sections 1311 and 1375 of this title] may be cited as the ‘Municipal Wastewater Treatment Construction Grant Amendments of 1981’.”

### **Short Title of 1977 Amendment**

Section 1 of Pub. L. 95–217 provided: “That this Act [enacting sections 1281a, 1294 to 1296, and 1297 of this title, amending this section and sections 1252, 1254 to 1256, 1259, 1262, 1263, 1281, 1282 to 1288, 1291, 1292, 1311, 1314, 1315, 1317 to 1319, 1321 to 1324, 1328, 1341, 1342, 1344, 1345, 1362, 1364, 1375, and 1376 of this title, enacting provisions set out as notes under this section and sections 1284, 1286, 1314, 1321, 1342, 1344, and 1376 of this title, and amending provisions set out as a note under this section] may be cited as the ‘Clean Water Act of 1977’.”

### **Short Title**

Section 1 of Pub. L. 92–500 provided that: “That this Act [enacting this chapter, amending section 24 of Title 12, Banks and Banking, sections 633 and 636 of Title 15, Commerce and Trade, and section 711 of former Title 31, Money and Finance, and enacting provisions set out as notes under this section and sections 1281 and 1361 of this title] may be cited as the ‘Federal Water Pollution Control Act Amendments of 1972’.”

NB: This unofficial compilation of the U.S. Code is current as of Jan. 4, 2012 (see <http://www.law.cornell.edu/uscode/uscpri.html>).

Section 519, formerly section 518, of Act June 30, 1948, ch. 758, title V, as added Oct. 18, 1972, Pub. L. 92–500, § 2, 86 Stat. 896, and amended Dec. 27, 1977, Pub. L. 95–217, § 2, 91 Stat. 1566, and renumbered § 519, Feb. 4, 1987, Pub. L. 100–4, title V, § 506, 101 Stat. 76, provided that: “This Act [this chapter] may be cited as the ‘Federal Water Pollution Control Act’ (commonly referred to as the Clean Water Act).”

### **Savings Provision**

Section 4 of Pub. L. 92–500 provided that:

“(a) No suit, action, or other proceeding lawfully commenced by or against the Administrator or any other officer or employee of the United States in his official capacity or in relation to the discharge of his official duties under the Federal Water Pollution Control Act as in effect immediately prior to the date of enactment of this Act [Oct. 18, 1972] shall abate by reason of the taking effect of the amendment made by section 2 of this Act [which enacted this chapter]. The court may, on its own motion or that of any party made at any time within twelve months after such taking effect, allow the same to be maintained by or against the Administrator or such officer or employee.

“(b) All rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, or other actions duly issued, made, or taken by or pursuant to the Federal Water Pollution Control Act as in effect immediately prior to the date of enactment of this Act [Oct. 18, 1972], and pertaining to any functions, powers, requirements, and duties under the Federal Water Pollution Control Act as in effect immediately prior to the date of enactment of this Act [Oct. 18, 1972] shall continue in full force and effect after the date of enactment of this Act [Oct. 18, 1972] until modified or rescinded in accordance with the Federal Water Pollution Control Act as amended by this Act [this chapter].

“(c) The Federal Water Pollution Control Act as in effect immediately prior to the date of enactment of this Act [Oct. 18, 1972] shall remain applicable to all grants made from funds authorized for the fiscal year ending June 30, 1972, and prior fiscal years, including any increases in the monetary amount of any such grant which may be paid from authorizations for fiscal years beginning after June 30, 1972, except as specifically otherwise provided in section 202 of the Federal Water Pollution Control Act as amended by this Act [section 1282 of this title] and in subsection (c) of section 3 of this Act.”

### **Separability**

Section 512 of act June 30, 1948, ch. 758, title V, as added Oct. 18, 1972, Pub. L. 92–500, § 2, 86 Stat. 894, provided that: “If any provision of this Act [this chapter], or the application of any provision of this Act [this chapter] to any person or circumstance, is held invalid, the application of such provision to other persons or circumstances, and the remainder of this Act [this chapter], shall not be affected thereby.”

### **National Shellfish Indicator Program**

Pub. L. 102–567, title III, § 308, Oct. 29, 1992, 106 Stat. 4286; as amended by Pub. L. 105–362, title II, § 201(b), Nov. 10, 1998, 112 Stat. 3282, provided that:

“(a) Establishment of a Research Program.—The Secretary of Commerce, in cooperation with the Secretary of Health and Human Services and the Administrator of the Environmental Protection Agency, shall establish and administer a 5-year national shellfish research program (hereafter in this section referred to as the ‘Program’) for the purpose of improving existing classification systems for shellfish growing waters using the latest technological advancements in microbiology and epidemiological methods. Within 12 months after the date of enactment of this Act [Oct. 29, 1992], the Secretary of Commerce, in cooperation with the advisory committee established under subsection (b) and the Consortium, shall develop a comprehensive 5-year plan for the Program which shall at a minimum provide for—

“(1) an environmental assessment of commercial shellfish growing areas in the United States, including an evaluation of the relationships between indicators of fecal contamination and human enteric pathogens;

“(2) the evaluation of such relationships with respect to potential health hazards associated with human consumption of shellfish;

“(3) a comparison of the current microbiological methods used for evaluating indicator bacteria and human enteric pathogens in shellfish and shellfish growing waters with new technological methods designed for this purpose;

“(4) the evaluation of current and projected systems for human sewage treatment in eliminating viruses and other human enteric pathogens which accumulate in shellfish;

“(5) the design of epidemiological studies to relate microbiological data, sanitary survey data, and human shellfish consumption data to actual hazards to health associated with such consumption; and

“(6) recommendations for revising Federal shellfish standards and improving the capabilities of Federal and State agencies to effectively manage shellfish and ensure the safety of shellfish intended for human consumption.

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“(b) Advisory Committee.—(1) For the purpose of providing oversight of the Program on a continuing basis, an advisory committee (hereafter in this section referred to as the ‘Committee’) shall be established under a memorandum of understanding between the Interstate Shellfish Sanitation Conference and the National Marine Fisheries Service.

“(2) The Committee shall—

“(A) identify priorities for achieving the purpose of the Program;

“(B) review and recommend approval or disapproval of Program work plans and plans of operation;

“(C) review and comment on all subcontracts and grants to be awarded under the Program;

“(D) receive and review progress reports from the Consortium and program subcontractors and grantees; and

“(E) provide such other advice on the Program as is appropriate.

“(3) The Committee shall consist of at least ten members and shall include—

“(A) three members representing agencies having authority under State law to regulate the shellfish industry, of whom one shall represent each of the Atlantic, Pacific, and Gulf of Mexico shellfish growing regions;

“(B) three members representing persons engaged in the shellfish industry in the Atlantic, Pacific, and Gulf of Mexico shellfish growing regions (who shall be appointed from among at least six recommendations by the industry members of the Interstate Shellfish Sanitation Conference Executive Board), of whom one shall represent the shellfish industry in each region;

“(C) three members, of whom one shall represent each of the following Federal agencies: the National Oceanic and Atmospheric Administration, the Environmental Protection Agency, and the Food and Drug Administration; and

“(D) one member representing the Shellfish Institute of North America.

“(4) The Chairman of the Committee shall be selected from among the Committee members described in paragraph (3)(A).

“(5) The Committee shall establish and maintain a subcommittee of scientific experts to provide advice, assistance, and information relevant to research funded under the Program, except that no individual who is awarded, or whose application is being considered for, a grant or subcontract under the Program may serve on such subcommittee. The membership of the subcommittee shall, to the extent practicable, be regionally balanced with experts who have scientific knowledge concerning each of the Atlantic, Pacific, and Gulf of Mexico shellfish growing regions. Scientists from the National Academy of Sciences and appropriate Federal agencies (including the National Oceanic and Atmospheric Administration, Food and Drug Administration, Centers for Disease Control, National Institutes of Health, Environmental Protection Agency, and National Science Foundation) shall be considered for membership on the subcommittee.

“(6) Members of the Committee and its scientific subcommittee established under this subsection shall not be paid for serving on the Committee or subcommittee, but shall receive travel expenses as authorized by section 5703 of title 5, United States Code.

“(c) Contract With Consortium.—Within 30 days after the date of enactment of this Act [Oct. 29, 1992], the Secretary of Commerce shall seek to enter into a cooperative agreement or contract with the Consortium under which the Consortium will—

“(1) be the academic administrative organization and fiscal agent for the Program;

“(2) award and administer such grants and subcontracts as are approved by the Committee under subsection (b);

“(3) develop and implement a scientific peer review process for evaluating grant and subcontractor applications prior to review by the Committee;

“(4) in cooperation with the Secretary of Commerce and the Committee, procure the services of a scientific project director;

“(5) develop and submit budgets, progress reports, work plans, and plans of operation for the Program to the Secretary of Commerce and the Committee; and

“(6) make available to the Committee such staff, information, and assistance as the Committee may reasonably require to carry out its activities.

“(d) Authorization of Appropriations.—(1) Of the sums authorized under section 4(a) of the National Oceanic and Atmospheric Administration Marine Fisheries Program Authorization Act (Public Law 98–210; 97 Stat. 1409), there are authorized to be appropriated to the Secretary of Commerce \$5,200,000 for each of the fiscal years 1993 through 1997 for carrying out the Program. Of the amounts appropriated pursuant to this authorization, not more than 5 percent of such appropriation may be used for administrative purposes by the National Oceanic and Atmospheric



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Administration. The remaining 95 percent of such appropriation shall be used to meet the administrative and scientific objectives of the Program.

“(2) The Interstate Shellfish Sanitation Conference shall not administer appropriations authorized under this section, but may be reimbursed from such appropriations for its expenses in arranging for travel, meetings, workshops, or conferences necessary to carry out the Program.

“(e) Definitions.—As used in this section, the term—

“(1) ‘Consortium’ means the Louisiana Universities Marine Consortium; and

“(2) ‘shellfish’ means any species of oyster, clam, or mussel that is harvested for human consumption.”

### **Limitation on Payments**

Section 2 of Pub. L. 100–4 provided that: “No payments may be made under this Act [see Short Title of 1987 Amendment note above] except to the extent provided in advance in appropriation Acts.”

### **Seafood Processing Study; Submittal of Results to Congress not Later Than January 1, 1979**

Pub. L. 95–217, § 74, Dec. 27, 1977, 91 Stat. 1609, provided that the Administrator of the Environmental Protection Agency conduct a study to examine the geographical, hydrological, and biological characteristics of marine waters to determine the effects of seafood processes which dispose of untreated natural wastes into such waters and to include in this study an examination of technologies which may be used in such processes to facilitate the use of the nutrients in these wastes or to reduce the discharge of such wastes into the marine environment and to submit the result of this study to Congress not later than Jan. 1, 1979.

### **Standards**

For provisions relating to the responsibility of the head of each Executive agency for compliance with applicable pollution control standards, see Ex. Ord. No. 12088, Oct. 13, 1978, 43 F.R. 47707, set out as a note under section 4321 of Title 42, The Public Health and Welfare.

### **Oversight Study**

Section 5 of Pub. L. 92–500 authorized the Comptroller General of the United States to conduct a study and review of the research, pilot, and demonstration programs related to prevention and control of water pollution conducted, supported, or assisted by any Federal agency pursuant to any Federal law or regulation and assess conflicts between these programs and their coordination and efficacy, and to report to Congress thereon by Oct. 1, 1973.

### **International Trade Study**

Section 6 of Pub. L. 92–500 provided that:

“(a) The Secretary of Commerce, in cooperation with other interested Federal agencies and with representatives of industry and the public, shall undertake immediately an investigation and study to determine—

“(1) the extent to which pollution abatement and control programs will be imposed on, or voluntarily undertaken by, United States manufacturers in the near future and the probable short- and long-range effects of the costs of such programs (computed to the greatest extent practicable on an industry-by-industry basis) on (A) the production costs of such domestic manufacturers, and (B) the market prices of the goods produced by them;

“(2) the probable extent to which pollution abatement and control programs will be implemented in foreign industrial nations in the near future and the extent to which the production costs (computed to the greatest extent practicable on an industry-by-industry basis) of foreign manufacturers will be affected by the costs of such programs;

“(3) the probable competitive advantage which any article manufactured in a foreign nation will likely have in relation to a comparable article made in the United States if that foreign nation—

“(A) does not require its manufacturers to implement pollution abatement and control programs.

“(B) requires a lesser degree of pollution abatement and control in its programs, or

“(C) in any way reimburses or otherwise subsidizes its manufacturers for the costs of such program;

“(4) alternative means by which any competitive advantage accruing to the products of any foreign nation as a result of any factor described in paragraph (3) may be (A) accurately and quickly determined, and (B) equalized, for example, by the imposition of a surcharge or duty, on a foreign product in an amount necessary to compensate for such advantage; and

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“(5) the impact, if any, which the imposition of a compensating tariff of other equalizing measure may have in encouraging foreign nations to implement pollution and abatement control programs.

“(b) The Secretary shall make an initial report to the President and Congress within six months after the date of enactment of this section [Oct. 18, 1972] of the results of the study and investigation carried out pursuant to this section and shall make additional reports thereafter at such times as he deems appropriate taking into account the development of relevant data, but not less than once every twelve months.”

### **International Agreements**

Section 7 of Pub. L. 92–500 provided that: “The President shall undertake to enter into international agreement to apply uniform standards of performance for the control of the discharge and emission of pollutants from new sources, uniform controls over the discharge and emission of toxic pollutants, and uniform controls over the discharge of pollutants into the ocean. For this purpose the President shall negotiate multilateral treaties, conventions, resolutions, or other agreements, and formulate, present, or support proposals at the United Nations and other appropriate international forums.”

### **National Policies and Goal Study**

Section 10 of Pub. L. 92–500 directed President to make a full and complete investigation and study of all national policies and goals established by law to determine what the relationship should be between these policies and goals, taking into account the resources of the Nation, and to report results of his investigation and study together with his recommendations to Congress not later than two years after Oct. 18, 1972.

### **Efficiency Study**

Section 11 of Pub. L. 92–500 directed President, by utilization of the General Accounting Office, to conduct a full and complete investigation and study of ways and means of most effectively using all of the various resources, facilities, and personnel of the Federal Government in order to most efficiently carry out the provisions of this chapter and to report results of his investigation and study together with his recommendations to Congress not later than two hundred and seventy days after Oct. 18, 1972.

### **Sex Discrimination**

Section 13 of Pub. L. 92–500 provided that: “No person in the United States shall on the ground of sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal assistance under this Act [see Short Title note above] the Federal Water Pollution Control Act [this chapter], or the Environmental Financing Act [set out as a note under section 1281 of this title]. This section shall be enforced through agency provisions and rules similar to those already established, with respect to racial and other discrimination, under title VI of the Civil Rights Act of 1964 [section 2000d et seq. of Title 42, The Public Health and Welfare]. However, this remedy is not exclusive and will not prejudice or cut off any other legal remedies available to a discriminatee.”

### **Contiguous Zone of United States**

For extension of contiguous zone of United States, see Proc. No. 7219, set out as a note under section 1331 of Title 43, Public Lands.

### **Prevention, Control, and Abatement of Environmental Pollution at Federal Facilities**

Ex. Ord. No. 12088, Oct. 13, 1978, 43 F.R. 47707, set out as a note under section 4321 of Title 42, The Public Health and Welfare, provides for the prevention, control, and abatement of environmental pollution at federal facilities.

### **Executive Order No. 11548**

Ex. Ord. No. 11548, July 20, 1970, 35 F.R. 11677, which related to the delegation of Presidential functions, was superseded by Ex. Ord. No. 11735, Aug. 3, 1973, 38 F.R. 21243, formerly set out as a note under section 1321 of this title.

### **Ex. Ord. No. 11742. Delegation of Functions to Secretary of State Respecting the Negotiation of International Agreements Relating to the Enhancement of the Environment**

Ex. Ord. No. 11742, Oct. 23, 1973, 38 F.R. 29457, provided:

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Under and by virtue of the authority vested in me by section 301 of title 3 of the United States Code and as President of the United States, I hereby authorize and empower the Secretary of State, in coordination with the Council on Environmental Quality, the Environmental Protection Agency, and other appropriate Federal agencies, to perform, without the approval, ratification, or other action of the President, the functions vested in the President by Section 7 of the Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500; 86 Stat. 898) with respect to international agreements relating to the enhancement of the environment.

Richard Nixon.

**Definition of “Administrator”**

Section 1(d) of Pub. L. 100-4 provided that: “For purposes of this Act [see Short Title of 1987 Amendment note above], the term ‘Administrator’ means the Administrator of the Environmental Protection Agency.”

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## **TITLE 33 - NAVIGATION AND NAVIGABLE WATERS**

### **CHAPTER 26 - WATER POLLUTION PREVENTION AND CONTROL**

#### **SUBCHAPTER II - GRANTS FOR CONSTRUCTION OF TREATMENT WORKS**

##### **§ 1281. Congressional declaration of purpose**

###### **(a) Development and implementation of waste treatment management plans and practices**

It is the purpose of this subchapter to require and to assist the development and implementation of waste treatment management plans and practices which will achieve the goals of this chapter.

###### **(b) Application of technology: confined disposal of pollutants; consideration of advanced techniques**

Waste treatment management plans and practices shall provide for the application of the best practicable waste treatment technology before any discharge into receiving waters, including reclaiming and recycling of water, and confined disposal of pollutants so they will not migrate to cause water or other environmental pollution and shall provide for consideration of advanced waste treatment techniques.

###### **(c) Waste treatment management area and scope**

To the extent practicable, waste treatment management shall be on an areawide basis and provide control or treatment of all point and nonpoint sources of pollution, including in place or accumulated pollution sources.

###### **(d) Waste treatment management construction of revenue producing facilities**

The Administrator shall encourage waste treatment management which results in the construction of revenue producing facilities providing for—

- (1) the recycling of potential sewage pollutants through the production of agriculture, silviculture, or aquaculture products, or any combination thereof;
- (2) the confined and contained disposal of pollutants not recycled;
- (3) the reclamation of wastewater; and
- (4) the ultimate disposal of sludge in a manner that will not result in environmental hazards.

###### **(e) Waste treatment management integration of facilities**

The Administrator shall encourage waste treatment management which results in integrating facilities for sewage treatment and recycling with facilities to treat, dispose of, or utilize other industrial and municipal wastes, including but not limited to solid waste and waste heat and thermal discharges. Such integrated facilities shall be designed and operated to produce revenues in excess of capital and operation and maintenance costs and such revenues shall be used by the designated regional management agency to aid in financing other environmental improvement programs.

###### **(f) Waste treatment management “open space” and recreational considerations**

The Administrator shall encourage waste treatment management which combines “open space” and recreational considerations with such management.

###### **(g) Grants to construct publicly owned treatment works**

- (1) The Administrator is authorized to make grants to any State, municipality, or intermunicipal or interstate agency for the construction of publicly owned treatment works. On and after October 1, 1984, grants under this subchapter shall be made only for projects for secondary treatment or more stringent treatment, or any cost effective alternative thereto, new interceptors and appurtenances, and infiltration-in-flow correction. Notwithstanding the preceding sentences, the Administrator may make grants on and after October 1, 1984, for

- (A) any project within the definition set forth in section 1292 (2) of this title, other than for a project referred to in the preceding sentence, and

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(B) any purpose for which a grant may be made under sections <sup>1</sup> 1329(h) and (i) of this title (including any innovative and alternative approaches for the control of nonpoint sources of pollution), except that not more than 20 per centum (as determined by the Governor of the State) of the amount allotted to a State under section 1285 of this title for any fiscal year shall be obligated in such State under authority of this sentence.

(2) The Administrator shall not make grants from funds authorized for any fiscal year beginning after June 30, 1974, to any State, municipality, or intermunicipal or interstate agency for the erection, building, acquisition, alteration, remodeling, improvement, or extension of treatment works unless the grant applicant has satisfactorily demonstrated to the Administrator that—

(A) alternative waste management techniques have been studied and evaluated and the works proposed for grant assistance will provide for the application of the best practicable waste treatment technology over the life of the works consistent with the purposes of this subchapter; and

(B) as appropriate, the works proposed for grant assistance will take into account and allow to the extent practicable the application of technology at a later date which will provide for the reclaiming or recycling of water or otherwise eliminate the discharge of pollutants.

(3) The Administrator shall not approve any grant after July 1, 1973, for treatment works under this section unless the applicant shows to the satisfaction of the Administrator that each sewer collection system discharging into such treatment works is not subject to excessive infiltration.

(4) The Administrator is authorized to make grants to applicants for treatment works grants under this section for such sewer system evaluation studies as may be necessary to carry out the requirements of paragraph (3) of this subsection. Such grants shall be made in accordance with rules and regulations promulgated by the Administrator. Initial rules and regulations shall be promulgated under this paragraph not later than 120 days after October 18, 1972.

(5) The Administrator shall not make grants from funds authorized for any fiscal year beginning after September 30, 1978, to any State, municipality, or intermunicipal or interstate agency for the erection, building, acquisition, alteration, remodeling, improvement, or extension of treatment works unless the grant applicant has satisfactorily demonstrated to the Administrator that innovative and alternative wastewater treatment processes and techniques which provide for the reclaiming and reuse of water, otherwise eliminate the discharge of pollutants, and utilize recycling techniques, land treatment, new or improved methods of waste treatment management for municipal and industrial waste (discharged into municipal systems) and the confined disposal of pollutants, so that pollutants will not migrate to cause water or other environmental pollution, have been fully studied and evaluated by the applicant taking into account subsection (d) of this section and taking into account and allowing to the extent practicable the more efficient use of energy and resources.

(6) The Administrator shall not make grants from funds authorized for any fiscal year beginning after September 30, 1978, to any State, municipality, or intermunicipal or interstate agency for the erection, building, acquisition, alteration, remodeling, improvement, or extension of treatment works unless the grant applicant has satisfactorily demonstrated to the Administrator that the applicant has analyzed the potential recreation and open space opportunities in the planning of the proposed treatment works.

**(h) Grants to construct privately owned treatment works**

A grant may be made under this section to construct a privately owned treatment works serving one or more principal residences or small commercial establishments constructed prior to, and inhabited on, December 27, 1977, where the Administrator finds that—

(1) a public body otherwise eligible for a grant under subsection (g) of this section has applied on behalf of a number of such units and certified that public ownership of such works is not feasible;

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(2) such public body has entered into an agreement with the Administrator which guarantees that such treatment works will be properly operated and maintained and will comply with all other requirements of section 1284 of this title and includes a system of charges to assure that each recipient of waste treatment services under such a grant will pay its proportionate share of the cost of operation and maintenance (including replacement); and

(3) the total cost and environmental impact of providing waste treatment services to such residences or commercial establishments will be less than the cost of providing a system of collection and central treatment of such wastes.

**(i) Waste treatment management methods, processes, and techniques to reduce energy requirements**

The Administrator shall encourage waste treatment management methods, processes, and techniques which will reduce total energy requirements.

**(j) Grants for treatment works utilizing processes and techniques of guidelines under section 1314 (d)(3) of this title**

The Administrator is authorized to make a grant for any treatment works utilizing processes and techniques meeting the guidelines promulgated under section 1314 (d)(3) of this title, if the Administrator determines it is in the public interest and if in the cost effectiveness study made of the construction grant application for the purpose of evaluating alternative treatment works, the life cycle cost of the treatment works for which the grant is to be made does not exceed the life cycle cost of the most cost effective alternative by more than 15 per centum.

**(k) Limitation on use of grants for publicly owned treatment works**

No grant made after November 15, 1981, for a publicly owned treatment works, other than for facility planning and the preparation of construction plans and specifications, shall be used to treat, store, or convey the flow of any industrial user into such treatment works in excess of a flow per day equivalent to fifty thousand gallons per day of sanitary waste. This subsection shall not apply to any project proposed by a grantee which is carrying out an approved project to prepare construction plans and specifications for a facility to treat wastewater, which received its grant approval before May 15, 1980. This subsection shall not be in effect after November 15, 1981.

**(l) Grants for facility plans, or plans, specifications, and estimates for proposed project for construction of treatment works; limitations, allotments, advances, etc.**

(1) After December 29, 1981, Federal grants shall not be made for the purpose of providing assistance solely for facility plans, or plans, specifications, and estimates for any proposed project for the construction of treatment works. In the event that the proposed project receives a grant under this section for construction, the Administrator shall make an allowance in such grant for non-Federal funds expended during the facility planning and advanced engineering and design phase at the prevailing Federal share under section 1282 (a) of this title, based on the percentage of total project costs which the Administrator determines is the general experience for such projects.

(2) (A) Each State shall use a portion of the funds allotted to such State each fiscal year, but not to exceed 10 per centum of such funds, to advance to potential grant applicants under this subchapter the costs of facility planning or the preparation of plans, specifications, and estimates.

(B) Such an advance shall be limited to the allowance for such costs which the Administrator establishes under paragraph (1) of this subsection, and shall be provided only to a potential grant applicant which is a small community and which in the judgment of the State would otherwise be unable to prepare a request for a grant for construction costs under this section.

(C) In the event a grant for construction costs is made under this section for a project for which an advance has been made under this paragraph, the Administrator shall reduce the amount of such grant by the allowance established under paragraph (1) of this subsection. In



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the event no such grant is made, the State is authorized to seek repayment of such advance on such terms and conditions as it may determine.

**(m) Grants for State of California projects**

(1) Notwithstanding any other provisions of this subchapter, the Administrator is authorized to make a grant from any funds otherwise allotted to the State of California under section 1285 of this title to the project (and in the amount) specified in Order WQG 81–1 of the California State Water Resources Control Board.

(2) Notwithstanding any other provision of this chapter, the Administrator shall make a grant from any funds otherwise allotted to the State of California to the city of Eureka, California, in connection with project numbered C–06–2772, for the purchase of one hundred and thirty-nine acres of property as environmental mitigation for siting of the proposed treatment plant.

(3) Notwithstanding any other provision of this chapter, the Administrator shall make a grant from any funds otherwise allotted to the State of California to the city of San Diego, California, in connection with that city’s aquaculture sewage process (total resources recovery system) as an innovative and alternative waste treatment process.

**(n) Water quality problems; funds, scope, etc.**

(1) On and after October 1, 1984, upon the request of the Governor of an affected State, the Administrator is authorized to use funds available to such State under section 1285 of this title to address water quality problems due to the impacts of discharges from combined storm water and sanitary sewer overflows, which are not otherwise eligible under this subsection, where correction of such discharges is a major priority for such State.

(2) Beginning fiscal year 1983, the Administrator shall have available \$200,000,000 per fiscal year in addition to those funds authorized in section 1287 of this title to be utilized to address water quality problems of marine bays and estuaries subject to lower levels of water quality due to the impacts of discharges from combined storm water and sanitary sewer overflows from adjacent urban complexes, not otherwise eligible under this subsection. Such sums may be used as deemed appropriate by the Administrator as provided in paragraphs (1) and (2) of this subsection, upon the request of and demonstration of water quality benefits by the Governor of an affected State.

**(o) Capital financing plan**

The Administrator shall encourage and assist applicants for grant assistance under this subchapter to develop and file with the Administrator a capital financing plan which, at a minimum—

(1) projects the future requirements for waste treatment services within the applicant’s jurisdiction for a period of no less than ten years;

(2) projects the nature, extent, timing, and costs of future expansion and reconstruction of treatment works which will be necessary to satisfy the applicant’s projected future requirements for waste treatment services; and

(3) sets forth with specificity the manner in which the applicant intends to finance such future expansion and reconstruction.

**(p) Time limit on resolving certain disputes**

In any case in which a dispute arises with respect to the awarding of a contract for construction of treatment works by a grantee of funds under this subchapter and a party to such dispute files an appeal with the Administrator under this subchapter for resolution of such dispute, the Administrator shall make a final decision on such appeal within 90 days of the filing of such appeal.

**Footnotes**

<sup>1</sup> So in original. Probably should be “section”.

(June 30, 1948, ch. 758, title II, § 201, as added Pub. L. 92–500, § 2, Oct. 18, 1972, 86 Stat. 833; amended Pub. L. 95–217, §§ 12–16, Dec. 27, 1977, 91 Stat. 1569, 1570; Pub. L. 96–483, §§ 2(d), 3, Oct. 21, 1980,

*NB: This unofficial compilation of the U.S. Code is current as of Jan. 4, 2012 (see <http://www.law.cornell.edu/uscode/uscpnt.html>).*

94 Stat. 2361; Pub. L. 97–117, §§ 2(a), 3 (a), 4–6, 10 (c), Dec. 29, 1981, 95 Stat. 1623–1626; Pub. L. 100–4, title II, § 201, title III, § 316(c), Feb. 4, 1987, 101 Stat. 15, 60.)

## Amendments

1987—Subsec. (g)(1). Pub. L. 100–4, § 316(c), substituted “sentences, the Administrator” for “sentence, the Administrator” and inserted “(A)” after “October 1, 1984, for” and “and (B) any purpose for which a grant may be made under sections 1329 (h) and (i) of this title (including any innovative and alternative approaches for the control of nonpoint sources of pollution),” before “except that”.

Subsec. (p). Pub. L. 100–4, § 201, added subsec. (p).

1981—Subsec. (g)(1). Pub. L. 97–117, § 2(a), inserted provisions restricting, on or after Oct. 1, 1984, the categories of projects eligible for grants under this subchapter and providing an exception to the restriction for projects, other than specified projects, within the definition set forth in section 1292 (2) of this title, but limiting such exception to not more than 20 per centum, as determined by the Governor of the State, of the amount allotted to a State under section 1285 of this title for any fiscal year.

Subsec. (k). Pub. L. 97–117, § 10(c), inserted provision that subsection not be in effect after Nov. 15, 1981.

Subsec. (l). Pub. L. 97–117, § 3(a), added subsec. (l).

Subsec. (m). Pub. L. 97–117, § 4, added subsec. (m).

Subsec. (n). Pub. L. 97–117, § 5, added subsec. (n).

Subsec. (o). Pub. L. 97–117, § 6, added subsec. (o).

1980—Subsec. (h). Pub. L. 96–483, § 2(d), struck out text following par. (3), relating to payment to the United States by commercial users of that portion of the cost of construction applicable to treatment of commercial wastes to the extent attributable to the Federal share of the cost of construction.

Subsec. (k). Pub. L. 96–483, § 3, added subsec. (k).

1977—Subsec. (g)(5). Pub. L. 95–217, § 12, added par. (5).

Subsec. (g)(6). Pub. L. 95–217, § 13, added par. (6).

Subsec. (h). Pub. L. 95–217, § 14, added subsec. (h).

Subsec. (i). Pub. L. 95–217, § 15, added subsec. (i).

Subsec. (j). Pub. L. 95–217, § 16, added subsec. (j).

## Effective Date of 1980 Amendment

Section 2(g) of Pub. L. 96–483 provided that: “The amendments made by this section [amending sections 1281, 1284, and 1293 of this title, enacting provisions set out as notes under section 1284 of this title, and amending provisions set out as a note under section 1284 of this title] shall take effect on December 27, 1977.”

## Environmental Protection Agency State and Tribal Assistance Grants

Pub. L. 105–174, title III, May 1, 1998, 112 Stat. 92, provided that: “Notwithstanding any other provision of law, eligible recipients of the funds appropriated to the Environmental Protection Agency in the State and Tribal Assistance Grants account since fiscal year 1997 and hereafter for multi-media or single media grants, other than Performance Partnership Grants authorized pursuant to Public Law 104–134 and Public Law 105–65 [see Grants to Indian Tribes for Pollution Prevention, Control, and Abatement notes set out below], for pollution prevention, control, and abatement and related activities have been and shall be those entities eligible for grants under the Agency’s organic statutes.”

## Privatization of Infrastructure Assets

Pub. L. 104–303, title V, § 586, Oct. 12, 1996, 110 Stat. 3791, provided that:

“(a) In General.—Notwithstanding the provisions of title II of the Federal Water Pollution Control Act (33 U.S.C. 1281 et seq.), Executive Order 12803 [5 U.S.C. 601 note ], or any other law or authority, an entity that received Federal grant assistance for an infrastructure asset under the Federal Water Pollution Control Act [33 U.S.C. 1251 et seq.] shall not be required to repay any portion of the grant upon the lease or concession of the asset only if—

“(1) ownership of the asset remains with the entity that received the grant; and



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“(2) the Administrator of the Environmental Protection Agency determines that the lease or concession furthers the purposes of such Act and approves the lease or concession.

“(b) Limitation.—The Administrator shall not approve a total of more than 5 leases and concessions under this section.”

### **Grants to States To Administer Completion and Closeout of Construction Grants Program**

Pub. L. 104–204, title III, Sept. 26, 1996, 110 Stat. 2912, provided in part: “That notwithstanding any other provision of law, beginning in fiscal year 1997 the Administrator may make grants to States, from funds available for obligation in the State under title II of the Federal Water Pollution Control Act [33 U.S.C. 1281 et seq.], as amended, for administering the completion and closeout of the State’s construction grants program, based on a budget annually negotiated with the State”.

### **Wastewater Assistance to Colonias**

Pub. L. 104–182, title III, § 307, Aug. 6, 1996, 110 Stat. 1688, provided that:

“(a) Definitions.—As used in this section:

“(1) Border state.—The term ‘border State’ means Arizona, California, New Mexico, and Texas.

“(2) Eligible community.—The term ‘eligible community’ means a low-income community with economic hardship that—

“(A) is commonly referred to as a colonia;

“(B) is located along the United States-Mexico border (generally in an unincorporated area); and

“(C) lacks basic sanitation facilities such as household plumbing or a proper sewage disposal system.

“(3) Treatment works.—The term ‘treatment works’ has the meaning provided in section 212(2) of the Federal Water Pollution Control Act (33 U.S.C. 1292 (2)).

“(b) Grants for Wastewater Assistance.—The Administrator of the Environmental Protection Agency and the heads of other appropriate Federal agencies are authorized to award grants to a border State to provide assistance to eligible communities for the planning, design, and construction or improvement of sewers, treatment works, and appropriate connections for wastewater treatment.

“(c) Use of Funds.—Each grant awarded pursuant to subsection (b) shall be used to provide assistance to one or more eligible communities with respect to which the residents are subject to a significant health risk (as determined by the Administrator or the head of the Federal agency making the grant) attributable to the lack of access to an adequate and affordable treatment works for wastewater.

“(d) Cost Sharing.—The amount of a grant awarded pursuant to this section shall not exceed 50 percent of the costs of carrying out the project that is the subject of the grant.

“(e) Authorization of Appropriations.—There are authorized to be appropriated to carry out this section \$25,000,000 for each of the fiscal years 1997 through 1999.”

### **Grants to Indian Tribes for Pollution Prevention, Control and Abatement**

Pub. L. 105–65, title III, Oct. 27, 1997, 111 Stat. 1373, provided in part that: “\$745,000,000 for grants to States, federally recognized tribes, and air pollution control agencies for multi-media or single media pollution prevention, control and abatement and related activities pursuant to the provisions set forth under this heading in Public Law 104–134 [see below], provided that eligible recipients of these funds and the funds made available for this purpose since fiscal year 1996 and hereafter include States, federally recognized tribes, interstate agencies, tribal consortia, and air pollution control agencies, as provided in authorizing statutes, subject to such terms and conditions as the Administrator shall establish, and for making grants under section 103 of the Clean Air Act [42 U.S.C. 7403] for particulate matter monitoring and data collection activities”.

Pub. L. 105–65, title III, Oct. 27, 1997, 111 Stat. 1374, provided in part: “That, hereafter from funds appropriated under this heading [“Environmental Protection Agency” and “state and tribal assistance grants”], the Administrator is authorized to make grants to federally recognized Indian governments for the development of multi-media environmental programs: Provided further, That, hereafter, the funds available under this heading for grants to States, federally recognized tribes, and air pollution control agencies for multi-media or single media pollution prevention, control and abatement and related activities may also be used for the direct implementation by the Federal Government of a program required by law in the absence of an acceptable State or tribal program”.

Similar provisions were contained in the following prior appropriation acts:

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Pub. L. 104–204, title III, Sept. 26, 1996, 110 Stat. 2912.

Pub. L. 104–134, title I, § 101(e) [title III], Apr. 26, 1996, 110 Stat. 1321–257, 1321–299, renumbered title I, Pub. L. 104–140, § 1(a), May 2, 1996, 110 Stat. 1327.

Pub. L. 103–327, title III, Sept. 28, 1994, 108 Stat. 2320.

Pub. L. 103–124, title III, Oct. 28, 1993, 107 Stat. 1293.

Pub. L. 102–389, title III, Oct. 6, 1992, 106 Stat. 1597.

Pub. L. 102–139, title III, Oct. 28, 1991, 105 Stat. 762.

Pub. L. 101–507, title III, Nov. 5, 1990, 104 Stat. 1372.

Pub. L. 104–134, title I, § 101(e) [title III], Apr. 26, 1996, 110 Stat. 1321–257, 1321–299; renumbered title I, Pub. L. 104–140, § 1(a), May 2, 1996, 110 Stat. 1327, provided in part: “That beginning in fiscal year 1996 and each fiscal year thereafter, and notwithstanding any other provision of law, the Administrator is authorized to make grants annually from funds appropriated under this heading [“Environmental Protection Agency” and “state and tribal assistance grants”], subject to such terms and conditions as the Administrator shall establish, to any State or federally recognized Indian tribe for multimedia or single media pollution prevention, control and abatement and related environmental activities at the request of the Governor or other appropriate State official or the tribe”.

### **State Management of Construction Grant Activities**

Pub. L. 104–134, title I, § 101(e) [title III], Apr. 26, 1996, 110 Stat. 1321–257, 1321–299; renumbered title I, Pub. L. 104–140, § 1(a), May 2, 1996, 110 Stat. 1327, provided in part: “That of the funds appropriated in the Construction Grants and Water Infrastructure/State Revolving Funds accounts since the appropriation for the fiscal year ending September 30, 1992, and hereafter, for making grants for wastewater treatment works construction projects, portions may be provided by the recipients to States for managing construction grant activities, on condition that the States agree to reimburse the recipients from State funding sources”.

### **Grants to Trust Territory of the Pacific Islands, American Samoa, Guam, Northern Mariana Islands, and Virgin Islands; Waiver of Collector Sewers Limitation**

Pub. L. 99–396, § 12(b), Aug. 27, 1986, 100 Stat. 841, provided that: “In awarding grants to the Trust Territory of the Pacific Islands, American Samoa, Guam, the Northern Mariana Islands and the Virgin Islands under section 201(g)(1) of the Clean Water Act (33 U.S.C. 1251 et seq.) [subsec. (g)(1) of this section], the Administrator of the Environmental Protection Agency may waive limitations regarding grant eligibility for sewerage facilities and related appurtenances, insofar as such limitations relate to collector sewers, based upon a determination that applying such limitations could hinder the alleviation of threats to public health and water quality. In making such a determination, the Administrator shall take into consideration the public health and water quality benefits to be derived and the availability of alternate funding sources. The Administrator shall not award grants under this section for the operation and maintenance of sewerage facilities, for construction of facilities which are not an essential component of the sewerage facilities, or any other activities or facilities which are not concerned with the management of wastewater to alleviate threats to public health and water quality.” [For termination of Trust Territory of the Pacific Islands, see note set out preceding section 1681 of Title 48, Territories and Insular Possessions.]

### **Environmental Financing Authority**

Section 12 of Pub. L. 92–500, as amended by Pub. L. 97–258, § 4(b), Sept. 13, 1982, 96 Stat. 1067, provided that:

“(a) [Short Title] This section may be cited as the Environmental Financing Act of 1972.

“(b) [Establishment] There is hereby created a body corporate to be known as the Environmental Financing Authority, which shall have succession until dissolved by Act of Congress. The Authority shall be subject to the general supervision and direction of the Secretary of the Treasury. The Authority shall be an instrumentality of the United States Government and shall maintain such offices as may be necessary or appropriate in the conduct of its business.

“(c) [Congressional Declaration of Purpose] The purpose of this section is to assure that inability to borrow necessary funds on reasonable terms does not prevent any State or local public body from carrying out any project for construction of waste treatment works determined eligible for assistance pursuant to subsection (e) of this section.

“(d) [Board of Directors] (1) The Authority shall have a Board of Directors consisting of five persons, one of whom shall be the Secretary of the Treasury or his designee as Chairman of the Board, and four of whom shall be appointed by the President from among the officers or employees of the Authority or of any department or agency of the United States Government.

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“(2) The Board of Directors shall meet at the call of its Chairman. The Board shall determine the general policies which shall govern the operations of the Authority. The Chairman of the Board shall select and effect the appointment of qualified persons to fill the offices as may be provided for in the bylaws, with such executive functions, powers, and duties as may be prescribed by the bylaws or by the Board of Directors, and such persons shall be the executive officers of the Authority and shall discharge all such executive functions, powers, and duties. The members of the Board, as such, shall not receive compensation for their services.

“(e) [Purchase of State and Local Obligations] (1) Until July 1, 1975, the Authority is authorized to make commitments to purchase, and to purchase on terms and conditions determined by the Authority, any obligation or participation therein which is issued by a State or local public body to finance the non-Federal share of the cost of any project for the construction of waste treatment works which the Administrator of the Environmental Protection Agency has determined to be eligible for Federal financial assistance under the Federal Water Pollution Control Act [this chapter].

“(2) No commitment shall be entered into, and no purchase shall be made, unless the Administrator of the Environmental Protection Agency (A) has certified that the public body is unable to obtain on reasonable terms sufficient credit to finance its actual needs; (B) has approved the project as eligible under the Federal Water Pollution Control Act [this chapter], and (C) has agreed to guarantee timely payment of principal and interest on the obligation. The Administrator is authorized to guarantee such timely payments and to issue regulations as he deems necessary and proper to protect such guarantees. Appropriations are hereby authorized to be made to the Administrator in such sums as are necessary to make payments under such guarantees, and such payments are authorized to be made from such appropriations.

“(3) No purchase shall be made of obligations issued to finance projects, the permanent financing of which occurred prior to the enactment of this section [Oct. 18, 1972].

“(4) Any purchase by the Authority shall be upon such terms and conditions as to yield a return at a rate determined by the Secretary of the Treasury taking into consideration (A) the current average yield on outstanding marketable obligations of the United States of comparable maturity or in its stead whenever the Authority has sufficient of its own long-term obligations outstanding, the current average yield on outstanding obligations of the Authority of comparable maturity; and (B) the market yields on municipal bonds.

“(5) The Authority is authorized to charge fees for its commitments and other services adequate to cover all expenses and to provide for the accumulation of reasonable contingency reserves and such fees shall be included in the aggregate project costs.

“(f) [Initial Capital] To provide initial capital to the Authority the Secretary of the Treasury is authorized to advance the funds necessary for this purpose. Each such advance shall be upon such terms and conditions as to yield a return at a rate not less than a rate determined by the Secretary of the Treasury taking into consideration the current average yield on outstanding marketable obligations of the United States of comparable maturities. Interest payments on such advances may be deferred, at the discretion of the Secretary, but any such deferred payments shall themselves bear interest at the rate specified in this section. There is authorized to be appropriated not to exceed \$100,000,000, which shall be available for the purposes of this subsection.

“(g) [Issuance of Obligations] (1) The Authority is authorized, with the approval of the Secretary of the Treasury, to issue and have outstanding obligations having such maturities and bearing such rate or rates of interest as may be determined by the Authority. Such obligations may be redeemable at the option of the Authority before maturity in such manner as may be stipulated therein.

“(2) As authorized in appropriation Acts, and such authorizations may be without fiscal year limitations, the Secretary of the Treasury may in his discretion purchase or agree to purchase any obligations issued pursuant to paragraph (1) of this subsection, and for such purpose the Secretary of the Treasury is authorized to use as a public debt transaction the proceeds of the sale of any securities hereafter issued under chapter 31 of title 31, as now or hereafter in force, and the purposes for which securities may be issued under chapter 31 of title 31, as now or hereafter in force, are extended to include such purchases. Each purchase of obligations by the Secretary of the Treasury under this subsection shall be upon such terms and conditions as to yield a return at a rate not less than a rate determined by the Secretary of the Treasury, taking into consideration the current average yield on outstanding marketable obligations of the United States of comparable maturities. The Secretary of the Treasury may sell, upon such terms and conditions and at such price or prices as he shall determine, any of the obligations acquired by him under this paragraph. All purchases and sales by the Secretary of the Treasury of such obligations under this paragraph shall be treated as public debt transactions of the United States. (As amended Pub. L. 97-258, § 4(b), Sept. 13, 1982, 96 Stat. 1067.)

“(h) [Interest Differential] The Secretary of the Treasury is authorized and directed to make annual payments to the Authority in such amounts as are necessary to equal the amount by which the dollar amount of interest expense accrued by the Authority on account of its obligations exceeds the dollar amount of interest income accrued by the Authority on account of obligations purchased by it pursuant to subsection (e) of this section.

“(i) [Powers] The Authority shall have power—

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- “(1) to sue and be sued, complain and defend, in its corporate name;
- “(2) to adopt, alter, and use a corporate seal, which shall be judicially noticed;
- “(3) to adopt, amend, and repeal bylaws, rules, and regulations as may be necessary for the conduct of its business;
- “(4) to conduct its business, carry on its operations, and have offices and exercise the powers granted by this section in any State without regard to any qualification or similar statute in any State;
- “(5) to lease, purchase, or otherwise acquire, own, hold, improve, use, or otherwise deal in and with any property, real, personal, or mixed, or any interest therein, wherever situated;
- “(6) to accept gifts or donations of services, or of property, real, personal, or mixed, tangible or intangible, in aid of any of the purposes of the Authority;
- “(7) to sell, convey, mortgage, pledge, lease, exchange, and otherwise dispose of its property and assets;
- “(8) to appoint such officers, attorneys, employees, and agents as may be required, to define their duties, to fix and to pay such compensation for their services as may be determined, subject to the civil service and classification laws, to require bonds for them and pay the premium thereof; and
- “(9) to enter into contracts, to execute instruments, to incur liabilities, and to do all things as are necessary or incidental to the proper management of its affairs and the proper conduct of its business.
- “(j) [Tax Exemption, Exemptions] The Authority, its property, its franchise, capital, reserves, surplus, security holdings, and other funds, and its income shall be exempt from all taxation now or hereafter imposed by the United States or by any State or local taxing authority; except that (A) any real property and any tangible personal property of the Authority shall be subject to Federal, State, and local taxation to the same extent according to its value as other such property is taxed, and (B) any and all obligations issued by the Authority shall be subject both as to principal and interest to Federal, State, and local taxation to the same extent as the obligations of private corporations are taxed.
- “(k) [Nature of Obligations] All obligations issued by the Authority shall be lawful investments, and may be accepted as security for all fiduciary, trust, and public funds, the investment or deposit of which shall be under authority or control of the United States or of any officer or officers thereof. All obligations issued by the Authority pursuant to this section shall be deemed to be exempt securities within the meaning of laws administered by the Securities and Exchange Commission, to the same extent as securities which are issued by the United States.
- “(l) [Preparation of Obligations by Secretary of the Treasury] In order to furnish obligations for delivery by the Authority, the Secretary of the Treasury is authorized to prepare such obligations in such form as the Authority may approve, such obligations when prepared to be held in the Treasury subject to delivery upon order by the Authority. The engraved plates, dies, bed pieces, and so forth, executed in connection therewith, shall remain in the custody of the Secretary of the Treasury. The Authority shall reimburse the Secretary of the Treasury for any expenditures made in the preparation, custody, and delivery of such obligations.
- “(m) [Annual Report to Congress] The Authority shall, as soon as practicable after the end of each fiscal year, transmit to the President and the Congress an annual report of its operations and activities.
- “(n) [Subsec. (n) amended section 24 of Title 12, Banks and Banking, and is not set out herein.]
- “(o) [Financial Controls] The budget and audit provisions of chapter 91 of title 31 shall be applicable to the Environmental Financing Authority in the same manner as they are applied to the wholly owned Government corporations. (As amended Pub. L. 97–258, § 4(b), Sept. 13, 1982, 96 Stat. 1067.)
- “(p) [Subsec. (p) amended section 711 of former Title 31, Money and Finance, and is not set out herein.]”

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**TITLE 42 - THE PUBLIC HEALTH AND WELFARE**  
**CHAPTER 85 - AIR POLLUTION PREVENTION AND CONTROL**  
**SUBCHAPTER I - PROGRAMS AND ACTIVITIES**  
**Part A - Air Quality and Emission Limitations**

**§ 7412. Hazardous air pollutants**

**(a) Definitions**

For purposes of this section, except subsection (r) of this section—

**(1) Major source**

The term “major source” means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants. The Administrator may establish a lesser quantity, or in the case of radionuclides different criteria, for a major source than that specified in the previous sentence, on the basis of the potency of the air pollutant, persistence, potential for bioaccumulation, other characteristics of the air pollutant, or other relevant factors.

**(2) Area source**

The term “area source” means any stationary source of hazardous air pollutants that is not a major source. For purposes of this section, the term “area source” shall not include motor vehicles or nonroad vehicles subject to regulation under subchapter II of this chapter.

**(3) Stationary source**

The term “stationary source” shall have the same meaning as such term has under section 7411 (a) of this title.

**(4) New source**

The term “new source” means a stationary source the construction or reconstruction of which is commenced after the Administrator first proposes regulations under this section establishing an emission standard applicable to such source.

**(5) Modification**

The term “modification” means any physical change in, or change in the method of operation of, a major source which increases the actual emissions of any hazardous air pollutant emitted by such source by more than a de minimis amount or which results in the emission of any hazardous air pollutant not previously emitted by more than a de minimis amount.

**(6) Hazardous air pollutant**

The term “hazardous air pollutant” means any air pollutant listed pursuant to subsection (b) of this section.

**(7) Adverse environmental effect**

The term “adverse environmental effect” means any significant and widespread adverse effect, which may reasonably be anticipated, to wildlife, aquatic life, or other natural resources, including adverse impacts on populations of endangered or threatened species or significant degradation of environmental quality over broad areas.

**(8) Electric utility steam generating unit**

The term “electric utility steam generating unit” means any fossil fuel fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale. A unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 megawatts electrical output to any utility power distribution system for sale shall be considered an electric utility steam generating unit.

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**(9) Owner or operator**

The term “owner or operator” means any person who owns, leases, operates, controls, or supervises a stationary source.

**(10) Existing source**

The term “existing source” means any stationary source other than a new source.

**(11) Carcinogenic effect**

Unless revised, the term “carcinogenic effect” shall have the meaning provided by the Administrator under Guidelines for Carcinogenic Risk Assessment as of the date of enactment.<sup>1</sup> Any revisions in the existing Guidelines shall be subject to notice and opportunity for comment.

**(b) List of pollutants**

**(1) Initial list**

The Congress establishes for purposes of this section a list of hazardous air pollutants as follows:

CAS number	Chemical name
75070	Acetaldehyde
60355	Acetamide
75058	Acetonitrile
98862	Acetophenone
53963	2-Acetylaminofluorene
107028	Acrolein
79061	Acrylamide
79107	Acrylic acid
107131	Acrylonitrile
107051	Allyl chloride
92671	4-Aminobiphenyl
62533	Aniline
90040	o-Anisidine
1332214	Asbestos
71432	Benzene (including benzene from gasoline)
92875	Benzidine
98077	Benzotrichloride
100447	Benzyl chloride
92524	Biphenyl
117817	Bis(2-ethylhexyl)phthalate (DEHP)
542881	Bis(chloromethyl)ether
75252	Bromoform
106990	1,3-Butadiene
156627	Calcium cyanamide
105602	Caprolactam
133062	Captan
63252	Carbaryl
75150	Carbon disulfide
56235	Carbon tetrachloride
463581	Carbonyl sulfide
120809	Catechol
133904	Chloramben

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CAS number	Chemical name
57749	Chlordane
7782505	Chlorine
79118	Chloroacetic acid
532274	2-Chloroacetophenone
108907	Chlorobenzene
510156	Chlorobenzilate
67663	Chloroform
107302	Chloromethyl methyl ether
126998	Chloroprene
1319773	Cresols/Cresylic acid (isomers and mixture)
95487	o-Cresol
108394	m-Cresol
106445	p-Cresol
98828	Cumene
94757	2,4-D, salts and esters
3547044	DDE
334883	Diazomethane
132649	Dibenzofurans
96128	1,2-Dibromo-3-chloropropane
84742	Dibutylphthalate
106467	1,4-Dichlorobenzene(p)
91941	3,3-Dichlorobenzidene
111444	Dichloroethyl ether (Bis(2-chloroethyl)ether)
542756	1,3-Dichloropropene
62737	Dichlorvos
111422	Diethanolamine
121697	N,N-Diethyl aniline (N,N-Dimethylaniline)
64675	Diethyl sulfate
119904	3,3-Dimethoxybenzidine
60117	Dimethyl aminoazobenzene
119937	3,3-Dimethyl benzidine
79447	Dimethyl carbamoyl chloride
68122	Dimethyl formamide
57147	1,1-Dimethyl hydrazine
131113	Dimethyl phthalate
77781	Dimethyl sulfate
534521	4,6-Dinitro-o-cresol, and salts
51285	2,4-Dinitrophenol
121142	2,4-Dinitrotoluene
123911	1,4-Dioxane (1,4-Diethyleneoxide)
122667	1,2-Diphenylhydrazine
106898	Epichlorohydrin (1-Chloro-2,3-epoxypropane)
106887	1,2-Epoxybutane
140885	Ethyl acrylate
100414	Ethyl benzene
51796	Ethyl carbamate (Urethane)
75003	Ethyl chloride (Chloroethane)
106934	Ethylene dibromide (Dibromoethane)



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CAS number	Chemical name
107062	Ethylene dichloride (1,2-Dichloroethane)
107211	Ethylene glycol
151564	Ethylene imine (Aziridine)
75218	Ethylene oxide
96457	Ethylene thiourea
75343	Ethylidene dichloride (1,1-Dichloroethane)
50000	Formaldehyde
76448	Heptachlor
118741	Hexachlorobenzene
87683	Hexachlorobutadiene
77474	Hexachlorocyclopentadiene
67721	Hexachloroethane
822060	Hexamethylene-1,6-diisocyanate
680319	Hexamethylphosphoramide
110543	Hexane
302012	Hydrazine
7647010	Hydrochloric acid
7664393	Hydrogen fluoride (Hydrofluoric acid)
123319	Hydroquinone
78591	Isophorone
58899	Lindane (all isomers)
108316	Maleic anhydride
67561	Methanol
72435	Methoxychlor
74839	Methyl bromide (Bromomethane)
74873	Methyl chloride (Chloromethane)
71556	Methyl chloroform (1,1,1-Trichloroethane)
78933	Methyl ethyl ketone (2-Butanone)
60344	Methyl hydrazine
74884	Methyl iodide (Iodomethane)
108101	Methyl isobutyl ketone (Hexone)
624839	Methyl isocyanate
80626	Methyl methacrylate
1634044	Methyl tert butyl ether
101144	4,4-Methylene bis(2-chloroaniline)
75092	Methylene chloride (Dichloromethane)
101688	Methylene diphenyl diisocyanate (MDI)
101779	4,4-Methylenedianiline
91203	Naphthalene
98953	Nitrobenzene
92933	4-Nitrobiphenyl
100027	4-Nitrophenol
79469	2-Nitropropane
684935	N-Nitroso-N-methylurea
62759	N-Nitrosodimethylamine
59892	N-Nitrosomorpholine
56382	Parathion
82688	Pentachloronitrobenzene (Quintobenzene)



NB: This unofficial compilation of the U.S. Code is current as of Jan. 4, 2012 (see <http://www.law.cornell.edu/uscode/uscpint.html>).

CAS number	Chemical name
87865	Pentachlorophenol
108952	Phenol
106503	p-Phenylenediamine
75445	Phosgene
7803512	Phosphine
7723140	Phosphorus
85449	Phthalic anhydride
1336363	Polychlorinated biphenyls (Aroclors)
1120714	1,3-Propane sultone
57578	beta-Propiolactone
123386	Propionaldehyde
114261	Propoxur (Baygon)
78875	Propylene dichloride (1,2-Dichloropropane)
75569	Propylene oxide
75558	1,2-Propylenimine (2-Methyl aziridine)
91225	Quinoline
106514	Quinone
100425	Styrene
96093	Styrene oxide
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin
79345	1,1,2,2-Tetrachloroethane
127184	Tetrachloroethylene (Perchloroethylene)
7550450	Titanium tetrachloride
108883	Toluene
95807	2,4-Toluene diamine
584849	2,4-Toluene diisocyanate
95534	o-Toluidine
8001352	Toxaphene (chlorinated camphene)
120821	1,2,4-Trichlorobenzene
79005	1,1,2-Trichloroethane
79016	Trichloroethylene
95954	2,4,5-Trichlorophenol
88062	2,4,6-Trichlorophenol
121448	Triethylamine
1582098	Trifluralin
540841	2,2,4-Trimethylpentane
108054	Vinyl acetate
593602	Vinyl bromide
75014	Vinyl chloride
75354	Vinylidene chloride (1,1-Dichloroethylene)
1330207	Xylenes (isomers and mixture)
95476	o-Xylenes
108383	m-Xylenes
106423	p-Xylenes
0	Antimony Compounds
0	Arsenic Compounds (inorganic including arsine)
0	Beryllium Compounds
0	Cadmium Compounds

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CAS number	Chemical name
0	Chromium Compounds
0	Cobalt Compounds
0	Coke Oven Emissions
0	Cyanide Compounds <sup>1</sup>
0	Glycol ethers <sup>2</sup>
0	Lead Compounds
0	Manganese Compounds
0	Mercury Compounds
0	Fine mineral fibers <sup>3</sup>
0	Nickel Compounds
0	Polycyclic Organic Matter <sup>4</sup>
0	Radionuclides (including radon) <sup>5</sup>
0	Selenium Compounds
NOTE: For all listings above which contain the word "compounds" and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical's infrastructure.	
<sup>1</sup> XCN where X = H or any other group where a formal dissociation may occur. For example KCN or Ca(CN) <sub>2</sub> .	
<sup>2</sup> Includes mono- and di- ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH <sub>2</sub> CH <sub>2</sub> ) <sub>n</sub> -OR where	
n = 1, 2, or 3	
R = alkyl or aryl groups	
R = R, H, or groups which, when removed, yield glycol ethers with the structure: R-(OCH <sub>2</sub> CH <sub>2</sub> ) <sub>n</sub> -OH. Polymers are excluded from the glycol category.	
<sup>3</sup> Includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less.	
<sup>4</sup> Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100°C.	
<sup>5</sup> A type of atom which spontaneously undergoes radioactive decay.	

## (2) Revision of the list

The Administrator shall periodically review the list established by this subsection and publish the results thereof and, where appropriate, revise such list by rule, adding pollutants which present, or may present, through inhalation or other routes of exposure, a threat of adverse human health effects (including, but not limited to, substances which are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, neurotoxic, which cause reproductive dysfunction, or which are acutely or chronically toxic) or adverse environmental effects whether through ambient concentrations, bioaccumulation, deposition, or otherwise, but not including releases subject to regulation under subsection (r) of this section as a result of emissions to the air. No air pollutant which is listed under section 7408 (a) of this title may be added to the list under this section, except that the prohibition of this sentence shall not apply to any pollutant which independently meets the listing criteria of this paragraph and is a precursor to a pollutant which is listed under section 7408 (a) of this title or to any pollutant which is in a class of pollutants listed under such section. No substance, practice, process or activity regulated under subchapter VI of this chapter shall be subject to regulation under this section solely due to its adverse effects on the environment.

## (3) Petitions to modify the list

NB: This unofficial compilation of the U.S. Code is current as of Jan. 4, 2012 (see <http://www.law.cornell.edu/uscode/uscpint.html>).

(A) Beginning at any time after 6 months after November 15, 1990, any person may petition the Administrator to modify the list of hazardous air pollutants under this subsection by adding or deleting a substance or, in case of listed pollutants without CAS numbers (other than coke oven emissions, mineral fibers, or polycyclic organic matter) removing certain unique substances. Within 18 months after receipt of a petition, the Administrator shall either grant or deny the petition by publishing a written explanation of the reasons for the Administrator's decision. Any such petition shall include a showing by the petitioner that there is adequate data on the health or environmental defects<sup>2</sup> of the pollutant or other evidence adequate to support the petition. The Administrator may not deny a petition solely on the basis of inadequate resources or time for review.

(B) The Administrator shall add a substance to the list upon a showing by the petitioner or on the Administrator's own determination that the substance is an air pollutant and that emissions, ambient concentrations, bioaccumulation or deposition of the substance are known to cause or may reasonably be anticipated to cause adverse effects to human health or adverse environmental effects.

(C) The Administrator shall delete a substance from the list upon a showing by the petitioner or on the Administrator's own determination that there is adequate data on the health and environmental effects of the substance to determine that emissions, ambient concentrations, bioaccumulation or deposition of the substance may not reasonably be anticipated to cause any adverse effects to the human health or adverse environmental effects.

(D) The Administrator shall delete one or more unique chemical substances that contain a listed hazardous air pollutant not having a CAS number (other than coke oven emissions, mineral fibers, or polycyclic organic matter) upon a showing by the petitioner or on the Administrator's own determination that such unique chemical substances that contain the named chemical of such listed hazardous air pollutant meet the deletion requirements of subparagraph (C). The Administrator must grant or deny a deletion petition prior to promulgating any emission standards pursuant to subsection (d) of this section applicable to any source category or subcategory of a listed hazardous air pollutant without a CAS number listed under subsection (b) of this section for which a deletion petition has been filed within 12 months of November 15, 1990.

**(4) Further information**

If the Administrator determines that information on the health or environmental effects of a substance is not sufficient to make a determination required by this subsection, the Administrator may use any authority available to the Administrator to acquire such information.

**(5) Test methods**

The Administrator may establish, by rule, test measures and other analytic procedures for monitoring and measuring emissions, ambient concentrations, deposition, and bioaccumulation of hazardous air pollutants.

**(6) Prevention of significant deterioration**

The provisions of part C of this subchapter (prevention of significant deterioration) shall not apply to pollutants listed under this section.

**(7) Lead**

The Administrator may not list elemental lead as a hazardous air pollutant under this subsection.

**(c) List of source categories**

**(1) In general**

Not later than 12 months after November 15, 1990, the Administrator shall publish, and shall from time to time, but no less often than every 8 years, revise, if appropriate, in response to public comment or new information, a list of all categories and subcategories of major sources and area

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sources (listed under paragraph (3)) of the air pollutants listed pursuant to subsection (b) of this section. To the extent practicable, the categories and subcategories listed under this subsection shall be consistent with the list of source categories established pursuant to section 7411 of this title and part C of this subchapter. Nothing in the preceding sentence limits the Administrator's authority to establish subcategories under this section, as appropriate.

**(2) Requirement for emissions standards**

For the categories and subcategories the Administrator lists, the Administrator shall establish emissions standards under subsection (d) of this section, according to the schedule in this subsection and subsection (e) of this section.

**(3) Area sources**

The Administrator shall list under this subsection each category or subcategory of area sources which the Administrator finds presents a threat of adverse effects to human health or the environment (by such sources individually or in the aggregate) warranting regulation under this section. The Administrator shall, not later than 5 years after November 15, 1990, and pursuant to subsection (k)(3)(B) of this section, list, based on actual or estimated aggregate emissions of a listed pollutant or pollutants, sufficient categories or subcategories of area sources to ensure that area sources representing 90 percent of the area source emissions of the 30 hazardous air pollutants that present the greatest threat to public health in the largest number of urban areas are subject to regulation under this section. Such regulations shall be promulgated not later than 10 years after November 15, 1990.

**(4) Previously regulated categories**

The Administrator may, in the Administrator's discretion, list any category or subcategory of sources previously regulated under this section as in effect before November 15, 1990.

**(5) Additional categories**

In addition to those categories and subcategories of sources listed for regulation pursuant to paragraphs (1) and (3), the Administrator may at any time list additional categories and subcategories of sources of hazardous air pollutants according to the same criteria for listing applicable under such paragraphs. In the case of source categories and subcategories listed after publication of the initial list required under paragraph (1) or (3), emission standards under subsection (d) of this section for the category or subcategory shall be promulgated within 10 years after November 15, 1990, or within 2 years after the date on which such category or subcategory is listed, whichever is later.

**(6) Specific pollutants**

With respect to alkylated lead compounds, polycyclic organic matter, hexachlorobenzene, mercury, polychlorinated biphenyls, 2,3,7,8-tetrachlorodibenzofurans and 2,3,7,8-tetrachlorodibenzo-p-dioxin, the Administrator shall, not later than 5 years after November 15, 1990, list categories and subcategories of sources assuring that sources accounting for not less than 90 per centum of the aggregate emissions of each such pollutant are subject to standards under subsection (d)(2) or (d)(4) of this section. Such standards shall be promulgated not later than 10 years after November 15, 1990. This paragraph shall not be construed to require the Administrator to promulgate standards for such pollutants emitted by electric utility steam generating units.

**(7) Research facilities**

The Administrator shall establish a separate category covering research or laboratory facilities, as necessary to assure the equitable treatment of such facilities. For purposes of this section, "research or laboratory facility" means any stationary source whose primary purpose is to conduct research and development into new processes and products, where such source is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner.

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### **(8) Boat manufacturing**

When establishing emissions standards for styrene, the Administrator shall list boat manufacturing as a separate subcategory unless the Administrator finds that such listing would be inconsistent with the goals and requirements of this chapter.

### **(9) Deletions from the list**

(A) Where the sole reason for the inclusion of a source category on the list required under this subsection is the emission of a unique chemical substance, the Administrator shall delete the source category from the list if it is appropriate because of action taken under either subparagraphs (C) or (D) of subsection (b)(3) of this section.

(B) The Administrator may delete any source category from the list under this subsection, on petition of any person or on the Administrator's own motion, whenever the Administrator makes the following determination or determinations, as applicable:

(i) In the case of hazardous air pollutants emitted by sources in the category that may result in cancer in humans, a determination that no source in the category (or group of sources in the case of area sources) emits such hazardous air pollutants in quantities which may cause a lifetime risk of cancer greater than one in one million to the individual in the population who is most exposed to emissions of such pollutants from the source (or group of sources in the case of area sources).

(ii) In the case of hazardous air pollutants that may result in adverse health effects in humans other than cancer or adverse environmental effects, a determination that emissions from no source in the category or subcategory concerned (or group of sources in the case of area sources) exceed a level which is adequate to protect public health with an ample margin of safety and no adverse environmental effect will result from emissions from any source (or from a group of sources in the case of area sources).

The Administrator shall grant or deny a petition under this paragraph within 1 year after the petition is filed.

### **(d) Emission standards**

#### **(1) In general**

The Administrator shall promulgate regulations establishing emission standards for each category or subcategory of major sources and area sources of hazardous air pollutants listed for regulation pursuant to subsection (c) of this section in accordance with the schedules provided in subsections (c) and (e) of this section. The Administrator may distinguish among classes, types, and sizes of sources within a category or subcategory in establishing such standards except that, there shall be no delay in the compliance date for any standard applicable to any source under subsection (i) of this section as the result of the authority provided by this sentence.

#### **(2) Standards and methods**

Emissions standards promulgated under this subsection and applicable to new or existing sources of hazardous air pollutants shall require the maximum degree of reduction in emissions of the hazardous air pollutants subject to this section (including a prohibition on such emissions, where achievable) that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new or existing sources in the category or subcategory to which such emission standard applies, through application of measures, processes, methods, systems or techniques including, but not limited to, measures which—

(A) reduce the volume of, or eliminate emissions of, such pollutants through process changes, substitution of materials or other modifications,

(B) enclose systems or processes to eliminate emissions,

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(C) collect, capture or treat such pollutants when released from a process, stack, storage or fugitive emissions point,

(D) are design, equipment, work practice, or operational standards (including requirements for operator training or certification) as provided in subsection (h) of this section, or

(E) are a combination of the above.

None of the measures described in subparagraphs (A) through (D) shall, consistent with the provisions of section 7414 (c) of this title, in any way compromise any United States patent or United States trademark right, or any confidential business information, or any trade secret or any other intellectual property right.

**(3) New and existing sources**

The maximum degree of reduction in emissions that is deemed achievable for new sources in a category or subcategory shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the Administrator. Emission standards promulgated under this subsection for existing sources in a category or subcategory may be less stringent than standards for new sources in the same category or subcategory but shall not be less stringent, and may be more stringent than—

(A) the average emission limitation achieved by the best performing 12 percent of the existing sources (for which the Administrator has emissions information), excluding those sources that have, within 18 months before the emission standard is proposed or within 30 months before such standard is promulgated, whichever is later, first achieved a level of emission rate or emission reduction which complies, or would comply if the source is not subject to such standard, with the lowest achievable emission rate (as defined by section 7501 of this title) applicable to the source category and prevailing at the time, in the category or subcategory for categories and subcategories with 30 or more sources, or

(B) the average emission limitation achieved by the best performing 5 sources (for which the Administrator has or could reasonably obtain emissions information) in the category or subcategory for categories or subcategories with fewer than 30 sources.

**(4) Health threshold**

With respect to pollutants for which a health threshold has been established, the Administrator may consider such threshold level, with an ample margin of safety, when establishing emission standards under this subsection.

**(5) Alternative standard for area sources**

With respect only to categories and subcategories of area sources listed pursuant to subsection (c) of this section, the Administrator may, in lieu of the authorities provided in paragraph (2) and subsection (f) of this section, elect to promulgate standards or requirements applicable to sources in such categories or subcategories which provide for the use of generally available control technologies or management practices by such sources to reduce emissions of hazardous air pollutants.

**(6) Review and revision**

The Administrator shall review, and revise as necessary (taking into account developments in practices, processes, and control technologies), emission standards promulgated under this section no less often than every 8 years.

**(7) Other requirements preserved**

No emission standard or other requirement promulgated under this section shall be interpreted, construed or applied to diminish or replace the requirements of a more stringent emission limitation or other applicable requirement established pursuant to section 7411 of this title, part C or D of this subchapter, or other authority of this chapter or a standard issued under State authority.

**(8) Coke ovens**



NB: This unofficial compilation of the U.S. Code is current as of Jan. 4, 2012 (see <http://www.law.cornell.edu/uscode/uscprint.html>).

(A) Not later than December 31, 1992, the Administrator shall promulgate regulations establishing emission standards under paragraphs (2) and (3) of this subsection for coke oven batteries. In establishing such standards, the Administrator shall evaluate—

- (i) the use of sodium silicate (or equivalent) luting compounds to prevent door leaks, and other operating practices and technologies for their effectiveness in reducing coke oven emissions, and their suitability for use on new and existing coke oven batteries, taking into account costs and reasonable commercial door warranties; and
- (ii) as a basis for emission standards under this subsection for new coke oven batteries that begin construction after the date of proposal of such standards, the Jewell design Thompson non-recovery coke oven batteries and other non-recovery coke oven technologies, and other appropriate emission control and coke production technologies, as to their effectiveness in reducing coke oven emissions and their capability for production of steel quality coke.

Such regulations shall require at a minimum that coke oven batteries will not exceed 8 per centum leaking doors, 1 per centum leaking lids, 5 per centum leaking offtakes, and 16 seconds visible emissions per charge, with no exclusion for emissions during the period after the closing of self-sealing oven doors. Notwithstanding subsection (i) of this section, the compliance date for such emission standards for existing coke oven batteries shall be December 31, 1995.

(B) The Administrator shall promulgate work practice regulations under this subsection for coke oven batteries requiring, as appropriate—

- (i) the use of sodium silicate (or equivalent) luting compounds, if the Administrator determines that use of sodium silicate is an effective means of emissions control and is achievable, taking into account costs and reasonable commercial warranties for doors and related equipment; and
- (ii) door and jam cleaning practices.

Notwithstanding subsection (i) of this section, the compliance date for such work practice regulations for coke oven batteries shall be not later than the date 3 years after November 15, 1990.

(C) For coke oven batteries electing to qualify for an extension of the compliance date for standards promulgated under subsection (f) of this section in accordance with subsection (i)(8) of this section, the emission standards under this subsection for coke oven batteries shall require that coke oven batteries not exceed 8 per centum leaking doors, 1 per centum leaking lids, 5 per centum leaking offtakes, and 16 seconds visible emissions per charge, with no exclusion for emissions during the period after the closing of self-sealing doors. Notwithstanding subsection (i) of this section, the compliance date for such emission standards for existing coke oven batteries seeking an extension shall be not later than the date 3 years after November 15, 1990.

#### **(9) Sources licensed by the Nuclear Regulatory Commission**

No standard for radionuclide emissions from any category or subcategory of facilities licensed by the Nuclear Regulatory Commission (or an Agreement State) is required to be promulgated under this section if the Administrator determines, by rule, and after consultation with the Nuclear Regulatory Commission, that the regulatory program established by the Nuclear Regulatory Commission pursuant to the Atomic Energy Act [42 U.S.C. 2011 et seq.] for such category or subcategory provides an ample margin of safety to protect the public health. Nothing in this subsection shall preclude or deny the right of any State or political subdivision thereof to adopt or enforce any standard or limitation respecting emissions of radionuclides which is more stringent than the standard or limitation in effect under section 7411 of this title or this section.

#### **(10) Effective date**

NB: This unofficial compilation of the U.S. Code is current as of Jan. 4, 2012 (see <http://www.law.cornell.edu/uscode/uscpri.html>).

Emission standards or other regulations promulgated under this subsection shall be effective upon promulgation.

**(e) Schedule for standards and review**

**(1) In general**

The Administrator shall promulgate regulations establishing emission standards for categories and subcategories of sources initially listed for regulation pursuant to subsection (c)(1) of this section as expeditiously as practicable, assuring that—

- (A) emission standards for not less than 40 categories and subcategories (not counting coke oven batteries) shall be promulgated not later than 2 years after November 15, 1990;
- (B) emission standards for coke oven batteries shall be promulgated not later than December 31, 1992;
- (C) emission standards for 25 per centum of the listed categories and subcategories shall be promulgated not later than 4 years after November 15, 1990;
- (D) emission standards for an additional 25 per centum of the listed categories and subcategories shall be promulgated not later than 7 years after November 15, 1990; and
- (E) emission standards for all categories and subcategories shall be promulgated not later than 10 years after November 15, 1990.

**(2) Priorities**

In determining priorities for promulgating standards under subsection (d) of this section, the Administrator shall consider—

- (A) the known or anticipated adverse effects of such pollutants on public health and the environment;
- (B) the quantity and location of emissions or reasonably anticipated emissions of hazardous air pollutants that each category or subcategory will emit; and
- (C) the efficiency of grouping categories or subcategories according to the pollutants emitted, or the processes or technologies used.

**(3) Published schedule**

Not later than 24 months after November 15, 1990, and after opportunity for comment, the Administrator shall publish a schedule establishing a date for the promulgation of emission standards for each category and subcategory of sources listed pursuant to subsection (c)(1) and (3) of this section which shall be consistent with the requirements of paragraphs (1) and (2). The determination of priorities for the promulgation of standards pursuant to this paragraph is not a rulemaking and shall not be subject to judicial review, except that, failure to promulgate any standard pursuant to the schedule established by this paragraph shall be subject to review under section 7604 of this title.

**(4) Judicial review**

Notwithstanding section 7607 of this title, no action of the Administrator adding a pollutant to the list under subsection (b) of this section or listing a source category or subcategory under subsection (c) of this section shall be a final agency action subject to judicial review, except that any such action may be reviewed under such section 7607 of this title when the Administrator issues emission standards for such pollutant or category.

**(5) Publicly owned treatment works**

The Administrator shall promulgate standards pursuant to subsection (d) of this section applicable to publicly owned treatment works (as defined in title II of the Federal Water Pollution Control Act [33 U.S.C. 1281 et seq.]) not later than 5 years after November 15, 1990.

**(f) Standard to protect health and environment**

**(1) Report**



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Not later than 6 years after November 15, 1990, the Administrator shall investigate and report, after consultation with the Surgeon General and after opportunity for public comment, to Congress on—

- (A) methods of calculating the risk to public health remaining, or likely to remain, from sources subject to regulation under this section after the application of standards under subsection (d) of this section;
- (B) the public health significance of such estimated remaining risk and the technologically and commercially available methods and costs of reducing such risks;
- (C) the actual health effects with respect to persons living in the vicinity of sources, any available epidemiological or other health studies, risks presented by background concentrations of hazardous air pollutants, any uncertainties in risk assessment methodology or other health assessment technique, and any negative health or environmental consequences to the community of efforts to reduce such risks; and
- (D) recommendations as to legislation regarding such remaining risk.

**(2) Emission standards**

(A) If Congress does not act on any recommendation submitted under paragraph (1), the Administrator shall, within 8 years after promulgation of standards for each category or subcategory of sources pursuant to subsection (d) of this section, promulgate standards for such category or subcategory if promulgation of such standards is required in order to provide an ample margin of safety to protect public health in accordance with this section (as in effect before November 15, 1990) or to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect. Emission standards promulgated under this subsection shall provide an ample margin of safety to protect public health in accordance with this section (as in effect before November 15, 1990), unless the Administrator determines that a more stringent standard is necessary to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect. If standards promulgated pursuant to subsection (d) of this section and applicable to a category or subcategory of sources emitting a pollutant (or pollutants) classified as a known, probable or possible human carcinogen do not reduce lifetime excess cancer risks to the individual most exposed to emissions from a source in the category or subcategory to less than one in one million, the Administrator shall promulgate standards under this subsection for such source category.

(B) Nothing in subparagraph (A) or in any other provision of this section shall be construed as affecting, or applying to the Administrator's interpretation of this section, as in effect before November 15, 1990, and set forth in the Federal Register of September 14, 1989 (54 Federal Register 38044).

(C) The Administrator shall determine whether or not to promulgate such standards and, if the Administrator decides to promulgate such standards, shall promulgate the standards 8 years after promulgation of the standards under subsection (d) of this section for each source category or subcategory concerned. In the case of categories or subcategories for which standards under subsection (d) of this section are required to be promulgated within 2 years after November 15, 1990, the Administrator shall have 9 years after promulgation of the standards under subsection (d) of this section to make the determination under the preceding sentence and, if required, to promulgate the standards under this paragraph.

**(3) Effective date**

Any emission standard established pursuant to this subsection shall become effective upon promulgation.

**(4) Prohibition**

No air pollutant to which a standard under this subsection applies may be emitted from any stationary source in violation of such standard, except that in the case of an existing source—

- (A) such standard shall not apply until 90 days after its effective date, and

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(B) the Administrator may grant a waiver permitting such source a period of up to 2 years after the effective date of a standard to comply with the standard if the Administrator finds that such period is necessary for the installation of controls and that steps will be taken during the period of the waiver to assure that the health of persons will be protected from imminent endangerment.

**(5) Area sources**

The Administrator shall not be required to conduct any review under this subsection or promulgate emission limitations under this subsection for any category or subcategory of area sources that is listed pursuant to subsection (c)(3) of this section and for which an emission standard is promulgated pursuant to subsection (d)(5) of this section.

**(6) Unique chemical substances**

In establishing standards for the control of unique chemical substances of listed pollutants without CAS numbers under this subsection, the Administrator shall establish such standards with respect to the health and environmental effects of the substances actually emitted by sources and direct transformation byproducts of such emissions in the categories and subcategories.

**(g) Modifications**

**(1) Offsets**

(A) A physical change in, or change in the method of operation of, a major source which results in a greater than de minimis increase in actual emissions of a hazardous air pollutant shall not be considered a modification, if such increase in the quantity of actual emissions of any hazardous air pollutant from such source will be offset by an equal or greater decrease in the quantity of emissions of another hazardous air pollutant (or pollutants) from such source which is deemed more hazardous, pursuant to guidance issued by the Administrator under subparagraph (B). The owner or operator of such source shall submit a showing to the Administrator (or the State) that such increase has been offset under the preceding sentence.

(B) The Administrator shall, after notice and opportunity for comment and not later than 18 months after November 15, 1990, publish guidance with respect to implementation of this subsection. Such guidance shall include an identification, to the extent practicable, of the relative hazard to human health resulting from emissions to the ambient air of each of the pollutants listed under subsection (b) of this section sufficient to facilitate the offset showing authorized by subparagraph (A). Such guidance shall not authorize offsets between pollutants where the increased pollutant (or more than one pollutant in a stream of pollutants) causes adverse effects to human health for which no safety threshold for exposure can be determined unless there are corresponding decreases in such types of pollutant(s).

**(2) Construction, reconstruction and modifications**

(A) After the effective date of a permit program under subchapter V of this chapter in any State, no person may modify a major source of hazardous air pollutants in such State, unless the Administrator (or the State) determines that the maximum achievable control technology emission limitation under this section for existing sources will be met. Such determination shall be made on a case-by-case basis where no applicable emissions limitations have been established by the Administrator.

(B) After the effective date of a permit program under subchapter V of this chapter in any State, no person may construct or reconstruct any major source of hazardous air pollutants, unless the Administrator (or the State) determines that the maximum achievable control technology emission limitation under this section for new sources will be met. Such determination shall be made on a case-by-case basis where no applicable emission limitations have been established by the Administrator.

**(3) Procedures for modifications**

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The Administrator (or the State) shall establish reasonable procedures for assuring that the requirements applying to modifications under this section are reflected in the permit.

**(h) Work practice standards and other requirements**

**(1) In general**

For purposes of this section, if it is not feasible in the judgment of the Administrator to prescribe or enforce an emission standard for control of a hazardous air pollutant or pollutants, the Administrator may, in lieu thereof, promulgate a design, equipment, work practice, or operational standard, or combination thereof, which in the Administrator's judgment is consistent with the provisions of subsection (d) or (f) of this section. In the event the Administrator promulgates a design or equipment standard under this subsection, the Administrator shall include as part of such standard such requirements as will assure the proper operation and maintenance of any such element of design or equipment.

**(2) Definition**

For the purpose of this subsection, the phrase "not feasible to prescribe or enforce an emission standard" means any situation in which the Administrator determines that—

(A) a hazardous air pollutant or pollutants cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant, or that any requirement for, or use of, such a conveyance would be inconsistent with any Federal, State or local law, or

(B) the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations.

**(3) Alternative standard**

If after notice and opportunity for comment, the owner or operator of any source establishes to the satisfaction of the Administrator that an alternative means of emission limitation will achieve a reduction in emissions of any air pollutant at least equivalent to the reduction in emissions of such pollutant achieved under the requirements of paragraph (1), the Administrator shall permit the use of such alternative by the source for purposes of compliance with this section with respect to such pollutant.

**(4) Numerical standard required**

Any standard promulgated under paragraph (1) shall be promulgated in terms of an emission standard whenever it is feasible to promulgate and enforce a standard in such terms.

**(i) Schedule for compliance**

**(1) Preconstruction and operating requirements**

After the effective date of any emission standard, limitation, or regulation under subsection (d), (f) or (h) of this section, no person may construct any new major source or reconstruct any existing major source subject to such emission standard, regulation or limitation unless the Administrator (or a State with a permit program approved under subchapter V of this chapter) determines that such source, if properly constructed, reconstructed and operated, will comply with the standard, regulation or limitation.

**(2) Special rule**

Notwithstanding the requirements of paragraph (1), a new source which commences construction or reconstruction after a standard, limitation or regulation applicable to such source is proposed and before such standard, limitation or regulation is promulgated shall not be required to comply with such promulgated standard until the date 3 years after the date of promulgation if—

(A) the promulgated standard, limitation or regulation is more stringent than the standard, limitation or regulation proposed; and

(B) the source complies with the standard, limitation, or regulation as proposed during the 3-year period immediately after promulgation.

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**(3) Compliance schedule for existing sources**

(A) After the effective date of any emissions standard, limitation or regulation promulgated under this section and applicable to a source, no person may operate such source in violation of such standard, limitation or regulation except, in the case of an existing source, the Administrator shall establish a compliance date or dates for each category or subcategory of existing sources, which shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the effective date of such standard, except as provided in subparagraph (B) and paragraphs (4) through (8).

(B) The Administrator (or a State with a program approved under subchapter V of this chapter) may issue a permit that grants an extension permitting an existing source up to 1 additional year to comply with standards under subsection (d) of this section if such additional period is necessary for the installation of controls. An additional extension of up to 3 years may be added for mining waste operations, if the 4-year compliance time is insufficient to dry and cover mining waste in order to reduce emissions of any pollutant listed under subsection (b) of this section.

**(4) Presidential exemption**

The President may exempt any stationary source from compliance with any standard or limitation under this section for a period of not more than 2 years if the President determines that the technology to implement such standard is not available and that it is in the national security interests of the United States to do so. An exemption under this paragraph may be extended for 1 or more additional periods, each period not to exceed 2 years. The President shall report to Congress with respect to each exemption (or extension thereof) made under this paragraph.

**(5) Early reduction**

(A) The Administrator (or a State acting pursuant to a permit program approved under subchapter V of this chapter) shall issue a permit allowing an existing source, for which the owner or operator demonstrates that the source has achieved a reduction of 90 per centum or more in emissions of hazardous air pollutants (95 per centum in the case of hazardous air pollutants which are particulates) from the source, to meet an alternative emission limitation reflecting such reduction in lieu of an emission limitation promulgated under subsection (d) of this section for a period of 6 years from the compliance date for the otherwise applicable standard, provided that such reduction is achieved before the otherwise applicable standard under subsection (d) of this section is first proposed. Nothing in this paragraph shall preclude a State from requiring reductions in excess of those specified in this subparagraph as a condition of granting the extension authorized by the previous sentence.

(B) An existing source which achieves the reduction referred to in subparagraph (A) after the proposal of an applicable standard but before January 1, 1994, may qualify under subparagraph (A), if the source makes an enforceable commitment to achieve such reduction before the proposal of the standard. Such commitment shall be enforceable to the same extent as a regulation under this section.

(C) The reduction shall be determined with respect to verifiable and actual emissions in a base year not earlier than calendar year 1987, provided that, there is no evidence that emissions in the base year are artificially or substantially greater than emissions in other years prior to implementation of emissions reduction measures. The Administrator may allow a source to use a baseline year of 1985 or 1986 provided that the source can demonstrate to the satisfaction of the Administrator that emissions data for the source reflects verifiable data based on information for such source, received by the Administrator prior to November 15, 1990, pursuant to an information request issued under section 7414 of this title.

(D) For each source granted an alternative emission limitation under this paragraph there shall be established by a permit issued pursuant to subchapter V of this chapter an enforceable emission limitation for hazardous air pollutants reflecting the reduction which qualifies the

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source for an alternative emission limitation under this paragraph. An alternative emission limitation under this paragraph shall not be available with respect to standards or requirements promulgated pursuant to subsection (f) of this section and the Administrator shall, for the purpose of determining whether a standard under subsection (f) of this section is necessary, review emissions from sources granted an alternative emission limitation under this paragraph at the same time that other sources in the category or subcategory are reviewed.

(E) With respect to pollutants for which high risks of adverse public health effects may be associated with exposure to small quantities including, but not limited to, chlorinated dioxins and furans, the Administrator shall by regulation limit the use of offsetting reductions in emissions of other hazardous air pollutants from the source as counting toward the 90 per centum reduction in such high-risk pollutants qualifying for an alternative emissions limitation under this paragraph.

**(6) Other reductions**

Notwithstanding the requirements of this section, no existing source that has installed—

(A) best available control technology (as defined in section 7479 (3) of this title), or

(B) technology required to meet a lowest achievable emission rate (as defined in section 7501 of this title),

prior to the promulgation of a standard under this section applicable to such source and the same pollutant (or stream of pollutants) controlled pursuant to an action described in subparagraph (A) or (B) shall be required to comply with such standard under this section until the date 5 years after the date on which such installation or reduction has been achieved, as determined by the Administrator. The Administrator may issue such rules and guidance as are necessary to implement this paragraph.

**(7) Extension for new sources**

A source for which construction or reconstruction is commenced after the date an emission standard applicable to such source is proposed pursuant to subsection (d) of this section but before the date an emission standard applicable to such source is proposed pursuant to subsection (f) of this section shall not be required to comply with the emission standard under subsection (f) of this section until the date 10 years after the date construction or reconstruction is commenced.

**(8) Coke ovens**

(A) Any coke oven battery that complies with the emission limitations established under subsection (d)(8)(C) of this section, subparagraph (B), and subparagraph (C), and complies with the provisions of subparagraph (E), shall not be required to achieve emission limitations promulgated under subsection (f) of this section until January 1, 2020.

(B) (i) Not later than December 31, 1992, the Administrator shall promulgate emission limitations for coke oven emissions from coke oven batteries. Notwithstanding paragraph (3) of this subsection, the compliance date for such emission limitations for existing coke oven batteries shall be January 1, 1998. Such emission limitations shall reflect the lowest achievable emission rate as defined in section 7501 of this title for a coke oven battery that is rebuilt or a replacement at a coke oven plant for an existing battery. Such emission limitations shall be no less stringent than—

(I) 3 per centum leaking doors (5 per centum leaking doors for six meter batteries);

(II) 1 per centum leaking lids;

(III) 4 per centum leaking oftakes; and

(IV) 16 seconds visible emissions per charge,

with an exclusion for emissions during the period after the closing of self-sealing oven doors (or the total mass emissions equivalent). The rulemaking in which such emission limitations are promulgated shall also establish an appropriate measurement methodology for determining compliance with such emission limitations, and shall establish such



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emission limitations in terms of an equivalent level of mass emissions reduction from a coke oven battery, unless the Administrator finds that such a mass emissions standard would not be practicable or enforceable. Such measurement methodology, to the extent it measures leaking doors, shall take into consideration alternative test methods that reflect the best technology and practices actually applied in the affected industries, and shall assure that the final test methods are consistent with the performance of such best technology and practices.

(ii) If the Administrator fails to promulgate such emission limitations under this subparagraph prior to the effective date of such emission limitations, the emission limitations applicable to coke oven batteries under this subparagraph shall be—

- (I) 3 per centum leaking doors (5 per centum leaking doors for six meter batteries);
- (II) 1 per centum leaking lids;
- (III) 4 per centum leaking offtakes; and
- (IV) 16 seconds visible emissions per charge,

or the total mass emissions equivalent (if the total mass emissions equivalent is determined to be practicable and enforceable), with no exclusion for emissions during the period after the closing of self-sealing oven doors.

(C) Not later than January 1, 2007, the Administrator shall review the emission limitations promulgated under subparagraph (B) and revise, as necessary, such emission limitations to reflect the lowest achievable emission rate as defined in section 7501 of this title at the time for a coke oven battery that is rebuilt or a replacement at a coke oven plant for an existing battery. Such emission limitations shall be no less stringent than the emission limitation promulgated under subparagraph (B). Notwithstanding paragraph (2) of this subsection, the compliance date for such emission limitations for existing coke oven batteries shall be January 1, 2010.

(D) At any time prior to January 1, 1998, the owner or operator of any coke oven battery may elect to comply with emission limitations promulgated under subsection (f) of this section by the date such emission limitations would otherwise apply to such coke oven battery, in lieu of the emission limitations and the compliance dates provided under subparagraphs (B) and (C) of this paragraph. Any such owner or operator shall be legally bound to comply with such emission limitations promulgated under subsection (f) of this section with respect to such coke oven battery as of January 1, 2003. If no such emission limitations have been promulgated for such coke oven battery, the Administrator shall promulgate such emission limitations in accordance with subsection (f) of this section for such coke oven battery.

(E) Coke oven batteries qualifying for an extension under subparagraph (A) shall make available not later than January 1, 2000, to the surrounding communities the results of any risk assessment performed by the Administrator to determine the appropriate level of any emission standard established by the Administrator pursuant to subsection (f) of this section.

(F) Notwithstanding the provisions of this section, reconstruction of any source of coke oven emissions qualifying for an extension under this paragraph shall not subject such source to emission limitations under subsection (f) of this section more stringent than those established under subparagraphs (B) and (C) until January 1, 2020. For the purposes of this subparagraph, the term “reconstruction” includes the replacement of existing coke oven battery capacity with new coke oven batteries of comparable or lower capacity and lower potential emissions.

**(j) Equivalent emission limitation by permit**

**(1) Effective date**

The requirements of this subsection shall apply in each State beginning on the effective date of a permit program established pursuant to subchapter V of this chapter in such State, but not prior to the date 42 months after November 15, 1990.

**(2) Failure to promulgate a standard**

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In the event that the Administrator fails to promulgate a standard for a category or subcategory of major sources by the date established pursuant to subsection (e)(1) and (3) of this section, and beginning 18 months after such date (but not prior to the effective date of a permit program under subchapter V of this chapter), the owner or operator of any major source in such category or subcategory shall submit a permit application under paragraph (3) and such owner or operator shall also comply with paragraphs (5) and (6).

### **(3) Applications**

By the date established by paragraph (2), the owner or operator of a major source subject to this subsection shall file an application for a permit. If the owner or operator of a source has submitted a timely and complete application for a permit required by this subsection, any failure to have a permit shall not be a violation of paragraph (2), unless the delay in final action is due to the failure of the applicant to timely submit information required or requested to process the application. The Administrator shall not later than 18 months after November 15, 1990, and after notice and opportunity for comment, establish requirements for applications under this subsection including a standard application form and criteria for determining in a timely manner the completeness of applications.

### **(4) Review and approval**

Permit applications submitted under this subsection shall be reviewed and approved or disapproved according to the provisions of section 7661d of this title. In the event that the Administrator (or the State) disapproves a permit application submitted under this subsection or determines that the application is incomplete, the applicant shall have up to 6 months to revise the application to meet the objections of the Administrator (or the State).

### **(5) Emission limitation**

The permit shall be issued pursuant to subchapter V of this chapter and shall contain emission limitations for the hazardous air pollutants subject to regulation under this section and emitted by the source that the Administrator (or the State) determines, on a case-by-case basis, to be equivalent to the limitation that would apply to such source if an emission standard had been promulgated in a timely manner under subsection (d) of this section. In the alternative, if the applicable criteria are met, the permit may contain an emissions limitation established according to the provisions of subsection (i)(5) of this section. For purposes of the preceding sentence, the reduction required by subsection (i)(5)(A) of this section shall be achieved by the date on which the relevant standard should have been promulgated under subsection (d) of this section. No such pollutant may be emitted in amounts exceeding an emission limitation contained in a permit immediately for new sources and, as expeditiously as practicable, but not later than the date 3 years after the permit is issued for existing sources or such other compliance date as would apply under subsection (i) of this section.

### **(6) Applicability of subsequent standards**

If the Administrator promulgates an emission standard that is applicable to the major source prior to the date on which a permit application is approved, the emission limitation in the permit shall reflect the promulgated standard rather than the emission limitation determined pursuant to paragraph (5), provided that the source shall have the compliance period provided under subsection (i) of this section. If the Administrator promulgates a standard under subsection (d) of this section that would be applicable to the source in lieu of the emission limitation established by permit under this subsection after the date on which the permit has been issued, the Administrator (or the State) shall revise such permit upon the next renewal to reflect the standard promulgated by the Administrator providing such source a reasonable time to comply, but no longer than 8 years after such standard is promulgated or 8 years after the date on which the source is first required to comply with the emissions limitation established by paragraph (5), whichever is earlier.

### **(k) Area source program**

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### **(1) Findings and purpose**

The Congress finds that emissions of hazardous air pollutants from area sources may individually, or in the aggregate, present significant risks to public health in urban areas. Considering the large number of persons exposed and the risks of carcinogenic and other adverse health effects from hazardous air pollutants, ambient concentrations characteristic of large urban areas should be reduced to levels substantially below those currently experienced. It is the purpose of this subsection to achieve a substantial reduction in emissions of hazardous air pollutants from area sources and an equivalent reduction in the public health risks associated with such sources including a reduction of not less than 75 per centum in the incidence of cancer attributable to emissions from such sources.

### **(2) Research program**

The Administrator shall, after consultation with State and local air pollution control officials, conduct a program of research with respect to sources of hazardous air pollutants in urban areas and shall include within such program—

- (A) ambient monitoring for a broad range of hazardous air pollutants (including, but not limited to, volatile organic compounds, metals, pesticides and products of incomplete combustion) in a representative number of urban locations;
- (B) analysis to characterize the sources of such pollution with a focus on area sources and the contribution that such sources make to public health risks from hazardous air pollutants; and
- (C) consideration of atmospheric transformation and other factors which can elevate public health risks from such pollutants.

Health effects considered under this program shall include, but not be limited to, carcinogenicity, mutagenicity, teratogenicity, neurotoxicity, reproductive dysfunction and other acute and chronic effects including the role of such pollutants as precursors of ozone or acid aerosol formation. The Administrator shall report the preliminary results of such research not later than 3 years after November 15, 1990.

### **(3) National strategy**

(A) Considering information collected pursuant to the monitoring program authorized by paragraph (2), the Administrator shall, not later than 5 years after November 15, 1990, and after notice and opportunity for public comment, prepare and transmit to the Congress a comprehensive strategy to control emissions of hazardous air pollutants from area sources in urban areas.

(B) The strategy shall—

- (i) identify not less than 30 hazardous air pollutants which, as the result of emissions from area sources, present the greatest threat to public health in the largest number of urban areas and that are or will be listed pursuant to subsection (b) of this section, and
- (ii) identify the source categories or subcategories emitting such pollutants that are or will be listed pursuant to subsection (c) of this section. When identifying categories and subcategories of sources under this subparagraph, the Administrator shall assure that sources accounting for 90 per centum or more of the aggregate emissions of each of the 30 identified hazardous air pollutants are subject to standards pursuant to subsection (d) of this section.

(C) The strategy shall include a schedule of specific actions to substantially reduce the public health risks posed by the release of hazardous air pollutants from area sources that will be implemented by the Administrator under the authority of this or other laws (including, but not limited to, the Toxic Substances Control Act [15 U.S.C. 2601 et seq.], the Federal Insecticide, Fungicide and Rodenticide Act [7 U.S.C. 136 et seq.] and the Resource Conservation and Recovery Act [42 U.S.C. 6901 et seq.]) or by the States. The strategy shall achieve a reduction in the incidence of cancer attributable to exposure to hazardous air pollutants emitted



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by stationary sources of not less than 75 per centum, considering control of emissions of hazardous air pollutants from all stationary sources and resulting from measures implemented by the Administrator or by the States under this or other laws.

(D) The strategy may also identify research needs in monitoring, analytical methodology, modeling or pollution control techniques and recommendations for changes in law that would further the goals and objectives of this subsection.

(E) Nothing in this subsection shall be interpreted to preclude or delay implementation of actions with respect to area sources of hazardous air pollutants under consideration pursuant to this or any other law and that may be promulgated before the strategy is prepared.

(F) The Administrator shall implement the strategy as expeditiously as practicable assuring that all sources are in compliance with all requirements not later than 9 years after November 15, 1990.

(G) As part of such strategy the Administrator shall provide for ambient monitoring and emissions modeling in urban areas as appropriate to demonstrate that the goals and objectives of the strategy are being met.

#### **(4) Areawide activities**

In addition to the national urban air toxics strategy authorized by paragraph (3), the Administrator shall also encourage and support areawide strategies developed by State or local air pollution control agencies that are intended to reduce risks from emissions by area sources within a particular urban area. From the funds available for grants under this section, the Administrator shall set aside not less than 10 per centum to support areawide strategies addressing hazardous air pollutants emitted by area sources and shall award such funds on a demonstration basis to those States with innovative and effective strategies. At the request of State or local air pollution control officials, the Administrator shall prepare guidelines for control technologies or management practices which may be applicable to various categories or subcategories of area sources.

#### **(5) Report**

The Administrator shall report to the Congress at intervals not later than 8 and 12 years after November 15, 1990, on actions taken under this subsection and other parts of this chapter to reduce the risk to public health posed by the release of hazardous air pollutants from area sources. The reports shall also identify specific metropolitan areas that continue to experience high risks to public health as the result of emissions from area sources.

### **(I) State programs**

#### **(1) In general**

Each State may develop and submit to the Administrator for approval a program for the implementation and enforcement (including a review of enforcement delegations previously granted) of emission standards and other requirements for air pollutants subject to this section or requirements for the prevention and mitigation of accidental releases pursuant to subsection (r) of this section. A program submitted by a State under this subsection may provide for partial or complete delegation of the Administrator's authorities and responsibilities to implement and enforce emissions standards and prevention requirements but shall not include authority to set standards less stringent than those promulgated by the Administrator under this chapter.

#### **(2) Guidance**

Not later than 12 months after November 15, 1990, the Administrator shall publish guidance that would be useful to the States in developing programs for submittal under this subsection. The guidance shall also provide for the registration of all facilities producing, processing, handling or storing any substance listed pursuant to subsection (r) of this section in amounts greater than the threshold quantity. The Administrator shall include as an element in such guidance an optional

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program begun in 1986 for the review of high-risk point sources of air pollutants including, but not limited to, hazardous air pollutants listed pursuant to subsection (b) of this section.

**(3) Technical assistance**

The Administrator shall establish and maintain an air toxics clearinghouse and center to provide technical information and assistance to State and local agencies and, on a cost recovery basis, to others on control technology, health and ecological risk assessment, risk analysis, ambient monitoring and modeling, and emissions measurement and monitoring. The Administrator shall use the authority of section 7403 of this title to examine methods for preventing, measuring, and controlling emissions and evaluating associated health and ecological risks. Where appropriate, such activity shall be conducted with not-for-profit organizations. The Administrator may conduct research on methods for preventing, measuring and controlling emissions and evaluating associated health and environment risks. All information collected under this paragraph shall be available to the public.

**(4) Grants**

Upon application of a State, the Administrator may make grants, subject to such terms and conditions as the Administrator deems appropriate, to such State for the purpose of assisting the State in developing and implementing a program for submittal and approval under this subsection. Programs assisted under this paragraph may include program elements addressing air pollutants or extremely hazardous substances other than those specifically subject to this section. Grants under this paragraph may include support for high-risk point source review as provided in paragraph (2) and support for the development and implementation of areawide area source programs pursuant to subsection (k) of this section.

**(5) Approval or disapproval**

Not later than 180 days after receiving a program submitted by a State, and after notice and opportunity for public comment, the Administrator shall either approve or disapprove such program. The Administrator shall disapprove any program submitted by a State, if the Administrator determines that—

- (A) the authorities contained in the program are not adequate to assure compliance by all sources within the State with each applicable standard, regulation or requirement established by the Administrator under this section;
- (B) adequate authority does not exist, or adequate resources are not available, to implement the program;
- (C) the schedule for implementing the program and assuring compliance by affected sources is not sufficiently expeditious; or
- (D) the program is otherwise not in compliance with the guidance issued by the Administrator under paragraph (2) or is not likely to satisfy, in whole or in part, the objectives of this chapter.

If the Administrator disapproves a State program, the Administrator shall notify the State of any revisions or modifications necessary to obtain approval. The State may revise and resubmit the proposed program for review and approval pursuant to the provisions of this subsection.

**(6) Withdrawal**

Whenever the Administrator determines, after public hearing, that a State is not administering and enforcing a program approved pursuant to this subsection in accordance with the guidance published pursuant to paragraph (2) or the requirements of paragraph (5), the Administrator shall so notify the State and, if action which will assure prompt compliance is not taken within 90 days, the Administrator shall withdraw approval of the program. The Administrator shall not withdraw approval of any program unless the State shall have been notified and the reasons for withdrawal shall have been stated in writing and made public.

**(7) Authority to enforce**

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Nothing in this subsection shall prohibit the Administrator from enforcing any applicable emission standard or requirement under this section.

**(8) Local program**

The Administrator may, after notice and opportunity for public comment, approve a program developed and submitted by a local air pollution control agency (after consultation with the State) pursuant to this subsection and any such agency implementing an approved program may take any action authorized to be taken by a State under this section.

**(9) Permit authority**

Nothing in this subsection shall affect the authorities and obligations of the Administrator or the State under subchapter V of this chapter.

**(m) Atmospheric deposition to Great Lakes and coastal waters**

**(1) Deposition assessment**

The Administrator, in cooperation with the Under Secretary of Commerce for Oceans and Atmosphere, shall conduct a program to identify and assess the extent of atmospheric deposition of hazardous air pollutants (and in the discretion of the Administrator, other air pollutants) to the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters. As part of such program, the Administrator shall—

- (A) monitor the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters, including monitoring of the Great Lakes through the monitoring network established pursuant to paragraph (2) of this subsection and designing and deploying an atmospheric monitoring network for coastal waters pursuant to paragraph (4);
- (B) investigate the sources and deposition rates of atmospheric deposition of air pollutants (and their atmospheric transformation precursors);
- (C) conduct research to develop and improve monitoring methods and to determine the relative contribution of atmospheric pollutants to total pollution loadings to the Great Lakes, the Chesapeake Bay, Lake Champlain, and coastal waters;
- (D) evaluate any adverse effects to public health or the environment caused by such deposition (including effects resulting from indirect exposure pathways) and assess the contribution of such deposition to violations of water quality standards established pursuant to the Federal Water Pollution Control Act [33 U.S.C. 1251 et seq.] and drinking water standards established pursuant to the Safe Drinking Water Act [42 U.S.C. 300f et seq.]; and
- (E) sample for such pollutants in biota, fish, and wildlife of the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters and characterize the sources of such pollutants.

**(2) Great Lakes monitoring network**

The Administrator shall oversee, in accordance with Annex 15 of the Great Lakes Water Quality Agreement, the establishment and operation of a Great Lakes atmospheric deposition network to monitor atmospheric deposition of hazardous air pollutants (and in the Administrator's discretion, other air pollutants) to the Great Lakes.

- (A) As part of the network provided for in this paragraph, and not later than December 31, 1991, the Administrator shall establish in each of the 5 Great Lakes at least 1 facility capable of monitoring the atmospheric deposition of hazardous air pollutants in both dry and wet conditions.
- (B) The Administrator shall use the data provided by the network to identify and track the movement of hazardous air pollutants through the Great Lakes, to determine the portion of water pollution loadings attributable to atmospheric deposition of such pollutants, and to support development of remedial action plans and other management plans as required by the Great Lakes Water Quality Agreement.

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(C) The Administrator shall assure that the data collected by the Great Lakes atmospheric deposition monitoring network is in a format compatible with databases sponsored by the International Joint Commission, Canada, and the several States of the Great Lakes region.

**(3) Monitoring for the Chesapeake Bay and Lake Champlain**

The Administrator shall establish at the Chesapeake Bay and Lake Champlain atmospheric deposition stations to monitor deposition of hazardous air pollutants (and in the Administrator's discretion, other air pollutants) within the Chesapeake Bay and Lake Champlain watersheds. The Administrator shall determine the role of air deposition in the pollutant loadings of the Chesapeake Bay and Lake Champlain, investigate the sources of air pollutants deposited in the watersheds, evaluate the health and environmental effects of such pollutant loadings, and shall sample such pollutants in biota, fish and wildlife within the watersheds, as necessary to characterize such effects.

**(4) Monitoring for coastal waters**

The Administrator shall design and deploy atmospheric deposition monitoring networks for coastal waters and their watersheds and shall make any information collected through such networks available to the public. As part of this effort, the Administrator shall conduct research to develop and improve deposition monitoring methods, and to determine the relative contribution of atmospheric pollutants to pollutant loadings. For purposes of this subsection, "coastal waters" shall mean estuaries selected pursuant to section 320(a)(2)(A) of the Federal Water Pollution Control Act [33 U.S.C. 1330 (a)(2)(A)] or listed pursuant to section 320(a)(2)(B) of such Act [33 U.S.C. 1330 (a)(2)(B)] or estuarine research reserves designated pursuant to section 1461 of title 16.

**(5) Report**

Within 3 years of November 15, 1990, and biennially thereafter, the Administrator, in cooperation with the Under Secretary of Commerce for Oceans and Atmosphere, shall submit to the Congress a report on the results of any monitoring, studies, and investigations conducted pursuant to this subsection. Such report shall include, at a minimum, an assessment of—

(A) the contribution of atmospheric deposition to pollution loadings in the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters;

(B) the environmental and public health effects of any pollution which is attributable to atmospheric deposition to the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters;

(C) the source or sources of any pollution to the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters which is attributable to atmospheric deposition;

(D) whether pollution loadings in the Great Lakes, the Chesapeake Bay, Lake Champlain or coastal waters cause or contribute to exceedances of drinking water standards pursuant to the Safe Drinking Water Act [42 U.S.C. 300f et seq.] or water quality standards pursuant to the Federal Water Pollution Control Act [33 U.S.C. 1251 et seq.] or, with respect to the Great Lakes, exceedances of the specific objectives of the Great Lakes Water Quality Agreement; and

(E) a description of any revisions of the requirements, standards, and limitations pursuant to this chapter and other applicable Federal laws as are necessary to assure protection of human health and the environment.

**(6) Additional regulation**

As part of the report to Congress, the Administrator shall determine whether the other provisions of this section are adequate to prevent serious adverse effects to public health and serious or widespread environmental effects, including such effects resulting from indirect exposure pathways, associated with atmospheric deposition to the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters of hazardous air pollutants (and their atmospheric transformation

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products). The Administrator shall take into consideration the tendency of such pollutants to bioaccumulate. Within 5 years after November 15, 1990, the Administrator shall, based on such report and determination, promulgate, in accordance with this section, such further emission standards or control measures as may be necessary and appropriate to prevent such effects, including effects due to bioaccumulation and indirect exposure pathways. Any requirements promulgated pursuant to this paragraph with respect to coastal waters shall only apply to the coastal waters of the States which are subject to section 7627 (a) of this title.

**(n) Other provisions**

**(1) Electric utility steam generating units**

**(A)** The Administrator shall perform a study of the hazards to public health reasonably anticipated to occur as a result of emissions by electric utility steam generating units of pollutants listed under subsection (b) of this section after imposition of the requirements of this chapter. The Administrator shall report the results of this study to the Congress within 3 years after November 15, 1990. The Administrator shall develop and describe in the Administrator's report to Congress alternative control strategies for emissions which may warrant regulation under this section. The Administrator shall regulate electric utility steam generating units under this section, if the Administrator finds such regulation is appropriate and necessary after considering the results of the study required by this subparagraph.

**(B)** The Administrator shall conduct, and transmit to the Congress not later than 4 years after November 15, 1990, a study of mercury emissions from electric utility steam generating units, municipal waste combustion units, and other sources, including area sources. Such study shall consider the rate and mass of such emissions, the health and environmental effects of such emissions, technologies which are available to control such emissions, and the costs of such technologies.

**(C)** The National Institute of Environmental Health Sciences shall conduct, and transmit to the Congress not later than 3 years after November 15, 1990, a study to determine the threshold level of mercury exposure below which adverse human health effects are not expected to occur. Such study shall include a threshold for mercury concentrations in the tissue of fish which may be consumed (including consumption by sensitive populations) without adverse effects to public health.

**(2) Coke oven production technology study**

**(A)** The Secretary of the Department of Energy and the Administrator shall jointly undertake a 6-year study to assess coke oven production emission control technologies and to assist in the development and commercialization of technically practicable and economically viable control technologies which have the potential to significantly reduce emissions of hazardous air pollutants from coke oven production facilities. In identifying control technologies, the Secretary and the Administrator shall consider the range of existing coke oven operations and battery design and the availability of sources of materials for such coke ovens as well as alternatives to existing coke oven production design.

**(B)** The Secretary and the Administrator are authorized to enter into agreements with persons who propose to develop, install and operate coke production emission control technologies which have the potential for significant emissions reductions of hazardous air pollutants provided that Federal funds shall not exceed 50 per centum of the cost of any project assisted pursuant to this paragraph.

**(C)** On completion of the study, the Secretary shall submit to Congress a report on the results of the study and shall make recommendations to the Administrator identifying practicable and economically viable control technologies for coke oven production facilities to reduce residual risks remaining after implementation of the standard under subsection (d) of this section.

**(D)** There are authorized to be appropriated \$5,000,000 for each of the fiscal years 1992 through 1997 to carry out the program authorized by this paragraph.



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### **(3) Publicly owned treatment works**

The Administrator may conduct, in cooperation with the owners and operators of publicly owned treatment works, studies to characterize emissions of hazardous air pollutants emitted by such facilities, to identify industrial, commercial and residential discharges that contribute to such emissions and to demonstrate control measures for such emissions. When promulgating any standard under this section applicable to publicly owned treatment works, the Administrator may provide for control measures that include pretreatment of discharges causing emissions of hazardous air pollutants and process or product substitutions or limitations that may be effective in reducing such emissions. The Administrator may prescribe uniform sampling, modeling and risk assessment methods for use in implementing this subsection.

### **(4) Oil and gas wells; pipeline facilities**

(A) Notwithstanding the provisions of subsection (a) of this section, emissions from any oil or gas exploration or production well (with its associated equipment) and emissions from any pipeline compressor or pump station shall not be aggregated with emissions from other similar units, whether or not such units are in a contiguous area or under common control, to determine whether such units or stations are major sources, and in the case of any oil or gas exploration or production well (with its associated equipment), such emissions shall not be aggregated for any purpose under this section.

(B) The Administrator shall not list oil and gas production wells (with its associated equipment) as an area source category under subsection (c) of this section, except that the Administrator may establish an area source category for oil and gas production wells located in any metropolitan statistical area or consolidated metropolitan statistical area with a population in excess of 1 million, if the Administrator determines that emissions of hazardous air pollutants from such wells present more than a negligible risk of adverse effects to public health.

### **(5) Hydrogen sulfide**

The Administrator is directed to assess the hazards to public health and the environment resulting from the emission of hydrogen sulfide associated with the extraction of oil and natural gas resources. To the extent practicable, the assessment shall build upon and not duplicate work conducted for an assessment pursuant to section 8002(m) of the Solid Waste Disposal Act [42 U.S.C. 6982 (m)] and shall reflect consultation with the States. The assessment shall include a review of existing State and industry control standards, techniques and enforcement. The Administrator shall report to the Congress within 24 months after November 15, 1990, with the findings of such assessment, together with any recommendations, and shall, as appropriate, develop and implement a control strategy for emissions of hydrogen sulfide to protect human health and the environment, based on the findings of such assessment, using authorities under this chapter including sections <sup>3</sup> 7411 of this title and this section.

### **(6) Hydrofluoric acid**

Not later than 2 years after November 15, 1990, the Administrator shall, for those regions of the country which do not have comprehensive health and safety regulations with respect to hydrofluoric acid, complete a study of the potential hazards of hydrofluoric acid and the uses of hydrofluoric acid in industrial and commercial applications to public health and the environment considering a range of events including worst-case accidental releases and shall make recommendations to the Congress for the reduction of such hazards, if appropriate.

### **(7) RCRA facilities**

In the case of any category or subcategory of sources the air emissions of which are regulated under subtitle C of the Solid Waste Disposal Act [42 U.S.C. 6921 et seq.], the Administrator shall take into account any regulations of such emissions which are promulgated under such subtitle and

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shall, to the maximum extent practicable and consistent with the provisions of this section, ensure that the requirements of such subtitle and this section are consistent.

**(o) National Academy of Sciences study**

**(1) Request of the Academy**

Within 3 months of November 15, 1990, the Administrator shall enter into appropriate arrangements with the National Academy of Sciences to conduct a review of—

(A) risk assessment methodology used by the Environmental Protection Agency to determine the carcinogenic risk associated with exposure to hazardous air pollutants from source categories and subcategories subject to the requirements of this section; and

(B) improvements in such methodology.

**(2) Elements to be studied**

In conducting such review, the National Academy of Sciences should consider, but not be limited to, the following—

(A) the techniques used for estimating and describing the carcinogenic potency to humans of hazardous air pollutants; and

(B) the techniques used for estimating exposure to hazardous air pollutants (for hypothetical and actual maximally exposed individuals as well as other exposed individuals).

**(3) Other health effects of concern**

To the extent practicable, the Academy shall evaluate and report on the methodology for assessing the risk of adverse human health effects other than cancer for which safe thresholds of exposure may not exist, including, but not limited to, inheritable genetic mutations, birth defects, and reproductive dysfunctions.

**(4) Report**

A report on the results of such review shall be submitted to the Senate Committee on Environment and Public Works, the House Committee on Energy and Commerce, the Risk Assessment and Management Commission established by section 303 of the Clean Air Act Amendments of 1990 and the Administrator not later than 30 months after November 15, 1990.

**(5) Assistance**

The Administrator shall assist the Academy in gathering any information the Academy deems necessary to carry out this subsection. The Administrator may use any authority under this chapter to obtain information from any person, and to require any person to conduct tests, keep and produce records, and make reports respecting research or other activities conducted by such person as necessary to carry out this subsection.

**(6) Authorization**

Of the funds authorized to be appropriated to the Administrator by this chapter, such amounts as are required shall be available to carry out this subsection.

**(7) Guidelines for carcinogenic risk assessment**

The Administrator shall consider, but need not adopt, the recommendations contained in the report of the National Academy of Sciences prepared pursuant to this subsection and the views of the Science Advisory Board, with respect to such report. Prior to the promulgation of any standard under subsection (f) of this section, and after notice and opportunity for comment, the Administrator shall publish revised Guidelines for Carcinogenic Risk Assessment or a detailed explanation of the reasons that any recommendations contained in the report of the National Academy of Sciences will not be implemented. The publication of such revised Guidelines shall be a final Agency action for purposes of section 7607 of this title.

**(p) Mickey Leland National Urban Air Toxics Research Center**

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**(1) Establishment**

The Administrator shall oversee the establishment of a National Urban Air Toxics Research Center, to be located at a university, a hospital, or other facility capable of undertaking and maintaining similar research capabilities in the areas of epidemiology, oncology, toxicology, pulmonary medicine, pathology, and biostatistics. The center shall be known as the Mickey Leland National Urban Air Toxics Research Center. The geographic site of the National Urban Air Toxics Research Center should be further directed to Harris County, Texas, in order to take full advantage of the well developed scientific community presence on-site at the Texas Medical Center as well as the extensive data previously compiled for the comprehensive monitoring system currently in place.

**(2) Board of Directors**

The National Urban Air Toxics Research Center shall be governed by a Board of Directors to be comprised of 9 members, the appointment of which shall be allocated pro rata among the Speaker of the House, the Majority Leader of the Senate and the President. The members of the Board of Directors shall be selected based on their respective academic and professional backgrounds and expertise in matters relating to public health, environmental pollution and industrial hygiene. The duties of the Board of Directors shall be to determine policy and research guidelines, submit views from center sponsors and the public and issue periodic reports of center findings and activities.

**(3) Scientific Advisory Panel**

The Board of Directors shall be advised by a Scientific Advisory Panel, the 13 members of which shall be appointed by the Board, and to include eminent members of the scientific and medical communities. The Panel membership may include scientists with relevant experience from the National Institute of Environmental Health Sciences, the Center for Disease Control, the Environmental Protection Agency, the National Cancer Institute, and others, and the Panel shall conduct peer review and evaluate research results. The Panel shall assist the Board in developing the research agenda, reviewing proposals and applications, and advise on the awarding of research grants.

**(4) Funding**

The center shall be established and funded with both Federal and private source funds.

**(q) Savings provision****(1) Standards previously promulgated**

Any standard under this section in effect before the date of enactment of the Clean Air Act Amendments of 1990 [November 15, 1990] shall remain in force and effect after such date unless modified as provided in this section before the date of enactment of such Amendments or under such Amendments. Except as provided in paragraph (4), any standard under this section which has been promulgated, but has not taken effect, before such date shall not be affected by such Amendments unless modified as provided in this section before such date or under such Amendments. Each such standard shall be reviewed and, if appropriate, revised, to comply with the requirements of subsection (d) of this section within 10 years after the date of enactment of the Clean Air Act Amendments of 1990. If a timely petition for review of any such standard under section 7607 of this title is pending on such date of enactment, the standard shall be upheld if it complies with this section as in effect before that date. If any such standard is remanded to the Administrator, the Administrator may in the Administrator's discretion apply either the requirements of this section, or those of this section as in effect before the date of enactment of the Clean Air Act Amendments of 1990.

**(2) Special rule**

Notwithstanding paragraph (1), no standard shall be established under this section, as amended by the Clean Air Act Amendments of 1990, for radionuclide emissions from



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- (A) elemental phosphorous plants,
- (B) grate calcination elemental phosphorous plants,
- (C) phosphogypsum stacks, or
- (D) any subcategory of the foregoing. This section, as in effect prior to the date of enactment of the Clean Air Act Amendments of 1990 [November 15, 1990], shall remain in effect for radionuclide emissions from such plants and stacks.

**(3) Other categories**

Notwithstanding paragraph (1), this section, as in effect prior to the date of enactment of the Clean Air Act Amendments of 1990 [November 15, 1990], shall remain in effect for radionuclide emissions from non-Department of Energy Federal facilities that are not licensed by the Nuclear Regulatory Commission, coal-fired utility and industrial boilers, underground uranium mines, surface uranium mines, and disposal of uranium mill tailings piles, unless the Administrator, in the Administrator's discretion, applies the requirements of this section as modified by the Clean Air Act Amendments of 1990 to such sources of radionuclides.

**(4) Medical facilities**

Notwithstanding paragraph (1), no standard promulgated under this section prior to November 15, 1990, with respect to medical research or treatment facilities shall take effect for two years following November 15, 1990, unless the Administrator makes a determination pursuant to a rulemaking under subsection (d)(9) of this section. If the Administrator determines that the regulatory program established by the Nuclear Regulatory Commission for such facilities does not provide an ample margin of safety to protect public health, the requirements of this section shall fully apply to such facilities. If the Administrator determines that such regulatory program does provide an ample margin of safety to protect the public health, the Administrator is not required to promulgate a standard under this section for such facilities, as provided in subsection (d)(9) of this section.

**(r) Prevention of accidental releases**

**(1) Purpose and general duty**

It shall be the objective of the regulations and programs authorized under this subsection to prevent the accidental release and to minimize the consequences of any such release of any substance listed pursuant to paragraph (3) or any other extremely hazardous substance. The owners and operators of stationary sources producing, processing, handling or storing such substances have a general duty in the same manner and to the same extent as section 654 of title 29 to identify hazards which may result from such releases using appropriate hazard assessment techniques, to design and maintain a safe facility taking such steps as are necessary to prevent releases, and to minimize the consequences of accidental releases which do occur. For purposes of this paragraph, the provisions of section 7604 of this title shall not be available to any person or otherwise be construed to be applicable to this paragraph. Nothing in this section shall be interpreted, construed, implied or applied to create any liability or basis for suit for compensation for bodily injury or any other injury or property damages to any person which may result from accidental releases of such substances.

**(2) Definitions**

- (A) The term "accidental release" means an unanticipated emission of a regulated substance or other extremely hazardous substance into the ambient air from a stationary source.
- (B) The term "regulated substance" means a substance listed under paragraph (3).
- (C) The term "stationary source" means any buildings, structures, equipment, installations or substance emitting stationary activities
  - (i) which belong to the same industrial group,
  - (ii) which are located on one or more contiguous properties,

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(iii) which are under the control of the same person (or persons under common control), and

(iv) from which an accidental release may occur.

(D) The term “retail facility” means a stationary source at which more than one-half of the income is obtained from direct sales to end users or at which more than one-half of the fuel sold, by volume, is sold through a cylinder exchange program.

### (3) List of substances

The Administrator shall promulgate not later than 24 months after November 15, 1990, an initial list of 100 substances which, in the case of an accidental release, are known to cause or may reasonably be anticipated to cause death, injury, or serious adverse effects to human health or the environment. For purposes of promulgating such list, the Administrator shall use, but is not limited to, the list of extremely hazardous substances published under the Emergency Planning and Community Right-to-Know<sup>4</sup> Act of 1986 [42 U.S.C. 11001 et seq.], with such modifications as the Administrator deems appropriate. The initial list shall include chlorine, anhydrous ammonia, methyl chloride, ethylene oxide, vinyl chloride, methyl isocyanate, hydrogen cyanide, ammonia, hydrogen sulfide, toluene diisocyanate, phosgene, bromine, anhydrous hydrogen chloride, hydrogen fluoride, anhydrous sulfur dioxide, and sulfur trioxide. The initial list shall include at least 100 substances which pose the greatest risk of causing death, injury, or serious adverse effects to human health or the environment from accidental releases. Regulations establishing the list shall include an explanation of the basis for establishing the list. The list may be revised from time to time by the Administrator on the Administrator’s own motion or by petition and shall be reviewed at least every 5 years. No air pollutant for which a national primary ambient air quality standard has been established shall be included on any such list. No substance, practice, process, or activity regulated under subchapter VI of this chapter shall be subject to regulations under this subsection. The Administrator shall establish procedures for the addition and deletion of substances from the list established under this paragraph consistent with those applicable to the list in subsection (b) of this section.

### (4) Factors to be considered

In listing substances under paragraph (3), the Administrator—

(A) shall consider—

(i) the severity of any acute adverse health effects associated with accidental releases of the substance;

(ii) the likelihood of accidental releases of the substance; and

(iii) the potential magnitude of human exposure to accidental releases of the substance; and

(B) shall not list a flammable substance when used as a fuel or held for sale as a fuel at a retail facility under this subsection solely because of the explosive or flammable properties of the substance, unless a fire or explosion caused by the substance will result in acute adverse health effects from human exposure to the substance, including the unburned fuel or its combustion byproducts, other than those caused by the heat of the fire or impact of the explosion.

### (5) Threshold quantity

At the time any substance is listed pursuant to paragraph (3), the Administrator shall establish by rule, a threshold quantity for the substance, taking into account the toxicity, reactivity, volatility, dispersibility, combustibility, or flammability of the substance and the amount of the substance which, as a result of an accidental release, is known to cause or may reasonably be anticipated to cause death, injury or serious adverse effects to human health for which the substance was listed. The Administrator is authorized to establish a greater threshold quantity for, or to exempt entirely, any substance that is a nutrient used in agriculture when held by a farmer.

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**(6) Chemical Safety Board**

**(A)** There is hereby established an independent safety board to be known as the Chemical Safety and Hazard Investigation Board.

**(B)** The Board shall consist of 5 members, including a Chairperson, who shall be appointed by the President, by and with the advice and consent of the Senate. Members of the Board shall be appointed on the basis of technical qualification, professional standing, and demonstrated knowledge in the fields of accident reconstruction, safety engineering, human factors, toxicology, or air pollution regulation. The terms of office of members of the Board shall be 5 years. Any member of the Board, including the Chairperson, may be removed for inefficiency, neglect of duty, or malfeasance in office. The Chairperson shall be the Chief Executive Officer of the Board and shall exercise the executive and administrative functions of the Board.

**(C)** The Board shall—

**(i)** investigate (or cause to be investigated), determine and report to the public in writing the facts, conditions, and circumstances and the cause or probable cause of any accidental release resulting in a fatality, serious injury or substantial property damages;

**(ii)** issue periodic reports to the Congress, Federal, State and local agencies, including the Environmental Protection Agency and the Occupational Safety and Health Administration, concerned with the safety of chemical production, processing, handling and storage, and other interested persons recommending measures to reduce the likelihood or the consequences of accidental releases and proposing corrective steps to make chemical production, processing, handling and storage as safe and free from risk of injury as is possible and may include in such reports proposed rules or orders which should be issued by the Administrator under the authority of this section or the Secretary of Labor under the Occupational Safety and Health Act [29 U.S.C. 651 et seq.] to prevent or minimize the consequences of any release of substances that may cause death, injury or other serious adverse effects on human health or substantial property damage as the result of an accidental release; and

**(iii)** establish by regulation requirements binding on persons for reporting accidental releases into the ambient air subject to the Board's investigatory jurisdiction. Reporting releases to the National Response Center, in lieu of the Board directly, shall satisfy such regulations. The National Response Center shall promptly notify the Board of any releases which are within the Board's jurisdiction.

**(D)** The Board may utilize the expertise and experience of other agencies.

**(E)** The Board shall coordinate its activities with investigations and studies conducted by other agencies of the United States having a responsibility to protect public health and safety. The Board shall enter into a memorandum of understanding with the National Transportation Safety Board to assure coordination of functions and to limit duplication of activities which shall designate the National Transportation Safety Board as the lead agency for the investigation of releases which are transportation related. The Board shall not be authorized to investigate marine oil spills, which the National Transportation Safety Board is authorized to investigate. The Board shall enter into a memorandum of understanding with the Occupational Safety and Health Administration so as to limit duplication of activities. In no event shall the Board forego an investigation where an accidental release causes a fatality or serious injury among the general public, or had the potential to cause substantial property damage or a number of deaths or injuries among the general public.

**(F)** The Board is authorized to conduct research and studies with respect to the potential for accidental releases, whether or not an accidental release has occurred, where there is evidence which indicates the presence of a potential hazard or hazards. To the extent practicable, the Board shall conduct such studies in cooperation with other Federal agencies having emergency

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response authorities, State and local governmental agencies and associations and organizations from the industrial, commercial, and nonprofit sectors.

**(G)** No part of the conclusions, findings, or recommendations of the Board relating to any accidental release or the investigation thereof shall be admitted as evidence or used in any action or suit for damages arising out of any matter mentioned in such report.

**(H)** Not later than 18 months after November 15, 1990, the Board shall publish a report accompanied by recommendations to the Administrator on the use of hazard assessments in preventing the occurrence and minimizing the consequences of accidental releases of extremely hazardous substances. The recommendations shall include a list of extremely hazardous substances which are not regulated substances (including threshold quantities for such substances) and categories of stationary sources for which hazard assessments would be an appropriate measure to aid in the prevention of accidental releases and to minimize the consequences of those releases that do occur. The recommendations shall also include a description of the information and analysis which would be appropriate to include in any hazard assessment. The Board shall also make recommendations with respect to the role of risk management plans as required by paragraph (8)(B) <sup>5</sup> in preventing accidental releases. The Board may from time to time review and revise its recommendations under this subparagraph.

**(I)** Whenever the Board submits a recommendation with respect to accidental releases to the Administrator, the Administrator shall respond to such recommendation formally and in writing not later than 180 days after receipt thereof. The response to the Board's recommendation by the Administrator shall indicate whether the Administrator will—

(i) initiate a rulemaking or issue such orders as are necessary to implement the recommendation in full or in part, pursuant to any timetable contained in the recommendation; <sup>6</sup>

(ii) decline to initiate a rulemaking or issue orders as recommended.

Any determination by the Administrator not to implement a recommendation of the Board or to implement a recommendation only in part, including any variation from the schedule contained in the recommendation, shall be accompanied by a statement from the Administrator setting forth the reasons for such determination.

**(J)** The Board may make recommendations with respect to accidental releases to the Secretary of Labor. Whenever the Board submits such recommendation, the Secretary shall respond to such recommendation formally and in writing not later than 180 days after receipt thereof.

The response to the Board's recommendation by the Administrator <sup>7</sup> shall indicate whether the Secretary will—

(i) initiate a rulemaking or issue such orders as are necessary to implement the recommendation in full or in part, pursuant to any timetable contained in the recommendation; <sup>6</sup>

(ii) decline to initiate a rulemaking or issue orders as recommended.

Any determination by the Secretary not to implement a recommendation or to implement a recommendation only in part, including any variation from the schedule contained in the recommendation, shall be accompanied by a statement from the Secretary setting forth the reasons for such determination.

**(K)** Within 2 years after November 15, 1990, the Board shall issue a report to the Administrator of the Environmental Protection Agency and to the Administrator of the Occupational Safety and Health Administration recommending the adoption of regulations for the preparation of risk management plans and general requirements for the prevention of accidental releases of regulated substances into the ambient air (including recommendations for listing substances under paragraph (3)) and for the mitigation of the potential adverse effect on human health or the environment as a result of accidental releases which should be

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applicable to any stationary source handling any regulated substance in more than threshold amounts. The Board may include proposed rules or orders which should be issued by the Administrator under authority of this subsection or by the Secretary of Labor under the Occupational Safety and Health Act [29 U.S.C. 651 et seq.]. Any such recommendations shall be specific and shall identify the regulated substance or class of regulated substances (or other substances) to which the recommendations apply. The Administrator shall consider such recommendations before promulgating regulations required by paragraph (7)(B).

**(L)** The Board, or upon authority of the Board, any member thereof, any administrative law judge employed by or assigned to the Board, or any officer or employee duly designated by the Board, may for the purpose of carrying out duties authorized by subparagraph (C)—

**(i)** hold such hearings, sit and act at such times and places, administer such oaths, and require by subpoena or otherwise attendance and testimony of such witnesses and the production of evidence and may require by order that any person engaged in the production, processing, handling, or storage of extremely hazardous substances submit written reports and responses to requests and questions within such time and in such form as the Board may require; and

**(ii)** upon presenting appropriate credentials and a written notice of inspection authority, enter any property where an accidental release causing a fatality, serious injury or substantial property damage has occurred and do all things therein necessary for a proper investigation pursuant to subparagraph (C) and inspect at reasonable times records, files, papers, processes, controls, and facilities and take such samples as are relevant to such investigation.

Whenever the Administrator or the Board conducts an inspection of a facility pursuant to this subsection, employees and their representatives shall have the same rights to participate in such inspections as provided in the Occupational Safety and Health Act [29 U.S.C. 651 et seq.].

**(M)** In addition to that described in subparagraph (L), the Board may use any information gathering authority of the Administrator under this chapter, including the subpoena power provided in section 7607 (a)(1) of this title.

**(N)** The Board is authorized to establish such procedural and administrative rules as are necessary to the exercise of its functions and duties. The Board is authorized without regard to section 6101 of title 41 to enter into contracts, leases, cooperative agreements or other transactions as may be necessary in the conduct of the duties and functions of the Board with any other agency, institution, or person.

**(O)** After the effective date of any reporting requirement promulgated pursuant to subparagraph (C)(iii) it shall be unlawful for any person to fail to report any release of any extremely hazardous substance as required by such subparagraph. The Administrator is authorized to enforce any regulation or requirements established by the Board pursuant to subparagraph (C)(iii) using the authorities of sections 7413 and 7414 of this title. Any request for information from the owner or operator of a stationary source made by the Board or by the Administrator under this section shall be treated, for purposes of sections 7413, 7414, 7416, 7420, 7603, 7604 and 7607 of this title and any other enforcement provisions of this chapter, as a request made by the Administrator under section 7414 of this title and may be enforced by the Chairperson of the Board or by the Administrator as provided in such section.

**(P)** The Administrator shall provide to the Board such support and facilities as may be necessary for operation of the Board.

**(Q)** Consistent with subsection <sup>8</sup> (G) and section 7414 (c) of this title any records, reports or information obtained by the Board shall be available to the Administrator, the Secretary of Labor, the Congress and the public, except that upon a showing satisfactory to the Board by any person that records, reports, or information, or particular part thereof (other than release



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or emissions data) to which the Board has access, if made public, is likely to cause substantial harm to the person's competitive position, the Board shall consider such record, report, or information or particular portion thereof confidential in accordance with section 1905 of title 18, except that such record, report, or information may be disclosed to other officers, employees, and authorized representatives of the United States concerned with carrying out this chapter or when relevant under any proceeding under this chapter. This subparagraph does not constitute authority to withhold records, reports, or information from the Congress.

**(R)** Whenever the Board submits or transmits any budget estimate, budget request, supplemental budget request, or other budget information, legislative recommendation, prepared testimony for congressional hearings, recommendation or study to the President, the Secretary of Labor, the Administrator, or the Director of the Office of Management and Budget, it shall concurrently transmit a copy thereof to the Congress. No report of the Board shall be subject to review by the Administrator or any Federal agency or to judicial review in any court. No officer or agency of the United States shall have authority to require the Board to submit its budget requests or estimates, legislative recommendations, prepared testimony, comments, recommendations or reports to any officer or agency of the United States for approval or review prior to the submission of such recommendations, testimony, comments or reports to the Congress. In the performance of their functions as established by this chapter, the members, officers and employees of the Board shall not be responsible to or subject to supervision or direction, in carrying out any duties under this subsection, of any officer or employee or agent of the Environmental Protection Agency, the Department of Labor or any other agency of the United States except that the President may remove any member, officer or employee of the Board for inefficiency, neglect of duty or malfeasance in office. Nothing in this section shall affect the application of title 5 to officers or employees of the Board.

**(S)** The Board shall submit an annual report to the President and to the Congress which shall include, but not be limited to, information on accidental releases which have been investigated by or reported to the Board during the previous year, recommendations for legislative or administrative action which the Board has made, the actions which have been taken by the Administrator or the Secretary of Labor or the heads of other agencies to implement such recommendations, an identification of priorities for study and investigation in the succeeding year, progress in the development of risk-reduction technologies and the response to and implementation of significant research findings on chemical safety in the public and private sector.

#### **(7) Accident prevention**

**(A)** In order to prevent accidental releases of regulated substances, the Administrator is authorized to promulgate release prevention, detection, and correction requirements which may include monitoring, record-keeping, reporting, training, vapor recovery, secondary containment, and other design, equipment, work practice, and operational requirements. Regulations promulgated under this paragraph may make distinctions between various types, classes, and kinds of facilities, devices and systems taking into consideration factors including, but not limited to, the size, location, process, process controls, quantity of substances handled, potency of substances, and response capabilities present at any stationary source. Regulations promulgated pursuant to this subparagraph shall have an effective date, as determined by the Administrator, assuring compliance as expeditiously as practicable.

**(B)** **(i)** Within 3 years after November 15, 1990, the Administrator shall promulgate reasonable regulations and appropriate guidance to provide, to the greatest extent practicable, for the prevention and detection of accidental releases of regulated substances and for response to such releases by the owners or operators of the sources of such releases. The Administrator shall utilize the expertise of the Secretaries of Transportation and Labor in promulgating such regulations. As appropriate, such regulations shall

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cover the use, operation, repair, replacement, and maintenance of equipment to monitor, detect, inspect, and control such releases, including training of persons in the use and maintenance of such equipment and in the conduct of periodic inspections. The regulations shall include procedures and measures for emergency response after an accidental release of a regulated substance in order to protect human health and the environment. The regulations shall cover storage, as well as operations. The regulations shall, as appropriate, recognize differences in size, operations, processes, class and categories of sources and the voluntary actions of such sources to prevent such releases and respond to such releases. The regulations shall be applicable to a stationary source 3 years after the date of promulgation, or 3 years after the date on which a regulated substance present at the source in more than threshold amounts is first listed under paragraph (3), whichever is later.

(ii) The regulations under this subparagraph shall require the owner or operator of stationary sources at which a regulated substance is present in more than a threshold quantity to prepare and implement a risk management plan to detect and prevent or minimize accidental releases of such substances from the stationary source, and to provide a prompt emergency response to any such releases in order to protect human health and the environment. Such plan shall provide for compliance with the requirements of this subsection and shall also include each of the following:

(I) a hazard assessment to assess the potential effects of an accidental release of any regulated substance. This assessment shall include an estimate of potential release quantities and a determination of downwind effects, including potential exposures to affected populations. Such assessment shall include a previous release history of the past 5 years, including the size, concentration, and duration of releases, and shall include an evaluation of worst case accidental releases;

(II) a program for preventing accidental releases of regulated substances, including safety precautions and maintenance, monitoring and employee training measures to be used at the source; and

(III) a response program providing for specific actions to be taken in response to an accidental release of a regulated substance so as to protect human health and the environment, including procedures for informing the public and local agencies responsible for responding to accidental releases, emergency health care, and employee training measures.

At the time regulations are promulgated under this subparagraph, the Administrator shall promulgate guidelines to assist stationary sources in the preparation of risk management plans. The guidelines shall, to the extent practicable, include model risk management plans.

(iii) The owner or operator of each stationary source covered by clause (ii) shall register a risk management plan prepared under this subparagraph with the Administrator before the effective date of regulations under clause (i) in such form and manner as the Administrator shall, by rule, require. Plans prepared pursuant to this subparagraph shall also be submitted to the Chemical Safety and Hazard Investigation Board, to the State in which the stationary source is located, and to any local agency or entity having responsibility for planning for or responding to accidental releases which may occur at such source, and shall be available to the public under section 7414 (c) of this title. The Administrator shall establish, by rule, an auditing system to regularly review and, if necessary, require revision in risk management plans to assure that the plans comply with this subparagraph. Each such plan shall be updated periodically as required by the Administrator, by rule.

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(C) Any regulations promulgated pursuant to this subsection shall to the maximum extent practicable, consistent with this subsection, be consistent with the recommendations and standards established by the American Society of Mechanical Engineers (ASME), the American National Standards Institute (ANSI) or the American Society of Testing Materials (ASTM). The Administrator shall take into consideration the concerns of small business in promulgating regulations under this subsection.

(D) In carrying out the authority of this paragraph, the Administrator shall consult with the Secretary of Labor and the Secretary of Transportation and shall coordinate any requirements under this paragraph with any requirements established for comparable purposes by the Occupational Safety and Health Administration or the Department of Transportation. Nothing in this subsection shall be interpreted, construed or applied to impose requirements affecting, or to grant the Administrator, the Chemical Safety and Hazard Investigation Board, or any other agency any authority to regulate (including requirements for hazard assessment), the accidental release of radionuclides arising from the construction and operation of facilities licensed by the Nuclear Regulatory Commission.

(E) After the effective date of any regulation or requirement imposed under this subsection, it shall be unlawful for any person to operate any stationary source subject to such regulation or requirement in violation of such regulation or requirement. Each regulation or requirement under this subsection shall for purposes of sections 7413, 7414, 7416, 7420, 7604, and 7607 of this title and other enforcement provisions of this chapter, be treated as a standard in effect under subsection (d) of this section.

(F) Notwithstanding the provisions of subchapter V of this chapter or this section, no stationary source shall be required to apply for, or operate pursuant to, a permit issued under such subchapter solely because such source is subject to regulations or requirements under this subsection.

(G) In exercising any authority under this subsection, the Administrator shall not, for purposes of section 653 (b)(1) of title 29, be deemed to be exercising statutory authority to prescribe or enforce standards or regulations affecting occupational safety and health.

**(H) Public access to off-site consequence analysis information.—**

**(i) Definitions.—** In this subparagraph:

**(I) Covered person.—** The term “covered person” means—

- (aa)** an officer or employee of the United States;
- (bb)** an officer or employee of an agent or contractor of the Federal Government;
- (cc)** an officer or employee of a State or local government;
- (dd)** an officer or employee of an agent or contractor of a State or local government;
- (ee)** an individual affiliated with an entity that has been given, by a State or local government, responsibility for preventing, planning for, or responding to accidental releases;
- (ff)** an officer or employee or an agent or contractor of an entity described in item (ee); and
- (gg)** a qualified researcher under clause (vii).

**(II) Official use.—** The term “official use” means an action of a Federal, State, or local government agency or an entity referred to in subclause (I)(ee) intended to carry out a function relevant to preventing, planning for, or responding to accidental releases.

**(III) Off-site consequence analysis information.—** The term “off-site consequence analysis information” means those portions of a risk management plan,



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excluding the executive summary of the plan, consisting of an evaluation of 1 or more worst-case release scenarios or alternative release scenarios, and any electronic data base created by the Administrator from those portions.

**(IV) Risk management plan.**— The term “risk management plan” means a risk management plan submitted to the Administrator by an owner or operator of a stationary source under subparagraph (B)(iii).

**(ii) Regulations.**— Not later than 1 year after August 5, 1999, the President shall—

**(I)** assess—

**(aa)** the increased risk of terrorist and other criminal activity associated with the posting of off-site consequence analysis information on the Internet; and

**(bb)** the incentives created by public disclosure of off-site consequence analysis information for reduction in the risk of accidental releases; and

**(II)** based on the assessment under subclause (I), promulgate regulations governing the distribution of off-site consequence analysis information in a manner that, in the opinion of the President, minimizes the likelihood of accidental releases and the risk described in subclause (I)(aa) and the likelihood of harm to public health and welfare, and—

**(aa)** allows access by any member of the public to paper copies of off-site consequence analysis information for a limited number of stationary sources located anywhere in the United States, without any geographical restriction;

**(bb)** allows other public access to off-site consequence analysis information as appropriate;

**(cc)** allows access for official use by a covered person described in any of items (cc) through (ff) of clause (i)(I) (referred to in this subclause as a “State or local covered person”) to off-site consequence analysis information relating to stationary sources located in the person’s State;

**(dd)** allows a State or local covered person to provide, for official use, off-site consequence analysis information relating to stationary sources located in the person’s State to a State or local covered person in a contiguous State; and

**(ee)** allows a State or local covered person to obtain for official use, by request to the Administrator, off-site consequence analysis information that is not available to the person under item (cc).

**(iii) Availability under freedom of information act.**—

**(I) First year.**— Off-site consequence analysis information, and any ranking of stationary sources derived from the information, shall not be made available under section 552 of title 5 during the 1-year period beginning on August 5, 1999.

**(II) After first year.**— If the regulations under clause (ii) are promulgated on or before the end of the period described in subclause (I), off-site consequence analysis information covered by the regulations, and any ranking of stationary sources derived from the information, shall not be made available under section 552 of title 5 after the end of that period.

**(III) Applicability.**— Subclauses (I) and (II) apply to off-site consequence analysis information submitted to the Administrator before, on, or after August 5, 1999.

**(iv) Availability of information during transition period.**— The Administrator shall make off-site consequence analysis information available to covered persons for official use in a manner that meets the requirements of items (cc) through (ee) of clause (ii)(II), and to the public in a form that does not make available any information concerning the identity or location of stationary sources, during the period—

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- (I) beginning on August 5, 1999; and
  - (II) ending on the earlier of the date of promulgation of the regulations under clause (ii) or the date that is 1 year after August 5, 1999.
- (v) **Prohibition on unauthorized disclosure of information by covered persons.**—
- (I) **In general.**— Beginning on August 5, 1999, a covered person shall not disclose to the public off-site consequence analysis information in any form, or any statewide or national ranking of identified stationary sources derived from such information, except as authorized by this subparagraph (including the regulations promulgated under clause (ii)). After the end of the 1-year period beginning on August 5, 1999, if regulations have not been promulgated under clause (ii), the preceding sentence shall not apply.
  - (II) **Criminal penalties.**— Notwithstanding section 7413 of this title, a covered person that willfully violates a restriction or prohibition established by this subparagraph (including the regulations promulgated under clause (ii)) shall, upon conviction, be fined for an infraction under section 3571 of title 18 (but shall not be subject to imprisonment) for each unauthorized disclosure of off-site consequence analysis information, except that subsection (d) of such section 3571 shall not apply to a case in which the offense results in pecuniary loss unless the defendant knew that such loss would occur. The disclosure of off-site consequence analysis information for each specific stationary source shall be considered a separate offense. The total of all penalties that may be imposed on a single person or organization under this item shall not exceed \$1,000,000 for violations committed during any 1 calendar year.
  - (III) **Applicability.**— If the owner or operator of a stationary source makes off-site consequence analysis information relating to that stationary source available to the public without restriction—
    - (aa) subclauses (I) and (II) shall not apply with respect to the information; and
    - (bb) the owner or operator shall notify the Administrator of the public availability of the information.
  - (IV) **List.**— The Administrator shall maintain and make publicly available a list of all stationary sources that have provided notification under subclause (III)(bb).
- (vi) **Notice.**— The Administrator shall provide notice of the definition of official use as provided in clause (i)(III)<sup>9</sup> and examples of actions that would and would not meet that definition, and notice of the restrictions on further dissemination and the penalties established by this chapter to each covered person who receives off-site consequence analysis information under clause (iv) and each covered person who receives off-site consequence analysis information for an official use under the regulations promulgated under clause (ii).
- (vii) **Qualified researchers.**—
- (I) **In general.**— Not later than 180 days after August 5, 1999, the Administrator, in consultation with the Attorney General, shall develop and implement a system for providing off-site consequence analysis information, including facility identification, to any qualified researcher, including a qualified researcher from industry or any public interest group.
  - (II) **Limitation on dissemination.**— The system shall not allow the researcher to disseminate, or make available on the Internet, the off-site consequence analysis information, or any portion of the off-site consequence analysis information, received under this clause.
- (viii) **Read-only information technology system.**— In consultation with the Attorney General and the heads of other appropriate Federal agencies, the Administrator shall

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establish an information technology system that provides for the availability to the public of off-site consequence analysis information by means of a central data base under the control of the Federal Government that contains information that users may read, but that provides no means by which an electronic or mechanical copy of the information may be made.

**(ix) Voluntary industry accident prevention standards.**— The Environmental Protection Agency, the Department of Justice, and other appropriate agencies may provide technical assistance to owners and operators of stationary sources and participate in the development of voluntary industry standards that will help achieve the objectives set forth in paragraph (1).

**(x) Effect on state or local law.**—

**(I) In general.**— Subject to subclause (II), this subparagraph (including the regulations promulgated under this subparagraph) shall supersede any provision of State or local law that is inconsistent with this subparagraph (including the regulations).

**(II) Availability of information under state law.**— Nothing in this subparagraph precludes a State from making available data on the off-site consequences of chemical releases collected in accordance with State law.

**(xi) Report.**—

**(I) In general.**— Not later than 3 years after August 5, 1999, the Attorney General, in consultation with appropriate State, local, and Federal Government agencies, affected industry, and the public, shall submit to Congress a report that describes the extent to which regulations promulgated under this paragraph have resulted in actions, including the design and maintenance of safe facilities, that are effective in detecting, preventing, and minimizing the consequences of releases of regulated substances that may be caused by criminal activity. As part of this report, the Attorney General, using available data to the extent possible, and a sampling of covered stationary sources selected at the discretion of the Attorney General, and in consultation with appropriate State, local, and Federal governmental agencies, affected industry, and the public, shall review the vulnerability of covered stationary sources to criminal and terrorist activity, current industry practices regarding site security, and security of transportation of regulated substances. The Attorney General shall submit this report, containing the results of the review, together with recommendations, if any, for reducing vulnerability of covered stationary sources to criminal and terrorist activity, to the Committee on Commerce of the United States House of Representatives and the Committee on Environment and Public Works of the United States Senate and other relevant committees of Congress.

**(II) Interim report.**— Not later than 12 months after August 5, 1999, the Attorney General shall submit to the Committee on Commerce of the United States House of Representatives and the Committee on Environment and Public Works of the United States Senate, and other relevant committees of Congress, an interim report that includes, at a minimum—

**(aa)** the preliminary findings under subclause (I);

**(bb)** the methods used to develop the findings; and

**(cc)** an explanation of the activities expected to occur that could cause the findings of the report under subclause (I) to be different than the preliminary findings.

**(III) Availability of information.**— Information that is developed by the Attorney General or requested by the Attorney General and received from a covered stationary source for the purpose of conducting the review under subclauses (I) and (II) shall be

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exempt from disclosure under section 552 of title 5 if such information would pose a threat to national security.

**(xii) Scope.**— This subparagraph—

(I) applies only to covered persons; and

(II) does not restrict the dissemination of off-site consequence analysis information by any covered person in any manner or form except in the form of a risk management plan or an electronic data base created by the Administrator from off-site consequence analysis information.

**(xiii) Authorization of appropriations.**— There are authorized to be appropriated to the Administrator and the Attorney General such sums as are necessary to carry out this subparagraph (including the regulations promulgated under clause (ii)), to remain available until expended.

**(8) Research on hazard assessments**

The Administrator may collect and publish information on accident scenarios and consequences covering a range of possible events for substances listed under paragraph (3). The Administrator shall establish a program of long-term research to develop and disseminate information on methods and techniques for hazard assessment which may be useful in improving and validating the procedures employed in the preparation of hazard assessments under this subsection.

**(9) Order authority**

(A) In addition to any other action taken, when the Administrator determines that there may be an imminent and substantial endangerment to the human health or welfare or the environment because of an actual or threatened accidental release of a regulated substance, the Administrator may secure such relief as may be necessary to abate such danger or threat, and the district court of the United States in the district in which the threat occurs shall have jurisdiction to grant such relief as the public interest and the equities of the case may require. The Administrator may also, after notice to the State in which the stationary source is located, take other action under this paragraph including, but not limited to, issuing such orders as may be necessary to protect human health. The Administrator shall take action under section 7603 of this title rather than this paragraph whenever the authority of such section is adequate to protect human health and the environment.

(B) Orders issued pursuant to this paragraph may be enforced in an action brought in the appropriate United States district court as if the order were issued under section 7603 of this title.

(C) Within 180 days after November 15, 1990, the Administrator shall publish guidance for using the order authorities established by this paragraph. Such guidance shall provide for the coordinated use of the authorities of this paragraph with other emergency powers authorized by section 9606 of this title, sections 311(c), 308, 309 and 504(a) of the Federal Water Pollution Control Act [33 U.S.C. 1321 (c), 1318, 1319, 1364 (a)], sections 3007, 3008, 3013, and 7003 of the Solid Waste Disposal Act [42 U.S.C. 6927, 6928, 6934, 6973], sections 1445 and 1431 of the Safe Drinking Water Act [42 U.S.C. 300j–4, 300i], sections 5 and 7 of the Toxic Substances Control Act [15 U.S.C. 2604, 2606], and sections 7413, 7414, and 7603 of this title.

**(10) Presidential review**

The President shall conduct a review of release prevention, mitigation and response authorities of the various Federal agencies and shall clarify and coordinate agency responsibilities to assure the most effective and efficient implementation of such authorities and to identify any deficiencies in authority or resources which may exist. The President may utilize the resources and solicit the recommendations of the Chemical Safety and Hazard Investigation Board in conducting such review. At the conclusion of such review, but not later than 24 months after November 15, 1990,

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the President shall transmit a message to the Congress on the release prevention, mitigation and response activities of the Federal Government making such recommendations for change in law as the President may deem appropriate. Nothing in this paragraph shall be interpreted, construed or applied to authorize the President to modify or reassign release prevention, mitigation or response authorities otherwise established by law.

**(11) State authority**

Nothing in this subsection shall preclude, deny or limit any right of a State or political subdivision thereof to adopt or enforce any regulation, requirement, limitation or standard (including any procedural requirement) that is more stringent than a regulation, requirement, limitation or standard in effect under this subsection or that applies to a substance not subject to this subsection.

**(s) Periodic report**

Not later than January 15, 1993 and every 3 years thereafter, the Administrator shall prepare and transmit to the Congress a comprehensive report on the measures taken by the Agency and by the States to implement the provisions of this section. The Administrator shall maintain a database on pollutants and sources subject to the provisions of this section and shall include aggregate information from the database in each annual report. The report shall include, but not be limited to—

- (1) a status report on standard-setting under subsections (d) and (f) of this section;
- (2) information with respect to compliance with such standards including the costs of compliance experienced by sources in various categories and subcategories;
- (3) development and implementation of the national urban air toxics program; and
- (4) recommendations of the Chemical Safety and Hazard Investigation Board with respect to the prevention and mitigation of accidental releases.

**Footnotes**

<sup>1</sup> See References in Text note below.

<sup>2</sup> So in original. Probably should be “effects”.

<sup>3</sup> So in original. Probably should be “section”.

<sup>4</sup> So in original. Probably should be “Right-To-Know”.

<sup>5</sup> So in original. Probably should be paragraph “(7)(B)”.

<sup>6</sup> So in original. The word “or” probably should appear.

<sup>7</sup> So in original. The word “Administrator” probably should be “Secretary”.

<sup>8</sup> So in original. Probably should be “subparagraph”.

<sup>9</sup> So in original. Probably should be “(i)(II)”.

(July 14, 1955, ch. 360, title I, § 112, as added Pub. L. 91–604, § 4(a), Dec. 31, 1970, 84 Stat. 1685; amended Pub. L. 95–95, title I, §§ 109(d)(2), 110, title IV, § 401(c), Aug. 7, 1977, 91 Stat. 701, 703, 791; Pub. L. 95–623, § 13(b), Nov. 9, 1978, 92 Stat. 3458; Pub. L. 101–549, title III, § 301, Nov. 15, 1990, 104 Stat. 2531; Pub. L. 102–187, Dec. 4, 1991, 105 Stat. 1285; Pub. L. 105–362, title IV, § 402(b), Nov. 10, 1998, 112 Stat. 3283; Pub. L. 106–40, §§ 2, 3 (a), Aug. 5, 1999, 113 Stat. 207, 208.)

**References in Text**

The date of enactment, referred to in subsec. (a)(11), probably means the date of enactment of Pub. L. 101–549, which amended this section generally and was approved Nov. 15, 1990.

The Atomic Energy Act, referred to in subsec. (d)(9), probably means the Atomic Energy Act of 1954, act Aug. 1, 1946, ch. 724, as added by act Aug. 30, 1954, ch. 1073, § 1, 68 Stat. 921, and amended, which is classified generally to chapter 23 (§ 2011 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 2011 of this title and Tables.

The Federal Water Pollution Control Act, referred to in subsecs. (e)(5) and (m)(1)(D), (5)(D), is act June 30, 1948, ch. 758, as amended generally by Pub. L. 92–500, § 2, Oct. 18, 1972, 86 Stat. 816, which is classified generally to



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chapter 26 (§ 1251 et seq.) of Title 33, Navigation and Navigable Waters. Title II of the Act is classified generally to subchapter II (§ 1281 et seq.) of chapter 26 of Title 33. For complete classification of this Act to the Code, see Short Title note set out under section 1251 of Title 33 and Tables.

The Toxic Substances Control Act, referred to in subsec. (k)(3)(C), is Pub. L. 94–469, Oct. 11, 1976, 90 Stat. 2003, as amended, which is classified generally to chapter 53 (§ 2601 et seq.) of Title 15, Commerce and Trade. For complete classification of this Act to the Code, see Short Title note set out under section 2601 of Title 15 and Tables.

The Federal Insecticide, Fungicide and Rodenticide Act, referred to in subsec. (k)(3)(C), probably means the Federal Insecticide, Fungicide, and Rodenticide Act, act June 25, 1947, ch. 125, as amended generally by Pub. L. 92–516, Oct. 21, 1972, 86 Stat. 973, which is classified generally to subchapter II (§ 136 et seq.) of chapter 6 of Title 7, Agriculture. For complete classification of this Act to the Code, see Short Title note set out under section 136 of Title 7 and Tables.

The Resource Conservation and Recovery Act, referred to in subsec. (k)(3)(C), probably means the Resource Conservation and Recovery Act of 1976, Pub. L. 94–580, Oct. 21, 1976, 90 Stat. 2796, as amended, which is classified generally to chapter 82 (§ 6901 et seq.) of this title. For complete classification of this Act to the Code, see Short Title of 1976 Amendment note set out under section 6901 of this title and Tables.

The Safe Drinking Water Act, referred to in subsec. (m)(1)(D), (5)(D), is title XIV of act July 1, 1944, as added Dec. 16, 1974, Pub. L. 93–523, § 2(a), 88 Stat. 1660, as amended, which is classified generally to subchapter XII (§ 300f et seq.) of chapter 6A of this title. For complete classification of this Act to the Code, see Short Title note set out under section 201 of this title and Tables.

The Solid Waste Disposal Act, referred to in subsec. (n)(7), is title II of Pub. L. 89–272, Oct. 20, 1965, 79 Stat. 997, as amended generally by Pub. L. 94–580, § 2, Oct. 21, 1976, 90 Stat. 2795. Subtitle C of the Act is classified generally to subchapter III (§ 6921 et seq.) of chapter 82 of this title. For complete classification of this Act to the Code, see Short Title note set out under section 6901 of this title and Tables.

Section 303 of the Clean Air Act Amendments of 1990, referred to in subsec. (o)(4), probably means section 303 of Pub. L. 101–549, which is set out below.

The Clean Air Act Amendments of 1990, referred to in subsec. (q)(1)–(3), probably means Pub. L. 101–549, Nov. 15, 1990, 104 Stat. 2399. For complete classification of this Act to the Code, see Short Title note set out under section 7401 of this title and Tables.

The Emergency Planning and Community Right-To-Know Act of 1986, referred to in subsec. (r)(3), is title III of Pub. L. 99–499, Oct. 17, 1986, 100 Stat. 1728, which is classified generally to chapter 116 (§ 11001 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 11001 of this title and Tables.

The Occupational Safety and Health Act, referred to in subsec. (r)(6)(C)(ii), (K), (L), probably means the Occupational Safety and Health Act of 1970, Pub. L. 91–596, Dec. 29, 1970, 84 Stat. 1590, as amended, which is classified principally to chapter 15 (§ 651 et seq.) of Title 29, Labor. For complete classification of this Act to the Code, see Short Title note set out under section 651 of Title 29 and Tables.

## Codification

In subsec. (r)(6)(N), “section 6101 of title 41” substituted for “section 5 of title 41 of the United States Code” on authority of Pub. L. 111–350, § 6(c), Jan. 4, 2011, 124 Stat. 3854, which Act enacted Title 41, Public Contracts.

Section was formerly classified to section 1857c-7 of this title.

## Amendments

1999—Subsec. (r)(2)(D). Pub. L. 106–40, § 2(5), added subpar. (D).

Subsec. (r)(4). Pub. L. 106–40, § 2, substituted “Administrator—

“(A) shall consider—”

for “Administrator shall consider each of the following criteria—” in introductory provisions, redesignated subpars. (A) to (C) as cls. (i) to (iii), respectively, of subpar. (A) and added subpar. (B).

Subsec. (r)(7)(H). Pub. L. 106–40, § 3(a), added subpar. (H).

1998—Subsec. (n)(2)(C). Pub. L. 105–362 substituted “On completion of the study, the Secretary shall submit to Congress a report on the results of the study and” for “The Secretary shall prepare annual reports to Congress on the status of the research program and at the completion of the study”.

1991—Subsec. (b)(1). Pub. L. 102–187 struck out “7783064 Hydrogen sulfide” from list of pollutants.

1990—Pub. L. 101–549 amended section generally, substituting present provisions for provisions which related to: in subsec. (a), definitions; in subsec. (b), list of hazardous air pollutants, emission standards, and pollution control

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techniques; in subsec. (c), prohibited acts and exemption; in subsec. (d), State implementation and enforcement; and in subsec. (e), design, equipment, work practice, and operational standards.

1978—Subsec. (e)(5). Pub. L. 95–623 added par. (5).

1977—Subsec. (a)(1). Pub. L. 95–95, § 401(c), substituted “causes, or contributes to, air pollution which may reasonably be anticipated to result in an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness” for “may cause, or contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness”.

Subsec. (d)(1). Pub. L. 95–95, § 109(d)(2), struck out “(except with respect to stationary sources owned or operated by the United States)” after “implement and enforce such standards”.

Subsec. (e). Pub. L. 95–95, § 110, added subsec. (e).

### **Change of Name**

Committee on Energy and Commerce of House of Representatives treated as referring to Committee on Commerce of House of Representatives by section 1(a) of Pub. L. 104–14, set out as a note preceding section 21 of Title 2, The Congress. Committee on Commerce of House of Representatives changed to Committee on Energy and Commerce of House of Representatives, and jurisdiction over matters relating to securities and exchanges and insurance generally transferred to Committee on Financial Services of House of Representatives by House Resolution No. 5, One Hundred Seventh Congress, Jan. 3, 2001.

### **Effective Date of 1977 Amendment**

Amendment by Pub. L. 95–95 effective Aug. 7, 1977, except as otherwise expressly provided, see section 406(d) of Pub. L. 95–95, set out as a note under section 7401 of this title.

### **Termination of Reporting Requirements**

For termination, effective May 15, 2000, of provisions of law requiring submittal to Congress of any annual, semiannual, or other regular periodic report listed in House Document No. 103–7 (in which reports required under subsecs. (m)(5), (r)(6)(C)(ii), and (s) of this section are listed, respectively, as the 8th item on page 162, the 9th item on page 198, and the 9th item on page 162), see section 3003 of Pub. L. 104–66, as amended, set out as a note under section 1113 of Title 31, Money and Finance.

### **Pending Actions and Proceedings**

Suits, actions, and other proceedings lawfully commenced by or against the Administrator or any other officer or employee of the United States in his official capacity or in relation to the discharge of his official duties under act July 14, 1955, the Clean Air Act, as in effect immediately prior to the enactment of Pub. L. 95–95 [Aug. 7, 1977], not to abate by reason of the taking effect of Pub. L. 95–95, see section 406(a) of Pub. L. 95–95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

### **Modification or Rescission of Rules, Regulations, Orders, Determinations, Contracts, Certifications, Authorizations, Delegations, and Other Actions**

All rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, or other actions duly issued, made, or taken by or pursuant to act July 14, 1955, the Clean Air Act, as in effect immediately prior to the date of enactment of Pub. L. 95–95 [Aug. 7, 1977] to continue in full force and effect until modified or rescinded in accordance with act July 14, 1955, as amended by Pub. L. 95–95 [this chapter], see section 406(b) of Pub. L. 95–95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

### **Delegation of Authority**

Memorandum of President of the United States, Aug. 19, 1993, 58 F.R. 52397, provided:

Memorandum for the Administrator of the Environmental Protection Agency

WHEREAS, the Environmental Protection Agency, the agencies and departments that are members of the National Response Team (authorized under Executive Order No. 12580, 52 Fed. Reg. 2923 (1987) [42 U.S.C. 9615 note ]), and other Federal agencies and departments undertake emergency release prevention, mitigation, and response activities pursuant to various authorities;

By the authority vested in me as President by the Constitution and the laws of the United States of America, including section 112(r)(10) of the Clean Air Act (the “Act”) (section 7412 (r)(10) of title 42 of the United States Code) and section 301 of title 3 of the United States Code, and in order to provide for the delegation of certain functions under the Act [42 U.S.C. 7401 et seq.], I hereby:

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(1) Authorize you, in coordination with agencies and departments that are members of the National Response Team and other appropriate agencies and departments, to conduct a review of release prevention, mitigation, and response authorities of Federal agencies in order to assure the most effective and efficient implementation of such authorities and to identify any deficiencies in authority or resources that may exist, to the extent such review is required by section 112(r)(10) of the Act; and

(2) Authorize you, in coordination with agencies and departments that are members of the National Response Team and other appropriate agencies and departments, to prepare and transmit a message to the Congress concerning the release prevention, mitigation, and response activities of the Federal Government with such recommendations for change in law as you deem appropriate, to the extent such message is required by section 112(r)(10) of the Act.

The authority delegated by this memorandum may be further redelegated within the Environmental Protection Agency.

You are hereby authorized and directed to publish this memorandum in the Federal Register.

William J. Clinton.

Memorandum of President of the United States, Jan. 27, 2000, 65 F.R. 8631, provided:

Memorandum for the Attorney General[, ] the Administrator of the Environmental Protection Agency[, and] the Director of the Office of Management and Budget

By the authority vested in me as President by the Constitution and laws of the United States of America, including section 112(r)(7)(H) of the Clean Air Act ("Act") (42 U.S.C. 7412 (r)(7)(H)), as added by section 3 of the Chemical Safety Information, Site Security and Fuels Regulatory Relief Act (Public Law 106-40), and section 301 of title 3, United States Code, I hereby delegate to:

(1) the Attorney General the authority vested in the President under section 112(r)(7)(H)(ii)(I)(aa) of the Act to assess the increased risk of terrorist and other criminal activity associated with the posting of off-site consequence analysis information on the Internet;

(2) the Administrator of the Environmental Protection Agency (EPA) the authority vested in the President under section 112(r)(7)(H)(ii)(I)(bb) of the Act to assess the incentives created by public disclosure of off-site consequence analysis information for reduction in the risk of accidental releases; and

(3) the Attorney General and the Administrator of EPA, jointly, the authority vested in the President under section 112(r)(7)(H)(ii)(II) of the Act to promulgate regulations, based on these assessments, governing the distribution of off-site consequence analysis information. These regulations, in proposed and final form, shall be subject to review and approval by the Director of the Office of Management and Budget.

The Administrator of EPA is authorized and directed to publish this memorandum in the Federal Register.

William J. Clinton.

## Reports

Pub. L. 106-40, § 3(b), Aug. 5, 1999, 113 Stat. 213, provided that:

"(1) Definition of accidental release.—In this subsection, the term 'accidental release' has the meaning given the term in section 112(r)(2) of the Clean Air Act (42 U.S.C. 7412 (r)(2)).

"(2) Report on status of certain amendments.—Not later than 2 years after the date of enactment of this Act [Aug. 5, 1999], the Comptroller General of the United States shall submit to Congress a report on the status of the development of amendments to the National Fire Protection Association Code for Liquefied Petroleum Gas that will result in the provision of information to local emergency response personnel concerning the off-site effects of accidental releases of substances exempted from listing under section 112(r)(4)(B) of the Clean Air Act (as added by section 3).

"(3) Report on compliance with certain information submission requirements.—Not later than 3 years after the date of enactment of this Act, the Comptroller General of the United States shall submit to Congress a report that—

"(A) describes the level of compliance with Federal and State requirements relating to the submission to local emergency response personnel of information intended to help the local emergency response personnel respond to chemical accidents or related environmental or public health threats; and

"(B) contains an analysis of the adequacy of the information required to be submitted and the efficacy of the methods for delivering the information to local emergency response personnel."

## Reevaluation of Regulations

Pub. L. 106-40, § 3(c), Aug. 5, 1999, 113 Stat. 213, provided that: "The President shall reevaluate the regulations promulgated under this section within 6 years after the enactment of this Act [Aug. 5, 1999]. If the President determines not to modify such regulations, the President shall publish a notice in the Federal Register stating that such reevaluation



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has been completed and that a determination has been made not to modify the regulations. Such notice shall include an explanation of the basis of such decision.”

### Public Meeting During Moratorium Period

Pub. L. 106–40, § 4, Aug. 5, 1999, 113 Stat. 214, provided that:

“(a) In General.—Not later than 180 days after the date of enactment of this Act [Aug. 5, 1999], each owner or operator of a stationary source covered by section 112(r)(7)(B)(ii) of the Clean Air Act [42 U.S.C. 7412 (r)(7)(B)(ii)] shall convene a public meeting, after reasonable public notice, in order to describe and discuss the local implications of the risk management plan submitted by the stationary source pursuant to section 112(r)(7)(B)(iii) of the Clean Air Act, including a summary of the off-site consequence analysis portion of the plan. Two or more stationary sources may conduct a joint meeting. In lieu of conducting such a meeting, small business stationary sources as defined in section 507(c)(1) of the Clean Air Act [42 U.S.C. 7661f (c)(1)] may comply with this section by publicly posting a summary of the off-site consequence analysis information for their facility not later than 180 days after the enactment of this Act. Not later than 10 months after the date of enactment of this Act, each such owner or operator shall send a certification to the director of the Federal Bureau of Investigation stating that such meeting has been held, or that such summary has been posted, within 1 year prior to, or within 6 months after, the date of the enactment of this Act. This section shall not apply to sources that employ only Program 1 processes within the meaning of regulations promulgated under section 112(r)(7)(B)(i) of the Clean Air Act.

“(b) Enforcement.—The Administrator of the Environmental Protection Agency may bring an action in the appropriate United States district court against any person who fails or refuses to comply with the requirements of this section, and such court may issue such orders, and take such other actions, as may be necessary to require compliance with such requirements.”

### Risk Assessment and Management Commission

Section 303 of Pub. L. 101–549 provided that:

“(a) Establishment.—There is hereby established a Risk Assessment and Management Commission (hereafter referred to in this section as the ‘Commission’), which shall commence proceedings not later than 18 months after the date of enactment of the Clean Air Act Amendments of 1990 [Nov. 15, 1990] and which shall make a full investigation of the policy implications and appropriate uses of risk assessment and risk management in regulatory programs under various Federal laws to prevent cancer and other chronic human health effects which may result from exposure to hazardous substances.

“(b) Charge.—The Commission shall consider—

“(1) the report of the National Academy of Sciences authorized by section 112(o) of the Clean Air Act [42 U.S.C. 7412 (o)], the use and limitations of risk assessment in establishing emission or effluent standards, ambient standards, exposure standards, acceptable concentration levels, tolerances or other environmental criteria for hazardous substances that present a risk of carcinogenic effects or other chronic health effects and the suitability of risk assessment for such purposes;

“(2) the most appropriate methods for measuring and describing cancer risks or risks of other chronic health effects from exposure to hazardous substances considering such alternative approaches as the lifetime risk of cancer or other effects to the individual or individuals most exposed to emissions from a source or sources on both an actual and worst case basis, the range of such risks, the total number of health effects avoided by exposure reductions, effluent standards, ambient standards, exposures standards, acceptable concentration levels, tolerances and other environmental criteria, reductions in the number of persons exposed at various levels of risk, the incidence of cancer, and other public health factors;

“(3) methods to reflect uncertainties in measurement and estimation techniques, the existence of synergistic or antagonistic effects among hazardous substances, the accuracy of extrapolating human health risks from animal exposure data, and the existence of unquantified direct or indirect effects on human health in risk assessment studies;

“(4) risk management policy issues including the use of lifetime cancer risks to individuals most exposed, incidence of cancer, the cost and technical feasibility of exposure reduction measures and the use of site-specific actual exposure information in setting emissions standards and other limitations applicable to sources of exposure to hazardous substances; and

“(5) and comment on the degree to which it is possible or desirable to develop a consistent risk assessment methodology, or a consistent standard of acceptable risk, among various Federal programs.

“(c) Membership.—Such Commission shall be composed of ten members who shall have knowledge or experience in fields of risk assessment or risk management, including three members to be appointed by the President, two members to be appointed by the Speaker of the House of Representatives, one member to be appointed by the Minority Leader of the House of Representatives, two members to be appointed by the Majority Leader of the Senate, one member to

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be appointed by the Minority Leader of the Senate, and one member to be appointed by the President of the National Academy of Sciences. Appointments shall be made not later than 18 months after the date of enactment of the Clean Air Act Amendments of 1990 [Nov. 15, 1990].

“(d) Assistance from Agencies.—The Administrator of the Environmental Protection Agency and the heads of all other departments, agencies, and instrumentalities of the executive branch of the Federal Government shall, to the maximum extent practicable, assist the Commission in gathering such information as the Commission deems necessary to carry out this section subject to other provisions of law.

“(e) Staff and Contracts.—

“(1) In the conduct of the study required by this section, the Commission is authorized to contract (in accordance with Federal contract law) with nongovernmental entities that are competent to perform research or investigations within the Commission’s mandate, and to hold public hearings, forums, and workshops to enable full public participation.

“(2) The Commission may appoint and fix the pay of such staff as it deems necessary in accordance with the provisions of title 5, United States Code. The Commission may request the temporary assignment of personnel from the Environmental Protection Agency or other Federal agencies.

“(3) The members of the Commission who are not officers or employees of the United States, while attending conferences or meetings of the Commission or while otherwise serving at the request of the Chair, shall be entitled to receive compensation at a rate not in excess of the maximum rate of pay for Grade GS–18, as provided in the General Schedule under section 5332 of title 5 of the United States Code, including travel time, and while away from their homes or regular places of business they may be allowed travel expenses, including per diem in lieu of subsistence as authorized by law for persons in the Government service employed intermittently.

“(f) Report.—A report containing the results of all Commission studies and investigations under this section, together with any appropriate legislative recommendations or administrative recommendations, shall be made available to the public for comment not later than 42 months after the date of enactment of the Clean Air Act Amendments of 1990 [Nov. 15, 1990] and shall be submitted to the President and to the Congress not later than 48 months after such date of enactment. In the report, the Commission shall make recommendations with respect to the appropriate use of risk assessment and risk management in Federal regulatory programs to prevent cancer or other chronic health effects which may result from exposure to hazardous substances. The Commission shall cease to exist upon the date determined by the Commission, but not later than 9 months after the submission of such report.

“(g) Authorization.—There are authorized to be appropriated such sums as are necessary to carry out the activities of the Commission established by this section.”

[References in laws to the rates of pay for GS–16, 17, or 18, or to maximum rates of pay under the General Schedule, to be considered references to rates payable under specified sections of Title 5, Government Organization and Employees, see section 529 [title I, § 101(c)(1)] of Pub. L. 101–509, set out in a note under section 5376 of Title 5.]

## **Flexible Implementation of the Mercury and Air Toxics Standards Rule**

Memorandum of President of the United States, Dec. 21, 2011, 76 F.R. 80727, provided:

Memorandum for the Administrator of the Environmental Protection Agency

Today’s issuance, by the Environmental Protection Agency (EPA), of the final Mercury and Air Toxics Standards rule for power plants (the “MATS Rule”) represents a major step forward in my Administration’s efforts to protect public health and the environment.

This rule, issued after careful consideration of public comments, prescribes standards under section 112 of the Clean Air Act to control emissions of mercury and other toxic air pollutants from power plants, which collectively are among the largest sources of such pollution in the United States. The EPA estimates that by substantially reducing emissions of pollutants that contribute to neurological damage, cancer, respiratory illnesses, and other health risks, the MATS Rule will produce major health benefits for millions of Americans—including children, older Americans, and other vulnerable populations. Consistent with Executive Order 13563 (Improving Regulation and Regulatory Review), the estimated benefits of the MATS Rule far exceed the estimated costs.

The MATS Rule can be implemented through the use of demonstrated, existing pollution control technologies. The United States is a global market leader in the design and manufacture of these technologies, and it is anticipated that U.S. firms and workers will provide much of the equipment and labor needed to meet the substantial investments in pollution control that the standards are expected to spur.

These new standards will promote the transition to a cleaner and more efficient U.S. electric power system. This system as a whole is critical infrastructure that plays a key role in the functioning of all facets of the U.S. economy, and maintaining its stability and reliability is of critical importance. It is therefore crucial that implementation of the MATS Rule proceed in a cost-effective manner that ensures electric reliability.

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Analyses conducted by the EPA and the Department of Energy (DOE) indicate that the MATS Rule is not anticipated to compromise electric generating resource adequacy in any region of the country. The Clean Air Act offers a number of implementation flexibilities, and the EPA has a long and successful history of using those flexibilities to ensure a smooth transition to cleaner technologies.

The Clean Air Act provides 3 years from the effective date of the MATS Rule for sources to comply with its requirements. In addition, section 112(i)(3)(B) of the Act allows the issuance of a permit granting a source up to one additional year where necessary for the installation of controls. As you stated in the preamble to the MATS Rule, this additional fourth year should be broadly available to sources, consistent with the requirements of the law.

The EPA has concluded that 4 years should generally be sufficient to install the necessary emission control equipment, and DOE has issued analysis consistent with that conclusion. While more time is generally not expected to be needed, the Clean Air Act offers other important flexibilities as well. For example, section 113(a) of the Act provides the EPA with flexibility to bring sources into compliance over the course of an additional year, should unusual circumstances arise that warrant such flexibility.

To address any concerns with respect to electric reliability while assuring MATS' public health benefits, I direct you to take the following actions:

1. Building on the information and guidance that you have provided to the public, relevant stakeholders, and permitting authorities in the preamble of the MATS Rule, work with State and local permitting authorities to make the additional year for compliance with the MATS Rule provided under section 112(i)(3)(B) of the Clean Air Act broadly available to sources, consistent with law, and to invoke this flexibility expeditiously where justified.
2. Promote early, coordinated, and orderly planning and execution of the measures needed to implement the MATS Rule while maintaining the reliability of the electric power system. Consistent with Executive Order 13563, this process should be designed to "promote predictability and reduce uncertainty," and should include engagement and coordination with DOE, the Federal Energy Regulatory Commission, State utility regulators, Regional Transmission Organizations, the North American Electric Reliability Corporation and regional electric reliability organizations, other grid planning authorities, electric utilities, and other stakeholders, as appropriate.
3. Make available to the public, including relevant stakeholders, information concerning any anticipated use of authorities: (a) under section 112(i)(3)(B) of the Clean Air Act in the event that additional time to comply with the MATS Rule is necessary for the installation of technology; and (b) under section 113(a) of the Clean Air Act in the event that additional time to comply with the MATS Rule is necessary to address a specific and documented electric reliability issue. This information should describe the process for working with entities with relevant expertise to identify circumstances where electric reliability concerns might justify allowing additional time to comply.

This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

You are hereby authorized and directed to publish this memorandum in the Federal Register.

Barack Obama.

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**TITLE 42 - THE PUBLIC HEALTH AND WELFARE**  
**CHAPTER 85 - AIR POLLUTION PREVENTION AND CONTROL**  
**SUBCHAPTER I - PROGRAMS AND ACTIVITIES**  
**Part A - Air Quality and Emission Limitations**

**§ 7429. Solid waste combustion**

**(a) New source performance standards**

**(1) In general**

(A) The Administrator shall establish performance standards and other requirements pursuant to section 7411 of this title and this section for each category of solid waste incineration units. Such standards shall include emissions limitations and other requirements applicable to new units and guidelines (under section 7411 (d) of this title and this section) and other requirements applicable to existing units.

(B) Standards under section 7411 of this title and this section applicable to solid waste incineration units with capacity greater than 250 tons per day combusting municipal waste shall be promulgated not later than 12 months after November 15, 1990. Nothing in this subparagraph shall alter any schedule for the promulgation of standards applicable to such units under section 7411 of this title pursuant to any settlement and consent decree entered by the Administrator before November 15, 1990: Provided, That, such standards are subsequently modified pursuant to the schedule established in this subparagraph to include each of the requirements of this section.

(C) Standards under section 7411 of this title and this section applicable to solid waste incineration units with capacity equal to or less than 250 tons per day combusting municipal waste and units combusting hospital waste, medical waste and infectious waste shall be promulgated not later than 24 months after November 15, 1990.

(D) Standards under section 7411 of this title and this section applicable to solid waste incineration units combusting commercial or industrial waste shall be proposed not later than 36 months after November 15, 1990, and promulgated not later than 48 months after November 15, 1990.

(E) Not later than 18 months after November 15, 1990, the Administrator shall publish a schedule for the promulgation of standards under section 7411 of this title and this section applicable to other categories of solid waste incineration units.

**(2) Emissions standard**

Standards applicable to solid waste incineration units promulgated under section 7411 of this title and this section shall reflect the maximum degree of reduction in emissions of air pollutants listed under section <sup>1</sup> (a)(4) that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new or existing units in each category. The Administrator may distinguish among classes, types (including mass-burn, refuse-derived fuel, modular and other types of units), and sizes of units within a category in establishing such standards. The degree of reduction in emissions that is deemed achievable for new units in a category 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 in a category may be less stringent than standards for new units in the same category but shall not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in the category (excluding units which first met lowest achievable emissions rates 18 months before the date such standards are proposed or 30 months before the date such standards are promulgated, whichever is later).

**(3) Control methods and technologies**

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Standards under section 7411 of this title and this section applicable to solid waste incineration units shall be based on methods and technologies for removal or destruction of pollutants before, during, or after combustion, and shall incorporate for new units siting requirements that minimize, on a site specific basis, to the maximum extent practicable, potential risks to public health or the environment.

**(4) Numerical emissions limitations**

The performance standards promulgated under section 7411 of this title and this section and applicable to solid waste incineration units shall specify numerical emission limitations for the following substances or mixtures: particulate matter (total and fine), opacity (as appropriate), sulfur dioxide, hydrogen chloride, oxides of nitrogen, carbon monoxide, lead, cadmium, mercury, and dioxins and dibenzofurans. The Administrator may promulgate numerical emissions limitations or provide for the monitoring of postcombustion concentrations of surrogate substances, parameters or periods of residence time in excess of stated temperatures with respect to pollutants other than those listed in this paragraph.

**(5) Review and revision**

Not later than 5 years following the initial promulgation of any performance standards and other requirements under this section and section 7411 of this title applicable to a category of solid waste incineration units, and at 5 year intervals thereafter, the Administrator shall review, and in accordance with this section and section 7411 of this title, revise such standards and requirements.

**(b) Existing units**

**(1) Guidelines**

Performance standards under this section and section 7411 of this title for solid waste incineration units shall include guidelines promulgated pursuant to section 7411 (d) of this title and this section applicable to existing units. Such guidelines shall include, as provided in this section, each of the elements required by subsection (a) of this section (emissions limitations, notwithstanding any restriction in section 7411 (d) of this title regarding issuance of such limitations), subsection (c) of this section (monitoring), subsection (d) of this section (operator training), subsection (e) of this section (permits), and subsection (h)(4)<sup>2</sup> of this section (residual risk).

**(2) State plans**

Not later than 1 year after the Administrator promulgates guidelines for a category of solid waste incineration units, each State in which units in the category are operating shall submit to the Administrator a plan to implement and enforce the guidelines with respect to such units. The State plan shall be at least as protective as the guidelines promulgated by the Administrator and shall provide that each unit subject to the guidelines shall be in compliance with all requirements of this section not later than 3 years after the State plan is approved by the Administrator but not later than 5 years after the guidelines were promulgated. The Administrator shall approve or disapprove any State plan within 180 days of the submission, and if a plan is disapproved, the Administrator shall state the reasons for disapproval in writing. Any State may modify and resubmit a plan which has been disapproved by the Administrator.

**(3) Federal plan**

The Administrator shall develop, implement and enforce a plan for existing solid waste incineration units within any category located in any State which has not submitted an approvable plan under this subsection with respect to units in such category within 2 years after the date on which the Administrator promulgated the relevant guidelines. Such plan shall assure that each unit subject to the plan is in compliance with all provisions of the guidelines not later than 5 years after the date the relevant guidelines are promulgated.

**(c) Monitoring**

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The Administrator shall, as part of each performance standard promulgated pursuant to subsection (a) of this section and section 7411 of this title, promulgate regulations requiring the owner or operator of each solid waste incineration unit—

- (1) to monitor emissions from the unit at the point at which such emissions are emitted into the ambient air (or within the stack, combustion chamber or pollution control equipment, as appropriate) and at such other points as necessary to protect public health and the environment;
- (2) to monitor such other parameters relating to the operation of the unit and its pollution control technology as the Administrator determines are appropriate; and
- (3) to report the results of such monitoring.

Such regulations shall contain provisions regarding the frequency of monitoring, test methods and procedures validated on solid waste incineration units, and the form and frequency of reports containing the results of monitoring and shall require that any monitoring reports or test results indicating an exceedance of any standard under this section shall be reported separately and in a manner that facilitates review for purposes of enforcement actions. Such regulations shall require that copies of the results of such monitoring be maintained on file at the facility concerned and that copies shall be made available for inspection and copying by interested members of the public during business hours.

**(d) Operator training**

Not later than 24 months after November 15, 1990, the Administrator shall develop and promote a model State program for the training and certification of solid waste incineration unit operators and high-capacity fossil fuel fired plant operators. The Administrator may authorize any State to implement a model program for the training of solid waste incineration unit operators and high-capacity fossil fuel fired plant operators, if the State has adopted a program which is at least as effective as the model program developed by the Administrator. Beginning on the date 36 months after the date on which performance standards and guidelines are promulgated under subsection (a) of this section and section 7411 of this title for any category of solid waste incineration units it shall be unlawful to operate any unit in the category unless each person with control over processes affecting emissions from such unit has satisfactorily completed a training program meeting the requirements established by the Administrator under this subsection.

**(e) Permits**

**Beginning**

- (1) 36 months after the promulgation of a performance standard under subsection (a) of this section and section 7411 of this title applicable to a category of solid waste incineration units, or
- (2) the effective date of a permit program under subchapter V of this chapter in the State in which the unit is located, whichever is later, each unit in the category shall operate pursuant to a permit issued under this subsection and subchapter V of this chapter. Permits required by this subsection may be renewed according to the provisions of subchapter V of this chapter. Notwithstanding any other provision of this chapter, each permit for a solid waste incineration unit combusting municipal waste issued under this chapter shall be issued for a period of up to 12 years and shall be reviewed every 5 years after date of issuance or reissuance. Each permit shall continue in effect after the date of issuance until the date of termination, unless the Administrator or State determines that the unit is not in compliance with all standards and conditions contained in the permit. Such determination shall be made at regular intervals during the term of the permit, such intervals not to exceed 5 years, and only after public comment and public hearing. No permit for a solid waste incineration unit may be issued under this chapter by an agency, instrumentality or person that is also responsible, in whole or part, for the design and construction or operation of the unit. Notwithstanding any other provision of this subsection, the Administrator or the State shall require the owner or operator of any unit to comply with emissions limitations or implement any other measures, if the Administrator or the State determines that emissions in the absence of such limitations or measures may reasonably be anticipated to endanger public health or the



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environment. The Administrator's determination under the preceding sentence is a discretionary decision.

**(f) Effective date and enforcement**

**(1) New units**

Performance standards and other requirements promulgated pursuant to this section and section 7411 of this title and applicable to new solid waste incineration units shall be effective as of the date 6 months after the date of promulgation.

**(2) Existing units**

Performance standards and other requirements promulgated pursuant to this section and section 7411 of this title and applicable to existing solid waste incineration units shall be effective as expeditiously as practicable after approval of a State plan under subsection (b)(2) of this section (or promulgation of a plan by the Administrator under subsection (b)(3) of this section) but in no event later than 3 years after the State plan is approved or 5 years after the date such standards or requirements are promulgated, whichever is earlier.

**(3) Prohibition**

After the effective date of any performance standard, emission limitation or other requirement promulgated pursuant to this section and section 7411 of this title, it shall be unlawful for any owner or operator of any solid waste incineration unit to which such standard, limitation or requirement applies to operate such unit in violation of such limitation, standard or requirement or for any other person to violate an applicable requirement of this section.

**(4) Coordination with other authorities**

For purposes of sections 7411 (e), 7413, 7414, 7416, 7420, 7603, 7604, 7607 of this title and other provisions for the enforcement of this chapter, each performance standard, emission limitation or other requirement established pursuant to this section by the Administrator or a State or local government, shall be treated in the same manner as a standard of performance under section 7411 of this title which is an emission limitation.

**(g) Definitions**

For purposes of section 306 of the Clean Air Act Amendments of 1990 and this section only—

**(1) Solid waste incineration unit**

The term "solid waste incineration unit" means a distinct operating unit of any facility which combusts any solid waste material from commercial or industrial establishments or the general public (including single and multiple residences, hotels, and motels). Such term does not include incinerators or other units required to have a permit under section 3005 of the Solid Waste Disposal Act [42 U.S.C. 6925]. The term "solid waste incineration unit" does not include

(A) materials recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals,

(B) qualifying small power production facilities, as defined in section 796 (17)(C) of title 16, or qualifying cogeneration facilities, as defined in section 796 (18)(B) of title 16, which burn homogeneous waste (such as units which burn tires or used oil, but not including refuse-derived fuel) for the production of electric energy or in the case of qualifying cogeneration facilities which burn homogeneous waste for the production of electric energy and steam or forms of useful energy (such as heat) which are used for industrial, commercial, heating or cooling purposes, or

(C) air curtain incinerators provided that such incinerators only burn wood wastes, yard wastes and clean lumber and that such air curtain incinerators comply with opacity limitations to be established by the Administrator by rule.

**(2) New solid waste incineration unit**

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The term “new solid waste incineration unit” means a solid waste incineration unit the construction of which is commenced after the Administrator proposes requirements under this section establishing emissions standards or other requirements which would be applicable to such unit or a modified solid waste incineration unit.

**(3) Modified solid waste incineration unit**

The term “modified solid waste incineration unit” means a solid waste incineration unit at which modifications have occurred after the effective date of a standard under subsection (a) of this section if

- (A) the cumulative cost of the modifications, over the life of the unit, exceed 50 per centum of the original cost of construction and installation of the unit (not including the cost of any land purchased in connection with such construction or installation) updated to current costs, or
- (B) the modification is a physical change in or change in the method of operation of the unit which increases the amount of any air pollutant emitted by the unit for which standards have been established under this section or section 7411 of this title.

**(4) Existing solid waste incineration unit**

The term “existing solid waste incineration unit” means a solid waste unit which is not a new or modified solid waste incineration unit.

**(5) Municipal waste**

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

- (A) the term does not include industrial process wastes or medical wastes that are segregated from such other wastes; and
- (B) an incineration unit shall not be considered to be combusting municipal waste for purposes of section 7411 of this title or this section if it combusts a fuel feed stream, 30 percent or less of the weight of which is comprised, in aggregate, of municipal waste.

**(6) Other terms**

The terms “solid waste” and “medical waste” shall have the meanings established by the Administrator pursuant to the Solid Waste Disposal Act [42 U.S.C. 6901 et seq.].

**(h) Other authority**

**(1) State authority**

Nothing in this section shall preclude or deny the right of any State or political subdivision thereof to adopt or enforce any regulation, requirement, limitation or standard relating to solid waste incineration units that is more stringent than a regulation, requirement, limitation or standard in effect under this section or under any other provision of this chapter.

**(2) Other authority under this chapter**

Nothing in this section shall diminish the authority of the Administrator or a State to establish any other requirements applicable to solid waste incineration units under any other authority of law, including the authority to establish for any air pollutant a national ambient air quality standard, except that no solid waste incineration unit subject to performance standards under this section and section 7411 of this title shall be subject to standards under section 7412 (d) of this title.

**(3) Residual risk**

The Administrator shall promulgate standards under section 7412 (f) of this title for a category of solid waste incineration units, if promulgation of such standards is required under section 7412 (f) of this title. For purposes of this <sup>3</sup> preceding sentence only—



NB: This unofficial compilation of the U.S. Code is current as of Jan. 4, 2012 (see <http://www.law.cornell.edu/uscode/uscpri.html>).

(A) the performance standards under subsection (a) of this section and section 7411 of this title applicable to a category of solid waste incineration units shall be deemed standards under section 7412 (d)(2) of this title, and

(B) the Administrator shall consider and regulate, if required, the pollutants listed under subsection (a)(4) of this section and no others.

**(4) Acid rain**

A solid waste incineration unit shall not be a utility unit as defined in subchapter IV–A of this chapter: Provided, That, more than 80 per centum of its annual average fuel consumption measured on a Btu basis, during a period or periods to be determined by the Administrator, is from a fuel (including any waste burned as a fuel) other than a fossil fuel.

**(5) Requirements of parts C and D**

No requirement of an applicable implementation plan under section 7475 of this title (relating to construction of facilities in regions identified pursuant to section 7407 (d)(1)(A)(ii) or (iii) of this title) or under section 7502 (c)(5) of this title (relating to permits for construction and operation in nonattainment areas) may be used to weaken the standards in effect under this section.

**Footnotes**

<sup>1</sup> So in original. Probably should be “subsection”.

<sup>2</sup> So in original. Probably should be subsection “(h)(3)”.

<sup>3</sup> So in original. Probably should be “the”.

(July 14, 1955, ch. 360, title I, § 129, as added Pub. L. 101–549, title III, § 305(a), Nov. 15, 1990, 104 Stat. 2577.)

**References in Text**

Section 306 of the Clean Air Act Amendments of 1990, referred to in subsec. (g), probably means section 306 of Pub. L. 101–549, which is set out as a note under section 6921 of this title.

The Solid Waste Disposal Act, referred to in subsec. (g)(6), is title II of Pub. L. 89–272, Oct. 20, 1965, 79 Stat. 997, as amended generally by Pub. L. 94–580, § 2, Oct. 21, 1976, 90 Stat. 2795, which is classified generally to chapter 82 (§ 6901 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 6901 of this title and Tables.

**Review of Acid Gas Scrubbing Requirements**

Section 305(c) of Pub. L. 101–549 provided that: “Prior to the promulgation of any performance standard for solid waste incineration units combusting municipal waste under section 111 or section 129 of the Clean Air Act [42 U.S.C. 7411, 7429], the Administrator shall review the availability of acid gas scrubbers as a pollution control technology for small new units and for existing units (as defined in 54 Federal Register 52190 (December 20, 1989)[)], taking into account the provisions of subsection (a)(2) of section 129 of the Clean Air Act.”



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## Part II

### Environmental Protection Agency

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40 CFR Part 60

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

**ENVIRONMENTAL PROTECTION  
AGENCY**

**40 CFR Part 60**

[EPA-HQ-OAR-2009-0559; FRL-9272-9]

**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 May 20, 2011. The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of May 20, 2011.

**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> Web site. 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](mailto: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<sub>x</sub> 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<sub>2</sub> 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.

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- I. National Technology Transfer and Advancement Act
- J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

## I. 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:

Category	NAICS code	Examples of potentially regulated entities
Solid waste combustors and incinerators .....	562213	Municipalities with SSI units.
Sewage treatment facilities .....	221320	

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 May 20, 2011. 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 20 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.<sup>1</sup> 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,

<sup>1</sup> *Sierra Club v. EPA*; DC Cir. Nos. 06–1066, 07–1063.

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 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.<sup>2</sup>

EPA considers SSI units to be "other solid waste incineration units," since that category is intended to 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).<sup>3</sup> 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, 2011.<sup>4</sup>

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?*

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<sub>x</sub>, PCDD/PCDF, PM, Pb, and SO<sub>2</sub>; 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<sub>x</sub>, SO<sub>2</sub>, 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

<sup>2</sup> *NRDC v. EPA*; 489 F. 3d. at 1257-8.

<sup>3</sup> CAA section 112(c)(3) and section 112(k)(3)(B)(ii).

<sup>4</sup> *Sierra Club v. Jackson*; D.DC No. 1:01CV01537.

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 <sub>2</sub> .....	0.095	0.0016
CO .....	ppmvd @ 7% O <sub>2</sub> .....	3,800	64
HCl .....	ppmvd @ 7% O <sub>2</sub> .....	1.2	0.51
Hg .....	mg/dscm @ 7% O <sub>2</sub> .....	0.28	0.037
NO <sub>x</sub> .....	ppmvd @ 7% O <sub>2</sub> .....	220	150
Pb .....	mg/dscm @ 7% O <sub>2</sub> .....	0.30	0.0074
PCDD/PCDF, TEQ .....	ng/dscm @ 7% O <sub>2</sub> .....	0.32	0.10
PCDD/PCDF, TMB .....	ng/dscm @ 7% O <sub>2</sub> .....	5.0	1.2
PM .....	mg/dscm @ 7% O <sub>2</sub> .....	80	18
SO <sub>2</sub> .....	ppmvd @ 7% O <sub>2</sub> .....	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 <sub>2</sub> .....	0.0024	0.0011
CO .....	ppmvd @ 7% O <sub>2</sub> .....	52	27
HCl .....	ppmvd @ 7% O <sub>2</sub> .....	1.2	0.24



TABLE 2—EMISSION LIMITS FOR NEW SSI UNITS—Continued

Pollutant	Units	Emission limit for MH incinerators	Emission limit for FB incinerators
Hg .....	mg/dscm @ 7% O <sub>2</sub> .....	0.15	0.0010
NO <sub>x</sub> .....	ppmvd @ 7% O <sub>2</sub> .....	210	30
Pb .....	mg/dscm @ 7% O <sub>2</sub> .....	0.0035	0.00062
PCDD/PCDF, TMB .....	ng/dscm @ 7% O <sub>2</sub> .....	0.045	0.013
PCDD/PCDF, TEQ .....	ng/dscm @ 7% O <sub>2</sub> .....	0.0022	0.0044
PM .....	mg/dscm @ 7% O <sub>2</sub> .....	60	9.6
SO <sub>2</sub> .....	ppmvd @ 7% O <sub>2</sub> .....	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<sub>x</sub>, PM, Pb or SO<sub>2</sub> 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<sub>x</sub>, PM, Pb or SO<sub>2</sub> 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.<sup>5</sup>

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 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."<sup>6</sup>

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.<sup>7</sup> 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.<sup>8</sup> Under this provision, the source 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 emission limitations were being exceeded \* \* \*" and that "[a]ll possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment and human health \* \* \*." In any judicial or administrative proceeding, the Administrator may challenge the assertion of the affirmative defense and, if the respondent has not met its burden of proving all of the requirements in the affirmative defense, appropriate penalties may be assessed in accordance with section 113 of the CAA (*see also* 40 CFR 22.77).

#### *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.<sup>9</sup>

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 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

<sup>5</sup> 40 CFR 60.2 (definition of malfunction).

<sup>7</sup> *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).

<sup>8</sup> *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 independently and objectively evaluated in a judicial or administrative proceeding).

<sup>9</sup> 40 CFR 70.6(a)(1), 70.2, 71.6(a)(1) and 71.2.

<sup>5</sup> *See, Weyerhaeuser v. Costle*, 590 F.2d 1011, 1058 (DC 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.").

later than 12 months after the date the SSI unit commences operation as a new source.<sup>10</sup>

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 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.<sup>11</sup>

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, 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 March 21, 2012. 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](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 Web site 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

<sup>10</sup> CAA section 503(c) and 40 CFR 70.5(a)(1)(i) and 71.5(a)(1)(i).

<sup>11</sup> 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).

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 Web site accessible through EPA's TTN Web. The WebFIRE Web site 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

submission 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](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 <sub>2</sub> .....	0.0019	0.0016
CO .....	ppmvd @ 7% O <sub>2</sub> .....	56	64
HCl .....	ppmvd @ 7% O <sub>2</sub> .....	0.49	0.51
Hg .....	mg/dscm @ 7% O <sub>2</sub> .....	0.0033	0.037
NO <sub>x</sub> .....	ppmvd @ 7% O <sub>2</sub> .....	63	150
Pb .....	mg/dscm @ 7% O <sub>2</sub> .....	0.0098	0.0074
PCDD/PCDF, TEQ .....	ng/dscm @ 7% O <sub>2</sub> .....	0.056	0.10
PCDD/PCDF, TMB .....	ng/dscm @ 7% O <sub>2</sub> .....	0.61	1.2
PM .....	mg/dscm @ 7% O <sub>2</sub> .....	12	18
SO <sub>2</sub> .....	ppmvd @ 7% O <sub>2</sub> .....	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 <sub>2</sub> .....	0.095	0.095
CO .....	ppmvd @ 7% O <sub>2</sub> .....	3,900	3,800
HCl .....	ppmvd @ 7% O <sub>2</sub> .....	1.0	1.2
Hg .....	mg/dscm @ 7% O <sub>2</sub> .....	0.02	0.28
NO <sub>x</sub> .....	ppmvd @ 7% O <sub>2</sub> .....	210	220
Pb .....	mg/dscm @ 7% O <sub>2</sub> .....	0.30	0.30
PCDD/PCDF, TEQ .....	ng/dscm @ 7% O <sub>2</sub> .....	0.32	0.32
PCDD/PCDF, TMB .....	ng/dscm @ 7% O <sub>2</sub> .....	5.0	5.0
PM .....	mg/dscm @ 7% O <sub>2</sub> .....	80	80
SO <sub>2</sub> .....	ppmvd @ 7% O <sub>2</sub> .....	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 <sub>2</sub> .....	0.00051	0.0011
CO .....	ppmvd @ 7% O <sub>2</sub> .....	7.4	27
HCl .....	ppmvd @ 7% O <sub>2</sub> .....	0.12	0.24
Hg .....	mg/dscm @ 7% O <sub>2</sub> .....	0.0010	0.0010
NO <sub>x</sub> .....	ppmvd @ 7% O <sub>2</sub> .....	26	30
Pb .....	mg/dscm @ 7% O <sub>2</sub> .....	0.00053	0.00062
PCDD/PCDF, TEQ .....	ng/dscm @ 7% O <sub>2</sub> .....	0.0022	0.0044
PCDD/PCDF, TMB .....	ng/dscm @ 7% O <sub>2</sub> .....	0.024	0.013
PM .....	mg/dscm @ 7% O <sub>2</sub> .....	4.1	9.6
SO <sub>2</sub> .....	ppmvd @ 7% O <sub>2</sub> .....	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 <sub>2</sub> .....	0.00051	0.0024
CO .....	ppmvd @ 7% O <sub>2</sub> .....	7.4	52
HCl .....	ppmvd @ 7% O <sub>2</sub> .....	0.12	1.2
Hg .....	mg/dscm @ 7% O <sub>2</sub> .....	0.0010	0.15
NO <sub>x</sub> .....	ppmvd @ 7% O <sub>2</sub> .....	26	210
Pb .....	mg/dscm @ 7% O <sub>2</sub> .....	0.00053	0.0035
PCDD/PCDF, TEQ .....	ng/dscm @ 7% O <sub>2</sub> .....	0.0022	0.0022
PCDD/PCDF, TMB .....	ng/dscm @ 7% O <sub>2</sub> .....	0.024	0.045
PM .....	mg/dscm @ 7% O <sub>2</sub> .....	4.1	60
SO <sub>2</sub> .....	ppmvd @ 7% O <sub>2</sub> .....	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:
  - 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.
  - For all pollutants, less frequent testing is allowed if emissions are no greater than an emissions threshold of 75 percent of the emission limit.
  - 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 needed 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 DC 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 DC 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 FR 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 DC 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 minimis* 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 part 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 definition of non-hazardous secondary materials promulgated 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<sub>x</sub> 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<sub>x</sub> emissions are inversely proportional. The commenters explained that decreases in CO tend to elevate NO<sub>x</sub> 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<sub>x</sub> emissions. The commenters added that the conditions used to minimize CO (i.e., high temperature afterburners) consume more fuel and produce more CO<sub>2</sub> 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<sub>x</sub> 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 (DC 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 (5th 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, 101st 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 (DC 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<sub>x</sub> 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<sub>x</sub> controls as necessary (e.g., SNCR systems, SCR systems, FGR, or low NO<sub>x</sub> 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<sub>x</sub> 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<sub>2</sub>; 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 <sup>a</sup>	MACT floor emission limit for MH incinerators <sup>a</sup>
Cd .....	mg/dscm@7% O <sub>2</sub> .....	0.0016	0.095
CO .....	ppmvd@7% O <sub>2</sub> .....	64	3,800
HCl .....	ppmvd@7% O <sub>2</sub> .....	<sup>b</sup> 0.51	1.2
Hg .....	mg/dscm@7% O <sub>2</sub> .....	0.037	<sup>b</sup> 0.28
NO <sub>x</sub> .....	ppmvd@7% O <sub>2</sub> .....	150	220
Pb .....	mg/dscm@7% O <sub>2</sub> .....	0.0074	0.30
PCDD/PCDF TEQ .....	ng/dscm@7% O <sub>2</sub> .....	0.1	0.32
PCDD/PCDF TMB .....	ng/dscm@7% O <sub>2</sub> .....	1.2	5.0
PM .....	mg/dscm@7% O <sub>2</sub> .....	18	80
SO <sub>2</sub> .....	ppmvd@7% O <sub>2</sub> .....	15	26

<sup>a</sup> Limits were rounded up to two significant figures.

<sup>b</sup> 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 <sup>a</sup>	MACT floor emission limit for MH incinerators <sup>a</sup>
Cd .....	mg/dscm@7% O <sub>2</sub> .....	0.0011	0.0024
CO .....	ppmvd@7% O <sub>2</sub> .....	27	52
HCl .....	ppmvd@7% O <sub>2</sub> .....	0.24	<sup>c</sup> 1.2
Hg .....	mg/dscm@7% O <sub>2</sub> .....	0.0010	<sup>b</sup> 0.15
NO <sub>x</sub> .....	ppmvd@7% O <sub>2</sub> .....	30	210
Pb .....	mg/dscm@7% O <sub>2</sub> .....	0.00062	0.0035
CDD/CDF TEQ .....	ng/dscm@7% O <sub>2</sub> .....	0.0044	0.0022
CDD/CDF TMB .....	ng/dscm@7% O <sub>2</sub> .....	0.013	0.045

TABLE 8—SUMMARY OF MACT FLOOR ANALYSIS FOR NEW SSI UNITS—Continued

Pollutant	Units	MACT floor emission limit for FB incinerators <sup>a</sup>	MACT floor emission limit for MH incinerators <sup>a</sup>
PM .....	mg/dscm@7% O <sub>2</sub> .....	9.6	60
SO <sub>2</sub> .....	ppmvd@7% O <sub>2</sub> .....	5.3	26 <sup>c</sup>

<sup>a</sup> Limits were rounded up to two significant figures.  
<sup>b</sup> Limits represent three times the detection level.  
<sup>c</sup> 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.<sup>12</sup> 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 *i* and run *j* with a weight term,  $w_{ij}$ , as shown in Equation 1 of this preamble:

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

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:

$$\text{Weighted Mean: } \bar{x}^{\text{weighted}} = \frac{\sum_{i=1}^N \sum_{j=1}^{M_i} w_{ij} x_{ij}}{\sum_{i=1}^N \sum_{j=1}^{M_i} w_{ij}} \quad \text{Equation 2}$$

$$\text{Weighted Variance: } v^{\text{weighted}} = \frac{\sum_{i=1}^N \sum_{j=1}^{M_i} w_{ij} (x_{ij} - \bar{x}_U^{\text{weighted}})^2}{(K-1) \sum_{i=1}^N \sum_{j=1}^{M_i} w_{ij}} \quad \text{Equation 3}$$

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.

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

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

<sup>12</sup>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 <http://www.itl.nist.gov/div898/software/dataplot/document.html>]



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, HCl and SO<sub>2</sub> 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 (DC Cir. 2001). The commenters stated that, in *Cement Kiln Recycling Coalition v. EPA*, 255 F.3d 855 (DC 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 <sub>x</sub> .....	320–480	2,100–2,800	2,400–3,300
Pb .....	0.0056–0.0077	2.4–3.1	2.4–3.1
PCDD/PCDF TEQ <sup>a</sup> .....	0.00012–0.00016	0.00076–0.0010	0.0009–0.0012
PCDD/PCDF TMB <sup>a</sup> .....	0.0014–0.0020	0.011–0.015	0.013–0.017
PM .....	25–37	310–410	330–450
SO <sub>2</sub> .....	43–57	660–1,020	700–1,100

<sup>a</sup> 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) <sup>a</sup>
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

<sup>a</sup> 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 + after-burner for MH units	MACT floor + after-burner + 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 <sub>x</sub> .....	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 <sub>2</sub> .....	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<sub>x</sub> 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<sub>2</sub> reduction, a wet ESP for additional PM, Cd and Pb reduction, and SNCR for additional NO<sub>x</sub> reduction. We determined that it was not appropriate to go beyond-the-floor to achieve greater reduction of HCl, SO<sub>2</sub>, PM, Cd, Pb, and NO<sub>x</sub> 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 in 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 EPA’s 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<sub>x</sub> 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<sub>2</sub>. 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 (DC 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 DC 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 part 60 subpart O, 40 CFR part 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 part 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 part 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<sub>x</sub> 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<sub>2</sub>.

#### 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 <sub>x</sub> .....	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 <sub>2</sub> .....	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<sub>x</sub>, CO, PM and SO<sub>2</sub> and an increase in CO<sub>2</sub> emissions. Since NO<sub>x</sub> and SO<sub>2</sub> are covered by capped emissions trading programs, and methodological limitations prevent us from quantifying the change in CO and PM, we do not estimate an increase in secondary air impacts for this rule from additional electricity demand.

##### 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\$]		
Sub-category	Capital cost (\$million)	Annualized cost (\$million/yr) <sup>a</sup>
FB .....	10.1	3.1
MH .....	45.0	14.7
Total	55.0	17.8

<sup>a</sup> 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\$]

Sub-category	Capital cost (\$million)	Annualized cost (\$million/yr) <sup>a</sup>
FB .....	278	38
MH .....	313	42.7
Total	591	80.7

<sup>a</sup> 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 .....	0.0000000051
CO .....	0.26
HCl .....	0
Hg .....	0.0026
NO <sub>x</sub> .....	14
Pb .....	0.00053
PM .....	0
PM <sub>2.5</sub> .....	0
SO <sub>2</sub> .....	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.

#### VII. 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.<sup>13</sup> While the characteristics of the controls analyzed have changed, we have also provided a comparison of the costs and benefits of

<sup>13</sup> 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).

the proposed controls analyzed with the selected alternative in this final action. A summary of the differences are presented below.

- 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<sub>x</sub> and SO<sub>2</sub>, 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



Cost changes for selected controls analyzed (millions of 2008\$)	3% or 7% Discount rate
% 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 CFR 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 NTAA of 1995, Public Law 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 NTAA 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 11564:1998, CAN/CSA Z223.24-M1983, CAN/CSA Z223.21-M1978, ASTM D3162-94 (2005), EN 1948-3 (1996), EN 1911-1,2,3 (1998), ASTM D6735-01, EN 13211:2001, CAN/CSA Z223.26-M1987) 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<sub>x</sub>, PM and PM<sub>2.5</sub> and SO<sub>2</sub>. Sulfur dioxide and NO<sub>x</sub> are precursors for the formation of PM<sub>2.5</sub> and ozone. Reducing these emissions will reduce ozone and PM<sub>2.5</sub> 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 Web site (<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 May 20, 2011.

#### **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: February 21, 2011.

**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.

\* \* \* \* \*

(h) \* \* \*

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

60.2710(s)(1)(i) and (ii), 60.2710(t)(1)(ii), 60.2710(t)(5)(i), 60.2710(w)(3), 60.2730(q)(3), 60.4900(b)(4)(vii) and (viii), 60.4900(b)(5)(i), 60.5220(b)(4)(vii) and (viii), 60.5220(b)(5)(i), tables 1 and 2 to subpart LLLL, and tables 2 and 3 to subpart MMMM.

\* \* \* \* \*

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

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

(2) [Reserved]

■ 3. 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**

60.4760 What does this subpart do?  
60.4765 When does this subpart become effective?

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60.4775 What is a new sewage sludge incineration unit?  
60.4780 What sewage sludge incineration units are exempt from this subpart?  
60.4785 Who implements and enforces this subpart?  
60.4790 How are these new source performance standards structured?  
60.4795 Do all nine components of these new source performance standards apply at the same time?

##### **Preconstruction Siting Analysis**

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60.4805 What is a siting analysis?

##### **Operator Training and Qualification**

60.4810 What are the operator training and qualification requirements?  
60.4815 When must the operator training course be completed?  
60.4820 How do I obtain my operator qualification?  
60.4825 How do I maintain my operator qualification?  
60.4830 How do I renew my lapsed operator qualification?  
60.4835 What if all the qualified operators are temporarily not accessible?  
60.4840 What site-specific documentation is required and how often must it be reviewed by qualified operators and plant personnel?

**Emission Limits, Emission Standards, and Operating Limits and Requirements**

- 60.4845 What emission limits and standards must I meet and by when?
- 60.4850 What operating limits and requirements must I meet and by when?
- 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?
- 60.4860 Do the emission limits, emission standards, and operating limits apply during periods of startup, shutdown, 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, bag leak detection, and ash handling systems, and by what date must I conduct an initial performance evaluation?

**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 *September 21, 2011*. 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 September 21, 2011.

(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 September 21, 2011.

(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 operators and plant personnel?**

(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 octachlorinated) 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, bag leak detection, and ash handling systems, and by what date must I conduct an initial performance evaluation?**

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 you 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:

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

Where:

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

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

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

20.9 = Oxygen concentration in air, percent.

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

(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.

(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  $\pm 5$  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  $\pm 5$  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.

## 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) *Air pollution control device inspections*. 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 was 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](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)(ii)).

(1) For a SSI unit that commenced operation as a new SSI unit as of March 21, 2011, then a complete title V permit application must be submitted not later than March 21, 2012.

(2) For a SSI unit that does not commence operation as a new SSI unit until after March 21, 2011, 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 September 21, 2011 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 <sup>a</sup>	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).

TABLE 1 TO SUBPART LLLL OF PART 60—EMISSION LIMITS AND STANDARDS FOR NEW FLUIDIZED BED SEWAGE SLUDGE INCINERATION UNITS—Continued

For the air pollutant	You must meet this emission limit <sup>a</sup>	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).
Dioxins/furans (total mass basis); or Dioxins/furans (toxic equivalency basis) <sup>b</sup>	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).
Mercury .....	0.0010 milligrams per dry standard cubic meter.	3-run average (For Method 29 and ASTM D6784–02 (Reapproved 2008), <sup>c</sup> 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)). <sup>c</sup>
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).
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). <sup>c</sup>
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.
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).

<sup>a</sup> All emission limits are measured at 7 percent oxygen, dry basis at standard conditions.

<sup>b</sup> 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.

<sup>c</sup> 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 <sup>a</sup>	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).
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).
Dioxins/furans (total mass basis); or Dioxins/furans (toxic equivalency basis) <sup>b</sup>	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).
Mercury .....	0.15 milligrams per dry standard cubic meter.	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008), <sup>c</sup> 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)). <sup>c</sup>
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).
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). <sup>c</sup>
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.
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).

<sup>a</sup> All emission limits are measured at 7 percent oxygen, dry basis at standard conditions.

<sup>b</sup> 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.

<sup>c</sup> Incorporated by reference, see § 60.17.



TABLE 3 TO SUBPART LLLL OF PART 60—OPERATING PARAMETERS FOR NEW SEWAGE SLUDGE INCINERATION UNITS <sup>A</sup>

For these operating parameters	You must establish these operating limits	And monitor using these minimum frequencies		
		Data measurement	Data recording <sup>b</sup>	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 .....	Not 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				
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).			
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.	Minimum effluent water flow rate at the outlet of the electrostatic precipitator.	Hourly .....	Hourly .....	12-hour block.
Effluent water flow rate at the outlet of the electrostatic precipitator.				
Activated carbon injection				
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.	Continuous .....	Every 15 minutes ...	12-hour block.
Carrier gas flow rate or carrier gas pressure drop.	Minimum carrier gas flow rate or minimum carrier gas pressure drop.			

<sup>a</sup> 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.

<sup>b</sup> 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
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<sup>A</sup>

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. 5. Site-specific monitoring plan. 6. The site-specific monitoring plan for your ash handling system.	§ 60.4915(b).
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 <sup>b</sup> 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 fabric filter. 8. Results of initial air pollution control device inspection, including a description of repairs.	§ 60.4915(c).
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 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 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 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.	§§ 60.4915(d).

TABLE 5 TO SUBPART LLLL OF PART 60—SUMMARY OF REPORTING REQUIREMENTS FOR NEW SEWAGE SLUDGE INCINERATION UNITS <sup>A</sup>—Continued

Report	Due date	Contents	Reference
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.	<p><i>If using a CMS:</i> 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 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).</p> <p><i>If not using a CMS:</i> .....  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 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.</p>	§ 60.4915(e).
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).
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 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.	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.	§ 60.4915(g).
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 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.	

<sup>a</sup> This table is only a summary, see the referenced sections of the rule for the complete requirements.

<sup>b</sup> 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 March 21, 2012.

**§ 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.

**§ 60.5020 Is there an approval process for my state plan?**

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

**§ 60.5025 What if my state plan is not approvable?**

If you do not submit an approvable state plan (or a negative declaration letter) by March 21, 2013, 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) March 21, 2016.

(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 March 21, 2012, 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 September 21, 2011, 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 September 21, 2011 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 operators and plant personnel?**

(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<sub>2</sub>) 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 octachlorinated) 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-establish-re-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, bag leak detection, and ash handling systems, and by what date must I conduct an initial performance evaluation?**

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 you 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 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 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:

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

Where:

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

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

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

20.9 = Oxygen concentration in air, percent.

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

(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) *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.

(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  $\pm 5$  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  $\pm 5$  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 was 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/](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) March 21, 2014.

(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 file 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 September 21, 2011 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 <sup>a</sup>
Increment 1—Submit final control plan.	(Dates to be specified in state plan)
Increment 2—Final compliance.	(Dates to be specified in state plan) <sup>b</sup>

<sup>a</sup> Site-specific schedules can be used at the discretion of the state.

<sup>b</sup> The date can be no later than 3 years after the effective date of state plan approval or March 21, 2016 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 <sup>a</sup>	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).
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).



TABLE 2 TO SUBPART MMMM OF PART 60—MODEL RULE—EMISSION LIMITS AND STANDARDS FOR EXISTING FLUIDIZED BED SEWAGE SLUDGE INCINERATION UNITS—Continued

For the air pollutant	You must meet this emission limit <sup>a</sup>	Using these averaging methods and minimum sampling volumes or durations	And determining compliance using this method
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) <sup>b</sup>	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).
Mercury .....	0.037 milligrams per dry standard cubic meter.	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008) <sup>c</sup> , 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). <sup>c</sup>
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).
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. <sup>c</sup>
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.
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).

<sup>a</sup> All emission limits are measured at 7 percent oxygen, dry basis at standard conditions.

<sup>b</sup> 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.

<sup>c</sup> 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 <sup>a</sup>	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).
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).	5.0 nanograms per dry standard cubic meter; or	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).
Dioxins/furans (toxic equivalency basis) <sup>b</sup> .	0.32 nanograms per dry standard cubic meter.		

TABLE 3 TO SUBPART MMMM OF PART 60—MODEL RULE—EMISSION LIMITS AND STANDARDS FOR EXISTING MULTIPLE HEARTH SEWAGE SLUDGE INCINERATION UNITS—Continued

For the air pollutant	You must meet this emission limit <sup>a</sup>	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)), <sup>c</sup> 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)). <sup>c</sup>
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).
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). <sup>c</sup>
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).
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).

<sup>a</sup> All emission limits are measured at 7 percent oxygen, dry basis at standard conditions.

<sup>b</sup> 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.

<sup>c</sup> Incorporated by reference, see § 60.17.

TABLE 4 TO SUBPART MMMM OF PART 60—MODEL RULE—OPERATING PARAMETERS FOR EXISTING SEWAGE SLUDGE INCINERATION UNITS<sup>a</sup>

For these operating parameters	You must establish these operating limits	And monitor using these minimum frequencies		
		Data measurement	Data recording <sup>b</sup>	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.
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)			
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.				



TABLE 4 TO SUBPART MMMM OF PART 60—MODEL RULE—OPERATING PARAMETERS FOR EXISTING SEWAGE SLUDGE INCINERATION UNITS<sup>a</sup>—Continued

For these operating parameters	You must establish these operating limits	And monitor using these minimum frequencies		
		Data measurement	Data recording <sup>b</sup>	Data averaging period for compliance
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.
<b>Activated carbon injection</b>				
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.
<b>Afterburner</b>				
Temperature of the afterburner combustion chamber.	Minimum temperature of the afterburner combustion chamber.	Continuous .....	Every 15 minutes ...	12-hour block.

<sup>a</sup> 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.

<sup>b</sup> 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
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<sup>a</sup>

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. 2. Notification of any failure to meet an increment of progress. 3. Notification of any closure.	§ 60.5235(a).
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 <sup>b</sup> performance evaluation.	§ 60.5235(b).

TABLE 6 TO SUBPART MMMM OF PART 60—MODEL RULE—SUMMARY OF REPORTING REQUIREMENTS FOR EXISTING SEWAGE SLUDGE INCINERATION UNITS <sup>a</sup>—Continued

Report	Due date	Contents	Reference
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.	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 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. 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 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 § 60.5205(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 pollution 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 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. <i>If using a CMS:</i> ..... 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 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). <i>If not using a CMS:</i> 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 standard, or operating limits. 5. The averaged and recorded data for those dates.	§ 60.5235(c).
Deviation report (deviations from emission limits, emission standards, or operating limits, as specified in § 60.5235(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.	<i>If using a CMS:</i> ..... 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 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). <i>If not using a CMS:</i> 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 standard, or operating limits. 5. The averaged and recorded data for those dates.	§ 60.5235(d).

TABLE 6 TO SUBPART MMMM OF PART 60—MODEL RULE—SUMMARY OF REPORTING REQUIREMENTS FOR EXISTING SEWAGE SLUDGE INCINERATION UNITS <sup>a</sup>—Continued

Report	Due date	Contents	Reference
Notification of qualified operator deviation (if all qualified operators are not accessible for 2 weeks or more). Notification of status of qualified operator deviation.	Within 10 days of deviation ....  Every 4 weeks following notification of deviation.	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. 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. 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).  § 60.5235(e).
Notification of resumed operation following shutdown (due to qualified operator deviation and as specified in § 60.5155(b)(2)(i)). Notification of a force majeure	Within five days of obtaining a qualified operator and resuming operation.  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 must occur as soon as practicable.	1. Notification that you have obtained a qualified operator and are resuming operation.  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(e).  § 60.5235(f).
Notification of intent to start or stop use of a CMS. Notification of intent to conduct a performance test. Notification of intent to conduct a rescheduled performance test.	1 month before starting or stopping use of a CMS. At least 30 days prior to the performance test. At least 7 days prior to the date of a rescheduled performance test.	1. Intent to start or stop use of a CMS .....  1. Intent to conduct a performance test to comply with this subpart. 1. Intent to conduct a rescheduled performance test to comply with this subpart.	§ 60.5235(g).

<sup>a</sup> This table is only a summary, see the referenced sections of the rule for the complete requirements.

<sup>b</sup> CMS means continuous monitoring system.

[FR Doc. 2011-4491 Filed 3-18-11; 8:45 am]

BILLING CODE 6560-50-P

# ENVIRONMENTAL PROTECTION AGENCY

## 40 CFR Part 52

[EPA-R09-OAR-2012-0082; FRL-9634-1]

### Revisions to the Hawaii State Implementation Plan

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Direct final rule.

**SUMMARY:** EPA is taking direct final action to approve revisions to the Hawaii State Implementation Plan (SIP). These revisions concern volatile organic compound (VOC), oxides of nitrogen (NO<sub>x</sub>), and particulate matter (PM) emissions from motor vehicles, water separation, pumps, compressors, waste gas, and open burning, as well as several administrative requirements. We are approving local rules that regulate these emission sources under the Clean Air Act as amended in 1990 (CAA or the Act).

**DATES:** This rule is effective on June 26, 2012 without further notice, unless EPA receives adverse comments by May 29, 2012. If we receive such comments, we will publish a timely withdrawal in the **Federal Register** to notify the public that this direct final rule will not take effect.

**ADDRESSES:** Submit comments, identified by docket number EPA-R09-OAR-2012-0082, by one of the following methods:

1. *Federal eRulemaking Portal:* [www.regulations.gov](http://www.regulations.gov). Follow the on-line instructions.

2. *Email:* [steckel.andrew@epa.gov](mailto:steckel.andrew@epa.gov).

3. *Mail or deliver:* Andrew Steckel (Air-4), U.S. Environmental Protection Agency Region IX, 75 Hawthorne Street, San Francisco, CA 94105-3901.

*Instructions:* All comments will be included in the public docket without change and may be made available online at [www.regulations.gov](http://www.regulations.gov), including any personal information provided, unless the comment includes Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Information that you consider CBI or otherwise protected should be clearly identified as such and should not be submitted through [www.regulations.gov](http://www.regulations.gov) or email.

[www.regulations.gov](http://www.regulations.gov) is an “anonymous access” system, and EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send email directly to EPA, your email address will be automatically captured and included as part of the public comment. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

*Docket:* Generally, documents in the docket for this action are available electronically at [www.regulations.gov](http://www.regulations.gov) and in hard copy at EPA Region IX, 75

Hawthorne Street, San Francisco, California. While all documents in the docket are listed at [www.regulations.gov](http://www.regulations.gov), some information may be publicly available only at the hard copy location (e.g., copyrighted material, large maps), and some may not be publicly available in either location (e.g., CBI). To inspect the hard copy materials, please schedule an appointment during normal business hours with the contact listed in the **FOR FURTHER INFORMATION CONTACT** section.

**FOR FURTHER INFORMATION CONTACT:** Nicole Law, EPA Region IX, (415) 947-4126, [law.nicole@epa.gov](mailto:law.nicole@epa.gov).

**SUPPLEMENTARY INFORMATION:** Throughout this document, “we,” “us,” and “our” refer to EPA.

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- III. Statutory and Executive Order Reviews

### I. The State’s Submittal

#### A. What rules did the State submit?

Table 1 lists the rules we are approving with the dates that they were adopted by the local air agency and submitted by the Hawaii Department of Health (HDOH).

TABLE 1—SUBMITTED RULES

Local agency	Rule No.	Rule title	Revised	Submitted
HDOH	11-60.1-1	Definitions	11/14/03	12/14/11
HDOH	11-60.1-2	Prohibition of air pollution	11/14/03	12/14/11
HDOH	11-60.1-4	Certification	11/14/03	12/14/11
HDOH	11-60.1-8	Reporting discontinuance	11/14/03	12/14/11
HDOH	11-60.1-11	Sampling, testing, and reporting methods	11/14/03	12/14/11
HDOH	11-60.1-14	Public access to information	11/14/03	12/14/11
HDOH	11-60.1-15	Reporting of equipment shutdown	11/14/03	12/14/11
HDOH	11-60.1-16	Prompt reporting of deviations	11/14/03	12/14/11
HDOH	11-60.1-17	Prevention of air pollution emergency episodes	11/14/03	12/14/11
HDOH	11-60.1-20	Severability	11/14/03	12/14/11
HDOH	11-60.1-32	Visible emissions	11/14/03	12/14/11
HDOH	11-60.1-34	Motor vehicles	11/14/03	12/14/11
HDOH	11-60.1-40	Volatile organic compound water separation	11/14/03	12/14/11
HDOH	11-60.1-41	Pump and compressor requirements	11/14/03	12/14/11
HDOH	11-60.1-42	Waste gas disposal	11/14/03	12/14/11
HDOH	11-60.1-51	Definitions	11/14/03	12/14/11
HDOH	11-60.1-53	Agricultural burning: permit requirement	11/14/03	12/14/11
HDOH	11-60.1-54	Agricultural burning: applications	11/14/03	12/14/11
HDOH	11-60.1-56	Agricultural burning: recordkeeping and monitoring	11/14/03	12/14/11

On January 27, 2012, EPA determined that the submittal for Hawaii Department of Health Chapter 60.1 met the completeness criteria in 40 CFR Part 51 Appendix V, which must be met before formal EPA review.

*B. Are there other versions of these rules?*

There are no previous versions of Rules 11-60.1-4, 11-60.1-14, 11-60.1-40, 11-60.1-41, 11-60.1-42, and 11-60.1-51 in the SIP. We approved earlier versions of Rules 11-60.1-1 (formerly numbered 11-60-1), 11-60.1-2 (11-60-17), 11-60.1-8 (11-60-10), 11-60.1-11 (11-60-15 and 11-60-6), 11-60.1-15 (11-60-16), 11-60.1-16 (11-60-16), 11-60.1-17 (11-60-35), 11-60.1-20 (11-60-38), 11-60.1-32 (11-60-24), 11-60.1-34 (11-60-25), 11-60.1-53 (11-60-19), 11-60.1-54 (11-60-20), and 11-60.1-56 (11-60-22) into the SIP on August 18, 1983 (48 FR 37402). The HDOH adopted revisions to the SIP-approved versions on November 14, 2003 and submitted them to us on December 14, 2011.

*C. What is the purpose of the submitted rule revisions?*

VOCs and NO<sub>x</sub> help produce ground-level ozone and smog, which harm human health and the environment. PM contributes to effects that are harmful to human health and the environment, including premature mortality, aggravation of respiratory and cardiovascular disease, decreased lung function, visibility impairment, and damage to vegetation and ecosystems. Section 110(a) of the CAA requires States to submit regulations that control VOC, NO<sub>x</sub>, and PM emissions. New rules requiring controls on water separation units, pumps, compressors, and waste gas disposal have been adopted. Several rule revisions have been made to update and clarify administrative rules. EPA's technical support document (TSD) has more information about these rules.

## II. EPA's Evaluation and Action

*A. How is EPA evaluating the rules?*

Generally, SIP rules must be enforceable (see section 110(a) of the Act), and must not relax existing requirements (see sections 110(l)). Section 193 of the CAA does not apply to this action because the entire State of Hawaii is designated unclassifiable/attainable for all of the current NAAQS.

*B. Do the rules meet the evaluation criteria?*

We believe these rules are consistent with the relevant policy and guidance

regarding enforceability and SIP relaxations. The TSD has more information on our evaluation.

*C. Public Comment and Final Action.*

As authorized in section 110(k)(3) of the Act, EPA is fully approving the submitted rules because we believe they fulfill all relevant requirements. We do not think anyone will object to this approval, so we are finalizing it without proposing it in advance. However, in the Proposed Rules section of this **Federal Register**, we are simultaneously proposing approval of the same submitted rules. If we receive adverse comments by May 29, 2012, we will publish a timely withdrawal in the **Federal Register** to notify the public that the direct final approval will not take effect and we will address the comments in a subsequent final action based on the proposal. If we do not receive timely adverse comments, the direct final approval will be effective without further notice on June 26, 2012. This will incorporate these rules into the federally enforceable SIP.

Please note that if EPA receives adverse comment on an amendment, paragraph, or section of this rule and if that provision may be severed from the remainder of the rule, EPA may adopt as final those provisions of the rule that are not the subject of an adverse comment.

## III. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve State choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this action merely approves State law as meeting Federal requirements and does not impose additional requirements beyond those imposed by State law. For that reason, this action:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);

- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4);

- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);

- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);

- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);

- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and

- Does not provide EPA with the discretionary authority to address disproportionate human health or environmental effects with practical, appropriate, and legally permissible methods under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

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 action 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).

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by June 26, 2012. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does



it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. Parties with objections to this direct final rule are encouraged to file a comment in response to the parallel notice of proposed rulemaking for this action published in the Proposed Rules section of today's **Federal Register**, rather than file an immediate petition for judicial review of this direct final rule, so that EPA can withdraw this direct final rule and address the comment in the proposed rulemaking. This action may not be challenged later in proceedings to enforce its requirements (see section 307(b)(2)).

#### List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations,

Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: February 1, 2012.

**Jared Blumenfeld**,  
*Regional Administrator, Region IX.*

Part 52, Chapter I, Title 40 of the Code of Federal Regulations is amended as follows:

#### PART 52—[AMENDED]

■ 1. The authority citation for Part 52 continues to read as follows:

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

#### Subpart M—Hawaii

■ 2. In § 52.620, the table in paragraph (c) is amended by:

■ a. Removing the following thirteen entries under the category for Title 11,

Chapter 60: 11–60–1, 11–60–6, 11–60–10, 11–60–15, 11–60–16, 11–60–17, 11–60–19, 11–60–20, 11–60–22, 11–60–24, 11–60–25, 11–60–35, and 11–60–38.

■ b. Following all entries in the category for Chapter 60, adding a new category for Chapter 60.1.

■ c. Adding the following nineteen new entries under the category for Chapter 60.1: sections 11–60.1–1, 11–60.1–2, 11–60.1–4, 11–60.1–8, 11–60.1–11, 11–60.1–14, 11–60.1–15, 11–60.1–16, 11–60.1–17, 11–60.1–20, 11–60.1–32, 11–60.1–34, 11–60.1–40, 11–60.1–41, 11–60.1–42, 11–60.1–51, 11–60.1–53, 11–60.1–54, and 11–60.1–56.

The amendments to paragraph(c) read as follows:

#### § 52.620 Identification of plan.

\* \* \* \* \*  
 (c) \* \* \*

#### EPA-APPROVED STATE OF HAWAII REGULATIONS

State citation	Title/subject	Effective date	EPA approval date	Explanation
*	*	*	*	*
Department of Health, Title 11, Chapter 60.1, Air Pollution Control.	Hawaii Administrative Rules			
11–60.1–1 .....	Definitions .....	11/14/2003	4/27/2012 [Insert page number where the document begins].	Supersedes 11–60–1.
11–60.1–2 .....	Prohibition of air pollution .....	11/14/2003	4/27/2012 [Insert page number where the document begins].	Supersedes 11–60–17.
11–60.1–4 .....	Certification .....	11/14/2003	4/27/2012 [Insert page number where the document begins].	New regulation.
11–60.1–8 .....	Reporting discontinuance .....	11/14/2003	4/27/2012 [Insert page number where the document begins].	Supersedes 11–60–10.
11–60.1–11 .....	Sampling, testing, and reporting methods.	11/14/2003	4/27/2012 [Insert page number where the document begins].	Supersedes 11–60–15 and 11–60–6.
11–60.1–14 .....	Public access to information ..	11/14/2003	4/27/2012 [Insert page number where the document begins].	New regulation.
11–60.1–15 .....	Reporting of equipment shutdown.	11/14/2003	4/27/2012 [Insert page number where the document begins].	Supersedes 11–60–16.
11–60.1–16 .....	Prompt reporting of deviations	11/14/2003	4/27/2012 [Insert page number where the document begins].	Supersedes 11–60–16.
11–60.1–17 .....	Prevention of air pollution emergency episodes.	11/14/2003	4/27/2012 [Insert page number where the document begins].	Supersedes 11–60–35.
11–60.1–20 .....	Severability .....	11/14/2003	4/27/2012 [Insert page number where the document begins].	Supersedes 11–60–38.
11–60.1–32 .....	Visible emissions .....	11/14/2003	4/27/2012 [Insert page number where the document begins].	Supersedes 11–60–24.
11–60.1–34 .....	Motor vehicles .....	11/14/2003	4/27/2012 [Insert page number where the document begins].	Supersedes 11–60–25.

EPA-APPROVED STATE OF HAWAII REGULATIONS—Continued

State citation	Title/subject	Effective date	EPA approval date	Explanation
11-60.1-40 .....	Volatile organic compound water separation.	11/14/2003	4/27/2012 [ <i>Insert page number where the document begins</i> ].	New regulation.
11-60.1-41 .....	Pump and compressor requirements.	11/14/2003	4/27/2012 [ <i>Insert page number where the document begins</i> ].	New regulation.
11-60.1-42 .....	Waste gas disposal .....	11/14/2003	4/27/2012 [ <i>Insert page number where the document begins</i> ].	New regulation.
11-60.1-51 .....	Definitions .....	11/14/2003	4/27/2012 [ <i>Insert page number where the document begins</i> ].	Supersedes 11-60-1.
11-60.1-53 .....	Agricultural burning: permit requirement.	11/14/2003	4/27/2012 [ <i>Insert page number where the document begins</i> ].	Supersedes 11-60-19.
11-60.1-54 .....	Agricultural burning: applications.	11/14/2003	4/27/2012 [ <i>Insert page number where the document begins</i> ].	Supersedes 11-60-20.
11-60.1-56 .....	Agricultural burning: record-keeping and monitoring.	11/14/2003	4/27/2012 [ <i>Insert page number where the document begins</i> ].	Supersedes 11-60-22.

\* \* \* \* \*

[FR Doc. 2012-10102 Filed 4-26-12; 8:45 am]

BILLING CODE 6560-50-P

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 60**

[EPA-HQ-OAR-2009-0559; FRL-9664-9]

RIN 2060-AP90

**Denial of Reconsideration Petitions on Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Sewage Sludge Incineration Units**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Denial of petitions for reconsideration.

**SUMMARY:** The EPA is providing notice that it has denied two petitions for reconsideration of a final rule published in the **Federal Register** on March 21, 2011. The rule established new source performance standards and emission guidelines for sewage sludge incineration units located at wastewater treatment facilities designed to treat domestic sewage sludge, and was issued pursuant to the EPA's authority under Clean Air Act section 129 to regulate solid waste incineration units. After publication of the rule, the EPA received petitions for reconsideration of the final rule from the National Association of Clean Water Agencies (NACWA) (dated May 24, 2011) and the Sierra Club (dated May 20, 2011). After carefully considering the petitions and

supporting information, in reaching a decision on the petitions, EPA Administrator Lisa P. Jackson denied the petitions for reconsideration on April 6, 2012, in separate letters to the petitioners. EPA denied the petitions because they fail to meet the procedural test for reconsideration under CAA section 307(d)(7)(B), and/or are not of central relevance to the outcome of the rule, both of which are necessary conditions precedent to granting reconsideration. The letters explain in detail EPA's reasons for the denials.

**FOR FURTHER INFORMATION CONTACT:** Ms. Amy Hambrick, Sector Policies and Programs Division (E143-03), Office of Air Quality Planning and Standards, Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-0964; fax number: (919) 541-3470; email address: [hambrick.amy@epa.gov](mailto:hambrick.amy@epa.gov).

**SUPPLEMENTARY INFORMATION:**

**I. How can I get copies of this document and other related information?**

This **Federal Register** notice, the petitions for reconsideration, and the letters denying the petitions for reconsideration are available in the docket that the EPA established for the "Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Sewage Sludge Incineration Units" under Docket ID No. EPA-HQ-OAR-2009-0559. The document identification numbers for the petitions for reconsideration are: Sierra Club, EPA-HQ-OAR-2009-0559-0173; and NACWA, EPA-HQ-OAR-2009-0559-0174 (petition). The document

identification number for EPA's response letters are EPA-HQ-OAR-2009-0559-0181. All documents in the docket are listed on the [www.regulations.gov](http://www.regulations.gov) Web site. 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 [www.regulations.gov](http://www.regulations.gov) or in hard copy at the EPA Docket Center (Air Docket), EPA/DC, EPA West, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744 and the telephone number for the Air Docket is (202) 566-1742.

This **Federal Register** notice, the petitions for reconsideration and the letters denying the petitions can also be found on the EPA's Web site at <http://www.epa.gov/ttn/atw/129/ssi/ssipg.html>. The "Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Sewage Sludge Incineration Units" rules were published in the **Federal Register** on March 21, 2011, at 76 FR 15372.

**II. Judicial Review**

Any petitions for review of the letters denying the petitions for