

- Make sure to submit your comments by the deadline in this notice.
- Be sure to include the name, date, and docket number with your comments.

List of Subjects

40 CFR Part 63

Air pollution control, Hazardous substances, Reporting and recordkeeping requirements.

40 CFR Part 264

Air pollution control, Environmental Protection Agency, Hazardous waste, Insurance, Packaging and containers, Reporting and recordkeeping requirements, Security measures, Surety bonds.

Dated: June 18, 2001.

Christine Todd Whitman,
Administrator.

[FR Doc. 01-16427 Filed 7-2-01; 8:45 am]

BILLING CODE 6560-50-U

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 63, 264, 265, 266, and 270

[FRL-7001-9]

RIN 2050-AE79

NESHAP: Standards for Hazardous Air Pollutants for Hazardous Waste Combustors—Proposed Amendments

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: Under the Clean Air Act (CAA), EPA established new emissions standards for hazardous waste burning cement kilns, lightweight aggregate kilns, and incinerators on September 30, 1999 (NESHAP: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors). Following promulgation of this final rule, the regulated community, through informal comments and through litigation, raised numerous issues related to specific requirements of the final rule. In response to relevant concerns, we are proposing and taking comment on certain targeted changes to the final rule. These regulatory changes do not propose to amend the numerical emission standards, but rather focus on improvements to the implementation of the emission standards, primarily in the areas of compliance, testing and monitoring.

DATES: Comments must be submitted by August 17, 2001.

ADDRESSES: If you wish to comment on this proposed rule, you must send an original and two copies of the comments referencing Docket Number F-2001-RC5P-FFFFF to: RCRA Information Center (RIC), Office of Solid Waste (5305G), U.S. Environmental Protection Agency Headquarters (EPA HQ), Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, D.C. 20460-0002; or, (2) if using special delivery, such as overnight express service: RIC, Crystal Gateway One, 1235 Jefferson Davis Highway, First Floor, Arlington, VA 22202. You may also submit comments electronically following the directions in the **SUPPLEMENTARY INFORMATION** section below.

You may view public comments and supporting materials in the RIC. The RIC is open from 9 am to 4 pm Monday through Friday, excluding Federal holidays. To review docket materials, we recommend that you make an appointment by calling 703-603-9230. You may copy up to 100 pages from any regulatory document at no charge. Additional copies cost \$ 0.15 per page. For information on accessing an electronic copy of the data base, see the **SUPPLEMENTARY INFORMATION** section.

FOR FURTHER INFORMATION CONTACT: For general information, call the RCRA Call Center at 1-800-424-9346 or TDD 1-800-553-7672 (hearing impaired). Callers within the Washington Metropolitan Area must dial 703-412-9810 or TDD 703-412-3323 (hearing impaired). The RCRA Call Center is open Monday-Friday, 9 am to 4 pm, Eastern Standard Time. For more information on specific aspects of this proposed rule, contact Mr. Frank Behan at 703-308-8476, behan.frank@epa.gov, or write him at the Office of Solid Waste, 5302W, U.S. EPA, Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, D.C. 20460.

SUPPLEMENTARY INFORMATION:

Submittal of Comments

You may submit comments electronically by sending electronic mail through the Internet to: rcra-docket@epamail.epa.gov. You should identify comments in electronic format with the docket number F-2001-RC5P-FFFFF. You must submit all electronic comments as an ASCII (text) file, avoiding the use of special characters or any type of encryption. The official record for this action will be kept in the paper form. Accordingly, we will transfer all comments received electronically into paper form and place them in the official record which will also include all comments submitted directly in writing. The official record is

the paper record maintained at the RIC as described above. We may seek clarification of electronic comments that are garbled in transmission or during conversion to paper form.

You should not electronically submit any confidential business information (CBI). You must submit an original and two copies of CBI under separate cover to: RCRA CBI Document Control Officer, Office of Solid Waste (5305W), U.S. EPA, Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, D.C. 20460.

If you do not submit comments electronically, we are asking prospective commenters to voluntarily submit one additional copy of their comments on labeled personal computer diskettes in ASCII (text) format or a word processing format that can be converted to ASCII (text). It is essential that you specify on the disk label the word processing software and version/edition as well as the commenter's name. This will allow us to convert the comments into one of the word processing formats used by the Agency. Please use mailing envelopes designed to protect the diskettes. We emphasize that submission of diskettes is not mandatory, nor will it result in any advantage or disadvantage to any commenter.

Acronyms Used in the Rule

APCD—Air pollution control device
ASME—American Society of Mechanical Engineers
CAA—Clean Air Act
CEMS—Continuous emissions monitors/monitoring system
COMS—Continuous opacity monitoring system
CFR—Code of Federal Regulations
DOC—Documentation of Compliance
DRE—Destruction and removal efficiency
dscf—Dry standard cubic feet
dscm—Dry standard cubic meter
EPA/USEPA—United States Environmental Protection Agency
gr—Grains
HAP—Hazardous air pollutant
HWC—Hazardous waste combustor
MACT—Maximum Achievable Control Technology
NESHAP—National Emission Standards for HAPs
ng—Nanograms
NIC—Notice of Intent to Comply
NOC—Notification of compliance
OPL—Operating parameter limit
PM—Particulate matter
POHC—Principal organic hazardous constituent
ppmv—Parts per million by volume
RCRA—Resource Conservation and Recovery Act
TEQ—Toxicity equivalence

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Part One: Overview and Background for This Proposed Rule

I. What Is the Purpose of This Proposed Rule?

Today's notice proposes specific changes to the NESHAP: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors (Phase I) rule, published September 30, 1999 (64 FR 52828). After promulgation, commenters (primarily the regulated community) raised numerous potential issues through informal comments and during litigation settlement discussions. After considering the issues raised, we have decided to propose for comment twenty amendments to the final rule, most of the proposed changes relating to compliance and implementation of the rule.

The ability of facilities to meet the September 30, 2002 compliance date may be dependent upon when these proposed changes are made final. While we expect to complete the rulemaking process and publish final amendments in a timely manner, we request comments on how the timing of these rule changes could impact compliance. In addition, we solicit comments on solutions to address compliance problems should they arise (e.g., use of § 63.1206(b)(4) to obtain an extension of compliance with the emission standards of up to one year).

In the "Rules and Regulations" section of the **Federal Register**, we are taking direct final action on thirteen additional amendments to the Phase I rule. If you wish to comment on those amendments, you must submit comments following the directions in the **ADDRESSES** section of that action.

The remaining sections of this part provide additional background information on the Phase I final rule.

II. What Is the Phase I Rule?

In the Phase I final rule, we adopted National Emissions Standards for Hazardous Air Pollutants to control toxic emissions from the burning of hazardous waste in incinerators, cement kilns, and lightweight aggregate kilns. These emission standards created a technology-based national cap for hazardous air pollutant emissions from the combustion of hazardous waste in these devices. Additional risk-based conditions necessary to protect human health and the environment may be imposed (assuming a proper, site-specific justification) under section 3005(c)(3) of the Resource Conservation and Recovery Act (RCRA).

Section 112 of the CAA requires emissions standards for hazardous air

pollutants to be based on the performance of the Maximum Achievable Control Technology (MACT). These standards apply to the three major categories of hazardous waste burners—incinerators, cement kilns, and lightweight aggregate kilns. For purposes of today's proposal, we refer to these three categories collectively as hazardous waste combustors (HWC). Hazardous waste combustors burn about 80% of the hazardous waste combusted annually within the United States. The Phase I HWC MACT standards are expected to achieve significant reductions in the amount of hazardous air pollutants being emitted each year.

Additionally, the Phase I HWC MACT rule satisfies our obligation under RCRA (the main statute regulating hazardous waste management) to ensure that hazardous waste combustion is conducted in a manner protective of human health and the environment. By using both CAA and RCRA authorities in a harmonized fashion, we consolidate regulatory control of hazardous waste combustion into a single set of regulations, thereby minimizing the potential for conflicting or duplicative federal requirements.

More information on the Phase I HWC MACT rule is available electronically from the World Wide Web at www.epa.gov/hwcmact.

III. What Related Actions Have Been Taken Since Publication of the Phase I Rule?

On November 19, 1999, we issued a technical correction to the Phase I HWC MACT final rule (64 FR 63209). It clarified our intent with respect to certain aspects of the Notification of Intent to Comply and Progress Report requirements of the 1998 "Fast Track" final rule (63 FR 33783). Additionally, specific to the Phase I HWC MACT final rule, we corrected several typographical errors and omissions.

On July 10, 2000, we issued a second technical correction to the Phase I HWC MACT final rule (65 FR 42292). This action corrected additional typographical errors and clarified several issues to make the Phase I rule easier to understand and implement. This action also supplied one omission from the technical correction published on November 19, 1999, and made one correction to the related June 19, 1998 "Fast Track" final rule (63 FR 33783).

On July 25, 2000, the Court of Appeals for the District of Columbia decided *Chemical Manufacturers Association v. EPA*, 217 F. 3d 861 (D.C. Cir. No. 99–1236). The court held that EPA had the legal authority to

promulgate a requirement of early cessation of hazardous waste burning activity for those sources not intending to comply with the MACT emission standards. However, the court also held that we had not adequately explained our reasons for imposing the early cessation requirement. As a result, the court vacated the early cessation requirement and the related Notice of Intent to Comply (NIC) and Progress Report requirements. This vacature took effect on October 11, 2000. Since the requirements were not vacated until after sources were required to submit their NICs (on October 2, 2000), we determined that the court's action does not impact a source's ability to request a RCRA permit modification using the streamlined procedures of 40 CFR 270.42(j)(1). As long as a source complied with the NIC provisions (including filing the NIC before the provision was vacated), the source has met the requirements in 40 CFR 270.42(j)(1) and is therefore eligible for the streamlined RCRA permit modification process. The court's decision does not impact the emission standards or compliance schedule for the other requirements of the HWC NESHAP Subpart EEE.

On November 9, 2000, we issued a third technical correction to the Phase I HWC MACT final rule (65 FR 67268). It clarified our intent with respect to the applicability of new source versus existing source standards for hazardous waste incinerators. This action also clarified three issues to make the Phase I rule easier to understand and implement.

On May 14, 2001, we issued a final rule implementing two court orders that removed affected provisions of the Phase I HWC MACT final rule from the Code of Federal Regulations (66 FR 24270). This action removed the Notice of Intent to Comply provisions (discussed above) and certain operating parameter limits of baghouses and electrostatic precipitators.

IV. How Can I Influence EPA's Thinking on This Rule?

In developing this proposal, we tried to address the concerns of all our stakeholders. Your comments will help us improve this rule. We invite you to provide different views on options we propose, new approaches we haven't considered, new data, how this rule may effect you, or other relevant information. We welcome your views on all aspects of this proposed rule. Your comments will be most effective if you follow the suggestions below:

- Explain your views as clearly as possible and why you feel that way.

- Provide solid technical and cost data to support your views.
- If you estimate potential costs, explain how you arrived at the estimate.
- Tell us which parts you support, as well as those you disagree with.
- Provide specific examples to illustrate your concerns.
- Offer specific alternatives.
- Refer your comments to specific sections of the proposal, such as the units or page numbers of the preamble, or the regulatory sections.
- Make sure to submit your comments by the deadline in this notice.
- Be sure to include the name, date, and docket number with your comments.

Part Two: NESHAP—Proposed Amendments to the HWC Final Rule

I. Definition of Research, Development, and Demonstration Sources

Section 63.1200, Table 1, exempts research, development, and demonstration sources from the Part 63, Subpart EEE, hazardous waste combustor MACT standards.¹ We explained at promulgation that the hazardous waste combustor emission standards and compliance assurance requirements may not be appropriate for these sources because of their typically intermittent operations and small size. See 64 FR at 52839.

The rule defines research, development, or demonstration sources as those sources engaged in laboratory, pilot plant, or prototype demonstration operations: (1) Whose primary purpose is to conduct research, development, or short-term demonstration of an innovative and experimental hazardous waste treatment technology or process; and (2) where the operations are under the close supervision of technically-trained personnel.

Stakeholders express concern that the definition of demonstration source and the provision to allow unlimited one-year time extensions to the exemption may result in commercial, production sources taking inappropriate advantage of the exemption. We request comment on approaches to preclude inappropriate use of the exemption for demonstration sources. Approaches that we are considering include: (1) Clearly distinguishing between research and development sources versus demonstration sources, and limiting the exemption for demonstration sources to one year or less; or (2) requiring

¹ Hazardous waste research, development, and demonstration sources remain subject to RCRA permit requirements under § 270.65. See 64 FR at 52839.

documentation of how a source's demonstration of an innovative or experimental hazardous waste treatment technology or process is different from the waste management services provided by a commercial hazardous waste combustor.

II. Identification of an Organics Residence Time That Is Independent of and Shorter Than the Hazardous Waste Residence Time

"Hazardous waste residence time" is defined at § 63.1201(a) as the time elapsed from cutoff of the flow of hazardous waste into the combustor (including, for example, the time required for liquids to flow from the cutoff valve into the combustor) until solid, liquid, and gaseous materials from the hazardous waste, excluding residues that may adhere to combustion chamber surfaces, exit the combustion chamber. As stakeholders recognize, hazardous waste residence time has significant regulatory and enforcement implications. For example, if a source were to exceed an operating requirement or emission standard after the hazardous waste residence time has expired, it is not a violation if the exceedance occurred during start-up or shut-down, or because of a malfunction provided that the source follows the procedures and corrective measures prescribed in the start-up, shut-down, and malfunction plan. In addition, after the hazardous waste residence time has expired, sources may elect to comply with emission standards the Agency has promulgated under sections 112 and 129 of the Clean Air Act for source categories that do not burn hazardous waste in lieu of the hazardous waste combustor standards of Subpart EEE, Part 63. See § 63.1206(b)(1).²

Since promulgation of the hazardous waste combustor rule, stakeholders have raised the issue of whether a hazardous waste organics residence time should be defined that is independent of and shorter than the bulk solids residence time.

Industry stakeholders recommend an approach to calculate a hazardous waste organics residence time that defines when organic constituents in solid materials have been destroyed.³ Although the concept has merit, several

² As discussed in Section XIX, if sources elect to comply temporarily with alternative section 112 or 129 MACT standards after the hazardous waste residence time has expired, sources nonetheless remain an affected source only under Subpart EEE for hazardous waste combustors.

³ Email from David Case, Environmental Treatment Council, to Bob Holloway, EPA, with attachment entitled "Proposed Method for Calculation of Hazardous Constituents Retention Time," dated June 7, 2000.

issues must be addressed prior to revising the rule to allow sources to petition the Administrator for case-by-case determinations of an organics residence time. We therefore are not proposing a change at this time but are requesting comment on the concept and implementation of an organic residence time.

As contemplated by stakeholders, the hazardous waste organics residence time would be independent of and considerably shorter than the bulk hazardous waste residence time discussed above. As with the bulk hazardous waste residence time, an organics residence time would have significant regulatory and enforcement implications. After the hazardous waste organics residence time has expired, an exceedance of the carbon monoxide or hydrocarbon emission standard or an operating parameter limit associated with the destruction and removal efficiency (DRE) or dioxin/furan emission standards would not be a violation if the exceedance occurred during start-up or shut-down or were caused by a malfunction and sources comply with the procedures and corrective measures prescribed in the start-up, shut-down, and malfunction plan. In addition, it seems appropriate to allow sources to elect to comply with standards the Agency has promulgated under sections 112 or 129 of the Clean Air Act to control organic emissions for source categories that do not burn hazardous waste in lieu of the hazardous waste combustor standards of Subpart EEE, Part 63. As discussed in Section III below, however, providing only a partial transition from the hazardous waste combustor MACT standards of Subpart EEE may be problematic.

A. What Is the Approach Stakeholders Recommend to Calculate Hazardous Waste Organics Residence Time?

Stakeholders suggest that a hazardous waste organics residence time can be calculated as the sum of: (1) The time for the solid matrix containing the organic constituents to reach the target temperature required to destroy the organics; (2) the time for the organic constituent to be destroyed at the target temperature; and (3) the time for the gas to pass through the combustion chamber and exit the air pollution control system. The time required for the organic constituents within the solid matrix to reach the target temperature would be calculated using standard heat transfer equations which are available in

chemical engineering references.⁴ Stakeholders state that these equations can be applied to various materials, assuming the thermal conductivity of the material. These equations also can be applied easily to various geometries, such as a 55 gallon drum (right circular cylinder), or to irregular shaped items resulting from shredder feed.

Stakeholders state that once the solid is at the target temperature the time for the hazardous constituent to be destroyed can be calculated using equations that are readily available from Dr. Dellinger's work on developing the low oxygen thermal stability index for hazardous organic compound incinerability.⁵ Using Dellinger's kinetic models under low oxygen conditions, the destruction time for hazardous constituents can be calculated.

To implement this approach to calculate a hazardous waste organics residence time, stakeholders suggest that sources should include the retention time evaluation and calculations in a report developed by an independent Professional Engineer with combustion engineering expertise. Sources would submit the report to the Administrator for review and approval.

B. How Would Site-Specific Factors Be Addressed?

Stakeholders state that the general approach can be readily applied to various scenarios as necessary on a site-specific basis. Stakeholders have considered how some scenarios could be addressed, as discussed below, and believe that approaches to address other scenarios would become apparent as the approach is applied to the site-specific situation.

1. How Would Various Geometric Shapes and Sizes of Solids Be Addressed?

Stakeholders acknowledge that an incineration process can have several types of solid feed such as bulk solids, direct drum feed in various sizes, shredded waste feed, and other mechanisms. Each of these solid feed scenarios can be evaluated for the heat transfer step by assigning an appropriate geometry to the solid for use in the heat

flux equations. Heat transfer will take place more rapidly in shredded waste feed, in which the particle size of the solids is reduced. At the other extreme is a monolith in a 55 gallon drum, which will require a longer time for the center point to reach the target temperature. The center point of the monolith can be considered the point where the organic constituent is located for ensuring a worst case for the heat transfer step. Site-specific feed can be modeled by evaluating the actual geometry and size of solid feed and post-shredder feed.

2. How Would the Thermal Conductivity of the Solid Be Determined?

The time for the solid mass to reach temperature will depend on the thermal conductivity of the solid mass. The thermal conductivity is a key parameter in the heat transfer equation. The types of solid feed managed at a particular site can be used to select a worst case material for thermal conductivity. Stakeholders present as an example a facility that feeds certain polymeric monolithic materials in 55 gallon drums. Certain polymers may have a low thermal conductivity that can be used as a worst case. References such as Perry's Chemical Engineering Handbook can be consulted to provide a range of thermal conductivities for consideration. For example, stakeholders note that polypropylene has one of the lower thermal conductivities of 0.08 BTU/hr-sq.ft.-°F (see Table 23-10 in Perry's Handbook). This might provide a good worst case value to use for the solid mass thermal conductivity for this source.

3. How Would a Worst-Case Organic Constituent Be Selected?

Stakeholders suggest that a worst-case hazardous organic constituent could be selected on the basis of its ranking in various incinerability indices, just as principal organic hazardous constituents (POHCs) are selected for demonstrating destruction and removal efficiency (DRE). A constituent that ranks high in both the heat of combustion and low oxygen thermal stability indices could be used. In addition, a few compounds with complex structures that would be expected to yield various decomposition byproducts could be modeled. Examples of such compounds are pentachlorophenol, perchloroethylene, and certain pesticides. Stakeholders suggest that Dr. Dellinger's work, cited above, can be consulted to select additional worst case constituents.

⁴ Geankoplis, C.J., "Transport Processes and Unit Operations," Chapters 3 and 4, Allyn and Bacon, Inc., Boston, 1978.

⁵ B. Dellinger, et al., "Development of a Thermal Stability Based Index of Hazardous Waste Incinerability," University of Dayton Research Institute Final Report Under EPA Cooperative Agreement CR-813938, November 15, 1991. Also, B. Dellinger, et al., "Development of a Thermal Stability Based Index of Hazardous Organic Compound Incinerability," *Environmental Science and Technology*, 24, p.316, March 1990.

4. How Would the Target Destruction Temperature Be Selected?

Stakeholders suggest that target destruction temperatures can be selected based on the kinetic studies of Dr. Dellinger. Stakeholders state that Dellinger has generally found that any organic chemical and its organic byproducts can be completely destroyed at 800°C.⁶ Also, the range of destruction temperatures published by Dellinger can be consulted to select a target temperature on a site-specific basis for the types of wastes that are managed.

5. How Would Paralytic and Starved Air Conditions Be Addressed?

Stakeholders acknowledge that certain solid geometries may result in the organic constituent being isolated from combustion air, such that pyrolytic conditions must be assumed. Nonetheless, stakeholders state that a destruction time can still be calculated and the low oxygen conditions can be incorporated into the kinetic model. Dellinger has published such calculations in developing the low oxygen thermal stability index for incinerability.⁷ Stakeholders state that pyrolytic conditions would likely be required to be assumed for monolithic feed. They note that shredder-feed, however, substantially reduces the particle size of the solid feed, and mixing with combustion air is achieved.

6. How Would Heat Sink and Other Heat Consuming Factors Be Addressed?

Stakeholders acknowledge that other factors in a given waste may consume energy, requiring another step or two to the retention time calculation. For example, a solid waste monolith that is a low melting point solid will go through a melting transition that will consume heat before the temperature of the mass rises past the transition point. Stakeholders state that this step can be easily added to the retention time calculation, if necessary. Similarly, a waste may contain a pocket of water or other low boiling point material, and a step for enthalpy of vaporization may need to be added. Stakeholders note that these calculations can also be performed as a form of sensitivity analysis to determine how conservative the retention time calculation is.

⁶ See Attachment 5 of ETC's Comments to the MACT Rule, Docket F-96-RCSP-FFFFF, filed August 19, 1996.

⁷ Dellinger, B. et al, "PIC Formation Under Pyrolytic and Starved Air Conditions," EPA Publication No. EPA/600/S2-86/006, July 1986.

B. What Are the Unresolved Issues About Stakeholders' Recommended Approach?

We acknowledge that the residence time for organic constituents in a solid matrix is generally less than the residence time for the bulk hazardous waste residue. Thus, ideally, sources should be eligible for the reduced regulatory and enforcement burden discussed above once the organics residence time has expired. One promising feature of the stakeholders' approach is that it would conservatively predict how long it takes the waste monolith to heat up to volatilize the organic constituent. We are concerned, however, that their approach does not explicitly address how long it would take for: (1) The generated volatiles or their potentially toxic intermediates to diffuse to the surface of the monolith where oxygen is present for destruction; or (2) alternatively for oxygen in the bulk gas to diffuse from the surface of the monolith to reach the volatiles. In lieu of accounting for the time required to destroy organic constituents under oxidative conditions, stakeholders' approach assumes that destruction would occur within solid matrices under pyrolytic conditions. Further, stakeholders believe that calculations developed by Dellinger while developing the low oxygen thermal stability index could be used to model those pyrolytic reactions. We request comments on whether Dellinger's work on low oxygen destruction would adequately model destruction under the pyrolytic conditions that occur within solid matrices, with respect to either the time required for destruction of the initial organic constituent or the types of intermediates that would be formed and the time required to destroy the intermediates. Finally, we request comments on whether it is practicable to perform valid engineering calculations for multiple waste streams that are not homogenous and that contain multiple organic constituents of concern.

We request comment on stakeholders' approach to calculate an organics residence time and specifically whether it can be revised to address our concerns.

III. Controls on APCDs After the Hazardous Waste Residence Time Has Expired

For sources equipped with a dry particulate matter control device, we propose to maintain the semivolatile metal, low volatile metal, and

particulate matter⁸ emission standards and the associated particulate matter control device operating requirements after the hazardous waste residence time has expired and until the control device undergoes a complete cleaning cycle (e.g., for all compartments of a baghouse; for all fields of an electrostatic precipitator).⁹ For sources equipped with activated carbon injection, the dioxins/furans and mercury emission standards would also continue to apply after the hazardous waste residence time has expired until the control device undergoes a complete cleaning cycle.

A. What Concern Would This Requirement Address?

Dry particulate matter emission control devices such as electrostatic precipitators and baghouses retain collected particulate matter in the device until the sections of the device are cleaned sequentially, e.g., rapping of electrostatic precipitator plates, bag cleaning. This retained particulate matter contains metal hazardous air pollutants other than mercury due to its volatility. In addition, if the source is equipped with activated carbon injection, the collected particulate matter also will contain mercury and dioxins/furans. Our concern is that these pollutants could be emitted at levels exceeding the hazardous waste combustor emission standards after the hazardous waste residence time has expired.

After the hazardous waste residence time has expired, sources may choose to comply with MACT standards the Agency has promulgated under sections 112 and 129 of the Clean Air Act for source categories that do not burn hazardous waste in lieu of the Subpart EEE standards. See § 63.1206(b)(1).¹⁰ If sources choose to comply with those

⁸ The particulate matter emission standard is included because particulate matter is a surrogate for metal hazardous air pollutants other than mercury, the enumerated semivolatile metals, and the enumerated low volatile metals.

⁹ If sources comply with the semivolatile and low volatile metal emission standards without emissions testing by assuming all metals in feedstreams are emitted, and therefore do not rely on the particulate matter control device to comply with the emission standards for these metals, the proposed requirements to maintain compliance with the semivolatile and low volatile metals emission standards and control device operating parameter limits would not apply.

¹⁰ As discussed in Section XIX of the text, if sources choose to comply with otherwise applicable section 112 or 129 requirements (e.g., Subpart LLL for cement kilns) after the hazardous waste residence time has expired, sources remain an affected source under Subpart EEE only. Sources would comply with those otherwise applicable MACT standards under an alternative mode of operation that sources would specify under § 63.1209(j).

otherwise applicable MACT standards, we are concerned that these standards may not adequately ensure that the hazardous waste-derived pollutants remaining in the dry particulate matter control device are controlled to the level required by the hazardous waste combustor rules of Subpart EEE. For example, if the alternative particulate matter standard were substantially higher than the hazardous waste combustor MACT standard, sources may be able to operate the control device under less stringent operating levels (e.g., lower power to a field of an electrostatic precipitator) which could cause the accumulated particulate matter (containing hazardous waste-derived pollutants) retained within the device to be reentrained in the stack gas. This could allow hazardous waste-derived pollutants to be emitted at levels exceeding the hazardous waste combustor MACT emission standards. When the particulate matter control device undergoes a complete cleaning cycle, the accumulated hazardous waste-derived pollutants are removed, thus precluding an exceedance of the hazardous waste combustor emission standards.

B. Is It Necessary To Require Continued Compliance With the Limit on Gas Temperature at the Inlet to the Dry Particulate Matter Control Device?

We considered whether increasing the gas temperature at the inlet to the dry particulate matter control device, absent a requirement to maintain the temperature operating limit, could cause hazardous waste-derived semivolatile metals (and mercury and dioxins/furans if sources use activated carbon injection) contained in the accumulated particulate matter to volatilize and be emitted at levels that exceed an emission standard.

We initially conclude that, absent a gas inlet temperature limit, gas temperatures are not likely to increase to the levels necessary to volatilize enough semivolatile metals to cause an exceedance of the emission standards. This is particularly true if we consider that many sources should be able to complete a cleaning cycle of their electrostatic precipitator or baghouse within 30 minutes after the hazardous waste residence time has expired. We are concerned, however, that, for sources equipped with activated carbon injection, increases in inlet gas temperatures above the operating limit may potentially revolatilize captured mercury and dioxins/furans. We request comment on the extent to which mercury and dioxins/furans may revolatilize and be emitted because of

increased gas temperatures in the short period after the hazardous waste residence time has expired and the cleaning cycle for the dry particulate matter control device has been completed.

C. Would the Proposed Requirement Increase Cleaning Cycle Frequency and Potentially Emissions of Hazardous Air Pollutants?

As discussed above, we propose to require continued compliance with the semivolatile metal, low volatile metal, and particulate matter standards (and the dioxin/furan and mercury standards if sources use carbon injection) after the hazardous waste residence time has expired until the dry particulate matter control device undergoes a complete cleaning cycle. However, we are concerned, that unless additional controls are applied, this requirement could potentially result in an increase in particulate emissions and associated hazardous air pollutants.

When a dry particulate matter control device is cleaned, collection efficiency is temporarily degraded. For example, when the plates in the last field of an electrostatic precipitator are rapped, some of the resuspended particulate matter is unavoidably emitted. For baghouses, when the bags are cleaned, typically using a pulse of air, the collection efficiency of the cleaned bags is reduced until a layer of particulate matter reforms on the bags. Thus, increasing the cleaning frequency of a baghouse decreases its collection efficiency.

To comply with the proposed requirement to clean the particulate matter control device before the Subpart EEE metals and particulate matter standards are waived in lieu of other standards, sources may want to initiate a cleaning cycle immediately after the hazardous waste residence time has expired. Further, they may want to restart the timing of the cleaning cycle beginning with the cleaning that occurs after the hazardous waste residence time has expired. Increasing the cleaning cycle frequency could potentially result in an exceedance of the emission standards, however, if compliance with the standards has not been demonstrated during performance testing at that cleaning cycle frequency. To ensure that the emission standards are not exceeded due to increased cleaning cycle frequency, sources may not increase the cleaning cycle frequency beyond the frequency used during the comprehensive performance test.

D. How Would This Requirement Be Implemented?

If sources elect to comply temporarily with the otherwise applicable section 112 or 129 Clean Air Act standards after the hazardous waste residence time has expired, sources would remain subject to certain Subpart EEE standards and associated compliance requirements until sources completed a cleaning cycle of the dry particulate matter control device: Particulate matter, semivolatile metals, low volatile metals, and, if sources use activated carbon injection, dioxin/furan and mercury. Given that sources remain an affected source only under Subpart EEE when sources elect to comply temporarily with otherwise applicable MACT standards, sources would identify this operating scenario as an alternative mode of operation under § 63.1209(q).¹¹ Consequently, sources would specify the applicable emission standards and compliance requirements for this alternative mode of operation as: (1) Those standards and compliance requirements of Subpart EEE that remain in effect; and (2) those otherwise applicable standards and compliance requirements established under section 112 or 129 (e.g., Subpart LLL for cement kilns). If an otherwise applicable section 112 or 129 standard or compliance requirement were more stringent than a Subpart EEE standard or compliance requirement that remains in effect, sources would comply with the more stringent standard or compliance requirement.

Exceedance of a Subpart EEE operating parameter limit (OPL) for a dry particulate matter control device after the hazardous waste residence time has expired but before a cleaning cycle of the device has been completed would be evidence of failure to maintain compliance with the Subpart EEE emission standards. Given that the hazardous waste residence time has expired, however, the exceedance need not be considered for the excessive exceedance reporting requirement under § 63.1206(c)(vi). Similarly, if the exceedance occurs because of a malfunction, the exceedance would not be evidence of failure to maintain compliance with an emission standard if the source followed the corrective measures prescribed in its startup, shutdown, and malfunction plan. Thus, the consequences of an exceedance would be the same after the hazardous waste residence time has expired whether the exceedance occurs before or

¹¹ See Section XIX below in the text for additional discussion on using § 63.1209(q) to specify operations under otherwise applicable section 112 or 129 MACT standards.

after the cleaning cycle has been completed if the source chose to continue to comply with the Subpart EEE emission standards (i.e., in lieu of otherwise applicable MACT standards under a different mode of operation). Having equivalent consequences of an exceedance of an OPL after the hazardous waste residence time has expired irrespective of whether the cleaning cycle has been completed is appropriate. Our objective is simply to ensure that the Subpart EEE OPLs for the dry particulate matter control device are maintained until the cleaning cycle is completed to minimize emissions of hazardous waste-derived HAPs to below the Subpart EEE emissions standards. Our intent is not to penalize a source for exceedances that may be attributable to unavoidable malfunctions after the source has taken the preventative measures to minimize emissions of HAPs by cutting off the hazardous waste feed and allowing the hazardous waste residence time to expire.

Some stakeholders have expressed initial concern with the technical feasibility of these proposed requirements. We will be considering these concerns prior to issuing a final rule.

IV. Instantaneous Monitoring of Combustion Zone Pressure

The final rule requires sources to control combustion system leaks by either: (1) Keeping the combustion zone sealed; (2) maintaining the maximum combustion zone pressure lower than the ambient pressure measured using an instantaneous monitor; or (3) using an alternative means to provide control of system leaks. See §§ 63.1201(a), 63.1206(c)(5)(ii), and 63.1209(p). The rule defines an "instantaneous monitor" as one that continuously samples, detects and records the regulated parameter without use of an averaging period. In today's notice, we propose to revise the combustion system leak requirements to better clarify the intent of this provision, and we are taking comment on whether we should allow sources to average pressure readings over short periods of time when demonstrating that their combustion system is maintained below ambient pressure.

After publication of the final rule, stakeholders expressed concern that the requirement to maintain the combustion zone pressure lower than ambient pressure (option 2 above) could result in an overly prescriptive requirement. Stakeholders believe this regulatory language can be interpreted to require sources to monitor and record combustion zone pressure at a

frequency of every 50 milliseconds.¹² Stakeholders state such an interpretation would be problematic because of the enormous number of data points that must be recorded and because such a frequent monitoring frequency would greatly increase the number of automatic waste feed cutoffs. Stakeholders also requested that we clarify that combustion system leaks refer to fugitive emissions resulting from the combustion of hazardous waste, and not fugitive emissions that originate from nonhazardous process streams (e.g., the clinker product at a cement kiln).

After careful review of the regulatory language and after considering our original intent, we agree that the final rule is ambiguous and may be conservatively interpreted to require sources to monitor and record combustion zone pressure at a frequency of every 50 milliseconds. Therefore, in today's notice, we clarify that our intent is to require sources to use a pressure monitor and recording frequency that is adequate to detect combustion system leak events. We also clarify that the intent of the combustion system leak requirement is to prevent fugitive emissions from the combustion of hazardous waste, not fugitive emissions that originate from nonhazardous process streams.

To make these clarifications, we propose to modify the § 63.1201(a) definition of an instantaneous pressure monitor to read as follows: "Instantaneous monitoring for combustion system leak control means detecting and recording pressure without use of an averaging period, *at a frequency adequate to detect combustion system leak events from hazardous waste combustion*" (emphasis added).¹³ We also propose to revise the § 63.1209(p) automatic waste feed cutoff regulatory language to read as follows: "If you comply with the requirements for combustion system leaks under § 63.1206(c)(5) by maintaining the maximum combustion chamber zone pressure lower than ambient pressure to prevent combustion system leaks from hazardous waste combustion, sources must perform instantaneous monitoring of pressure and the automatic waste feed cutoff system must be engaged when negative

pressure is not maintained" (emphasis added).

We do not specify the monitoring and recording frequencies in the regulations, however, because sources differ in design and operation such that different monitoring and recording frequencies may be needed to ensure that fugitive emissions do not occur. Rather, sources and permit officials should determine on a site-specific basis what frequency of monitoring and recording would be appropriate. Each source should describe in the comprehensive performance test workplan and Notification of Compliance how their compliance method will ensure that fugitive emissions will not occur. We propose that this description specify the monitoring and recording frequency and how the monitoring approach will be integrated into the automatic waste feed cutoff system.

Stakeholders also suggest that we allow averaging of the pressure readings over short periods of time, e.g., a 5-second rolling average updated every second, in demonstrating the combustion system is maintained below ambient pressure. Averaging of pressure readings is less stringent than the current final rule instantaneous monitoring requirements. We request comment on whether such a monitoring approach is appropriate, and specifically, whether averaging pressure readings can adequately detect pressure excursion events that result in combustion system leaks.

V. Operator Training and Certification

On July 10, 2000, we issued a technical correction to the operator training and certification requirements of § 63.1206(c)(6) to clarify which employees are subject to the training and certification requirements and to note that the training and certification program should be tailored to the responsibilities of the employee. See 65 FR at 42295. Subsequent to this technical correction, incinerator stakeholders raised concerns about the requirement for incinerator control room operators and shift supervisors to be trained and certified under the American Society of Mechanical Engineers (ASME) Standard Number QHO-1-1994. Although the rule allows incinerator control room operators to be trained and certified under either a State program or ASME's program, stakeholders note that they are required to use the ASME program because there are no State programs at this time. Stakeholders raise the following concerns: (1) The scope of the ASME training and certification program is too broad; (2) the ASME certification

¹² The final rule preamble states that typical pressure transducers in use today are capable of responding to pressure changes once every 50 milliseconds. See 64 FR 52920.

¹³ Note that this newly proposed definition removes the word "sampling" from the definition of instantaneous pressure monitor because a pressure monitor is not thought to physically withdraw a combustion gas sample.

program is problematic for new sources and newly hired operators because it requires 6 months of operating experience at the source before full certification may be awarded; (3) the ASME control room operator training and certification program is not necessary for shift supervisors; and (4) the ASME training and certification program cannot be implemented by the regulatory compliance date.

We provide below our reasons for preferring the ASME training and certification program over site-specific, source-implemented programs, but acknowledge stakeholders' concerns that the program may be more comprehensive than necessary to ensure compliance with the requirements of Subpart EEE. Accordingly, we propose to allow incinerator control room operators to be trained and certified under: (1) A site-specific, source-developed and implemented program; (2) the ASME program; or (3) a State program. We also conclude that it may be difficult for sources that choose to use the ASME program to fully certify their control room operators by the compliance date. Therefore, we propose to require only provisional certification by the compliance date for such sources. In addition, for sources that choose to use the ASME program, only provisional certification would be required for new employees and employees at new facilities prior to their assuming duties. Finally, we propose that control room operator training and certification is not necessary for shift supervisors to help ensure that the source operates within the limits established under the rule and that emissions of hazardous air pollutants are minimized.

A. How Do We Address Concerns About the ASME Training and Certification Program?

1. Is the Scope of the ASME Program Too Broad?

Incinerator stakeholders state that the scope of the ASME training and certification program for incinerator control room operators is too broad to apply generically to all control room operators. They prefer a tailored, site-specific, source-developed and implemented training and certification program.

The ASME program requires that control room operators be trained and certified to ensure a broad knowledge of operational, preventive maintenance, safety procedures, and practices for various types of incineration systems, emission control systems, and continuous emissions monitoring

systems. Incinerator stakeholders state that there is no obvious benefit of requiring a broad knowledge of incineration issues; knowledge of only the equipment and operations at the operator's site are important. They question the benefit of, for example, an operator of a small liquid waste incinerator equipped with a wet scrubber knowing how to operate a rotary kiln incinerator equipped with a baghouse. They note further that it is unnecessarily time-consuming and stressful for operators that are unfamiliar with equipment they have never operated to undergo a rigorous training and certification program for that equipment. In addition, they note that the ASME standard was developed as a voluntary standard. Finally, they note that cement kiln and lightweight aggregate kiln control room operators may be trained and certified under a site-specific program.

The ASME program is comprised of a broad training curriculum that is implemented by each source followed by a provisional certification that is administered by ASME. Provisional certification is awarded after the operator passes a comprehensive, generic written test addressing operations of various types of incinerators and control systems. Operators with provisional certification may apply to ASME for full certification. Full certification is awarded after passing an on-site, site-specific oral examination.

We continue to believe that a broad training and certification program can be beneficial. A broad training program may enable control room operators to recommend modifications to existing equipment or make recommendations for new equipment, which may reduce HAP emissions. In addition, certification under a broad training curriculum would avoid the retraining and recertification that would be required if the source modifies the design or operation of the unit in a manner that could affect compliance with the emission standards and operating requirements of Subpart EEE.

Nonetheless, we agree with incinerator stakeholders that the broad scope of the ASME program may not be necessary to ensure compliance with the provisions of Subpart EEE. Accordingly, we propose to allow sources to use site-specific, source-developed and implemented training and certification programs, as discussed under Section B below.

2. Full Certification Under the ASME Program Cannot Be Achieved by the Compliance Date

The rule currently requires full ASME (or State) certification by the compliance date. We agree with stakeholders that this is not workable because ASME does not have the resources to implement the site-specific oral examination requisite for full certification by the compliance date. After passing the written examination and achieving provisional certification, control room operators must apply to ASME for the oral examination. Stakeholders indicate that it will take one half day per control room operator to administer the site-specific oral examination. For many facilities, the ASME oral examination team¹⁴ will require approximately one week, including travel time, to administer the exam to all control room operators. Although ASME may train several examination teams, it is unlikely that full certification examinations can be implemented at all 149 hazardous waste incineration facilities prior to the compliance date.

To address this concern, we propose to require only provisional certification by the compliance date for sources that choose to use the ASME certification program. In addition, the operator would be required to submit an application to ASME for full certification and be scheduled for the certification examination. Finally, the operator would be required to achieve full certification within 1 year of the compliance date. We hope that providing this flexibility in the deadline for full certification will encourage use of the ASME program. We specifically request comment on whether the proposed deadlines for implementing the ASME certification program are appropriate.

3. Requiring Six Months of Operating Experience at the Source Before Full Certification Is Problematic

The ASME standard requires that control room operators have six months of operating experience at the source before they can be fully certified. This is a problem for new sources and for newly hired operators. We propose to preclude this problem by requiring only provisional certification before operators at new sources and newly hired operators could assume their duties. Also, we would require that

¹⁴ The examination team is comprised of representatives from ASME, the hazardous waste industry, the operator's facility, and/or the regulatory agency or jurisdictional authority applicable to the facility.

provisionally certified operators apply to ASME for, and be scheduled for, full certification before they assume their duties. In addition, we would require that they achieve full certification within one year of assuming their duties. This will ensure that full certification will be achieved in a timely manner.

B. What Would Be the Requirements for Site-Specific, Source-Developed and Implemented Training and Certification Programs?

Under today's proposed rule, a source could choose to develop and implement a site-specific training and certification program in lieu of the ASME program or a State program. Certification under a site-specific program would be required by the compliance date given that the source will implement both the training and certification (i.e., written examination at a minimum). We note that cement and lightweight aggregate kiln sources are currently allowed to use site-specific training and certification programs because there is no ASME or other standard for these sources that addresses their hazardous waste burning activities. Because the requirements discussed below are appropriate for these sources as well, we propose to require that the requirements also apply to cement and lightweight aggregate kilns.

We propose to specify a training curriculum to ensure that the scope of the training is sufficient to ensure the control room operator can maintain compliance with the requirements of Subpart EEE. The certification program (i.e., written examination at a minimum) would be required to address the topics in the training curriculum. The training curriculum would be required to include the following topics: (1) Environmental concerns, including types of emissions; (2) basic combustion principals, including products of combustion; (3) operation of the specific type of combustor used by the operator, including proper startup, waste firing, and shutdown procedures; (4) combustion controls and continuous monitoring systems; (5) operation of air pollution control equipment and factors affecting performance; (6) inspection and maintenance of the combustor, continuous monitoring systems, and air pollution control devices; (7) actions to correct malfunctions or conditions that may lead to malfunctions; (8) residue characteristics and handling procedures; and (9) applicable Federal, state, and local regulations, including Occupational Safety and Health Administration workplace standards. This training curriculum is modeled

after the requirements the Agency recently promulgated for commercial and industrial solid waste incinerators. See 65 FR 75338 (December 1, 2000). We believe this training is also appropriate for hazardous waste combustors.

To maintain certification, an operator would be required to complete an annual review or refresher course covering, at a minimum, the following topics: (1) Update of regulations; (2) combustor operation, including startup and shutdown procedures, waste firing, and residue handling; (3) inspection and maintenance; (4) responses to malfunctions or conditions that may lead to malfunction; and (5) operating problems encountered by the operator. These are the same requirements the Agency recently promulgated for commercial and industrial solid waste incinerators at § 60.2085, and we believe they are also appropriate for hazardous waste combustors.

C. Control Room Operator Training and Certification Would Not Be Required for Shift Supervisors

The final rule requires the same level of training and certification for shift supervisors and control room operators. Incinerator stakeholders question whether shift supervisors need to meet these training and certification requirements. Stakeholders note that shift supervisors often have administrative duties that are not closely related to the technical knowledge required to operate and maintain a combustor.

After reconsideration, we agree with stakeholders' reasons for not requiring that shift supervisors be trained and certified to the level of a control room operator. Accordingly, we propose to require that shift supervisors, like personnel other than control room operators, be trained and certified to the technical level commensurate with the employee's job duties.

D. A Certified Control Room Operator Must Be on Duty At All Times

We propose to revise the rule to clarify that a certified control room operator must be on duty at the source at all times the source is in operation. Having a certified operator present at all times is necessary to ensure compliance with the emission standards and operating requirements, and to take appropriate corrective measures when malfunctions occur.

VI. Bag Leak Detection System

Section 63.1206(c)(7)(ii) of the hazardous waste combustor rule prescribes baghouse operation and

maintenance requirements for incinerators and lightweight aggregate kilns, including a requirement for the continuous operation of a bag leak detection system as a continuous monitor. Since promulgation of the rule, stakeholders have raised two issues: (1) Can less sensitive bag leak detectors be approved under the alternative monitoring provisions; and (2) why did we conclude that opacity monitors meeting revised Performance Specification 1 are not likely to be acceptable bag leak detectors.

A. Can Less Sensitive Bag Leak Detectors Be Approved Under the Alternative Monitoring Provisions?

Section 63.1206(c)(7)(ii)(D)(1) requires the bag leak detector system to be capable of continuously detecting and recording mass changes in particulate matter emissions at concentrations of 1.0 milligrams per actual cubic meter or less. Stakeholders state that monitors with higher detection limits are able to detect subtle changes in baseline, normal emissions as well as catastrophic events, and question whether these monitors can be approved under the alternative monitoring petitioning procedures of § 63.1209(g)(1).

We support the use of monitors with higher detection limits provided the monitor is sensitive enough to detect subtle increases in baseline, normal emissions, and we plan to develop guidance recommendations on this issue. We request comment on whether § 63.1206(c)(7)(ii)(D)(1) should be revised to explicitly allow the use of monitors with higher detection limits, or whether the existing alternative monitoring provisions coupled with guidance recommendations is sufficient. In addition, we request comment on how a source would document that a bag leak detection system, with a detection level higher than 1.0 milligrams per actual cubic meter, can detect subtle changes in baseline, normal mass emissions of particulate matter. For example, should we require site-specific tests to document that alternative detectors provide a measurable and repeatable change in opacity output with an increase in particulate matter mass emissions?

B. Why Did We Conclude That Opacity Monitors Meeting Revised Performance Specification 1 Are Not Likely To Be Acceptable Bag Leak Detectors?

EPA promulgated a significantly improved Performance Specification 1 (PS1) for opacity monitors on August 10, 2000. See 65 FR at 48914. We considered whether to allow use of

opacity monitors meeting PS1 as bag leak detectors, but conclude that they are not likely to be sensitive enough to detect subtle increases in mass particulate matter emissions from a source equipped with a well designed and operated baghouse.

Revised PS1 includes additional design and performance specifications as well as new test procedures that provide a profound improvement on opacity data accuracy and precision. Collectively, the additional measures provide a comprehensive, in-depth functional test of the complete measurement procedure, thereby eliminating many of the performance problems associated with previous opacity monitors.

The revisions go far beyond the previous version of PS1, drawing on recent technological advancements in optics, electronics, and information transfer. There are similar specifications for such monitors in Europe. The stipulation of automatic self-diagnosing capability is one of the many modern features incorporated into the new PS1. Taken together, the additional measures reflect a distinct new generation in the state-of-the-art of opacity monitors.

Notwithstanding the improvements that revised PS1 requires, opacity monitors are generally not acceptable for use as a bag leak detector because they are not sensitive enough to detect subtle increases in baseline, normal emissions. Baghouse emission opacity levels are very nearly zero at particulate matter concentrations below emission standards and are very near the lower detection limits of a continuous opacity monitoring system (COMS). COMS manufacturers have collectively raised the concern about COMS sensitivity limitations at low opacity levels. (See ASTM D-6216-98, Standard Practices for Opacity Monitor Manufacturers to Certify Conformance with Design and Performance Specifications.) Although the increase in particulate matter mass emissions that would trigger a measurable opacity change that a COMS could detect is usually site-specific and would depend on the particle size and reflective and refractive properties. We are concerned that particulate matter emission concentrations may have to double or triple before a COMS could detect a significant opacity change at the low opacity levels associated with baghouse emissions. For these reasons, we conclude that COMS meeting Performance Specification 1 are not likely to be suitable as bag leak detectors. Nonetheless, as discussed above, we request comment on whether an approach could be developed to allow use of bag leak detectors that have

detection limits above 1.0 milligrams per actual cubic meter.

Moreover, we note that electrodynamic and triboelectric bag leak detectors have proven to be much more sensitive and cost about the same or less than COMS to install and operate. In addition, some particulate matter continuous emissions monitors (CEMS) have been shown to be able to detect very small changes in particulate matter mass emissions at low emission levels. If sources were to use a particulate matter CEMS as a bag leak detector, sources need not correlate the detector to particulate matter emission concentrations. Rather, sources would be required to document that the CEMS provides a measurable and repeatable change in output with an increase in particulate matter mass emissions.

VII. Time Extensions For Performance Testing if the Test Plan Has Not Been Approved

During the comment period of the final rule and after promulgation, stakeholders raised the concern that the rule requires sources to commence performance testing within 180 days after September 30, 2002, even if the test plan has not been approved. Although the rule requires submittal of the test plan 12 months prior to the scheduled test date to provide a nine-month review period, stakeholders are concerned that the test plan may not be approved at the conclusion of that review period. Stakeholders state that they may spend hundreds of thousands of dollars to conduct a test under an unapproved test plan, only to learn after the test that EPA or the state may not accept the results as a valid demonstration of compliance with the emission standards due to differences of opinion on test design. In the preamble to the final rule, we address this issue by stating that "If permit officials nevertheless fail to act within the nine-month review and approval period, a source could argue that this failure is tacit approval of the plan and that later "second-guessing" is not allowable." See 64 FR at 52912. However, stakeholders are concerned that this preamble language does not guarantee that they will not have to repeat the test. Stakeholders recommend revising the rule to allow sources to wait until a test plan has been approved before conducting a performance test.

We are reluctant to deviate from the Part 63 General Provision's six-month deadline after the compliance date for conducting the initial comprehensive performance test. We continue to believe that an open-ended test date will not provide an incentive for either sources or regulatory officials to resolve

differences related to a test plan, thereby unnecessarily delaying testing. Nonetheless, we acknowledge that there may be situations where a source and regulatory officials are making genuine efforts to complete review of the test plan, but for reasons beyond their control, the review cannot be completed prior to the testing deadline. Accordingly, we propose to revise the rule to address these particular situations.

Under today's proposal, a source may petition the Administrator, under the authority of § 63.7(h), to obtain a "waiver" of any performance test—initial or periodic performance test; comprehensive or confirmatory test. The "waiver" would not eliminate the test, but would be used to grant an extension of time to conduct the performance test. To qualify for the waiver, a source must make a good faith effort to comply with the testing requirements in a timely manner. First, as currently required, sources must submit a site-specific emissions testing plan and a continuous monitoring system performance evaluation test plan at least one year before a comprehensive performance test is scheduled to begin (see § 63.1207(c)(1)), or at least 60 days before a confirmatory performance test is scheduled to begin (see § 63.1207(d)). Sources also must submit all other documentation required by Subpart EEE to be included with the performance test plans. The submitted test plans must fulfill the substantive content requirements of §§ 63.1207(f) and 63.8(e). Second, a source must make a good faith effort to accommodate the Administrator's comments on the test plans. Finally, the Administrator must not take final action, through a notification of intent to deny (see § 63.7(c)(3)(i)(B)), to deny the source's test plan(s).

Under today's proposal, sources must submit to the Administrator a waiver petition or request to renew the petition under § 63.7(h), separately for each source, at least 60 days prior to the scheduled date of the performance test. The Administrator would approve or deny the petition within 30 days of receipt and promptly notify the source of the decision. The Administrator would not approve extensions of the test date for a duration exceeding 6 months, and the Administrator would include in granted petitions a sunset provision to end the waiver within 6 months.

To renew a waiver, we are proposing that sources must submit a revised petition under § 63.7(h)(3)(iii) at least 60 days prior to the end date of the most recently approved waiver petition. The Administrator could approve a revised

petition for a total waiver period up to 12 months. A performance test could not be delayed more than a total of 12 months, irrespective of the status of approval of the test plan.

If the Administrator denies a § 63.7(h) waiver petition, we are proposing that the source must commence the performance test, with or without approved test plans, by either the deadline provided by Subpart EEE or by the expiration date of their most recently approved waiver petition, whichever is later.

Sources would also need to address, in the waiver petition, the following requirements of § 63.7(h). A source must provide documentation to enable the Administrator to determine if “the source is meeting the relevant standard(s) on a continuous basis * * *.” See § 63.7(h)(2). For extension requests of the initial comprehensive performance test, a source must submit the Documentation of Compliance to assist the Administrator in making this determination. In addition, § 63.7(h)(3)(iii) requires sources to “include information justifying the owner or operator’s request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the affected source performing the required test.”

In order to continue to keep the public informed of the source’s compliance status, the source would need to notify the public (i.e., the source’s public mailing list) of their § 63.7(h) petition to “waive” a performance test.

The following is an example time line indicating how the proposed § 63.7(h) waiver petitioning process would work for the initial comprehensive performance test. All end dates should be read as “no later than” X number of months. The time line assumes the source has submitted its performance test plans (i.e., for emissions testing and continuous monitoring system evaluation) on the deadline date—one year before the performance test must be conducted (i.e., sources submit the test plans 6 months prior to the compliance date).

- 0 time—Submittal of performance test plans for review (1 year prior to test date; 6 months prior to compliance date).
- 9 months—Administrator does not approve or deny test plans, even though the source has acted in good faith to obtain approval
- 10 months—Submittal of performance test waiver petition and notify public (2 months prior to test date).

11 months—Administrator approves or denies the performance test waiver (1 month after receipt of waiver).

12 months—Commence performance test if the Administrator denies waiver.

12 months + ≤6months—Extended performance test commencement date if the Administrator approves waiver.

16 months—If needed, submit performance test waiver renewal petition and notify public (2 months prior to sunset of latest approved waiver).

17 months—Administrator approves or denies renewal petition (1 month after receipt of renewal petition).

18 months—Maximum extension of test date for unrenewed performance test waivers.

18 months + ≤6months—Extended performance test commencement date with renewed waiver.

24 months—Maximum extension of test date for renewed performance test waivers.

VIII. Flexibility in Operations During Confirmatory Performance Testing for Dioxin/Furan

During the confirmatory performance test, the final rule requires sources to operate so that carbon monoxide or hydrocarbon levels, and operating parameter limits associated with the dioxin/furan emission standard, are within the range of the average values over the previous 12 months. Sources also must stay within the maximum or minimum value, as appropriate, that is allowed. See § 63.1207(g)(2). These requirements ensure that during the confirmatory performance test, dioxin/furan emissions are within the range of the normal to the highest allowable emissions.

Stakeholders express concern that it may be difficult to “dial in” operation of the combustor to the required range for each operating parameter simultaneously. Sources are particularly concerned about having to operate within a potentially narrow range of carbon monoxide levels for sources that normally operate close to the 100 ppmv limit. This is because carbon monoxide levels are dependent on many combustion-related factors and cannot be directly “dialed in” as can be done for other parameters (e.g., activated carbon injection federate).

Although this is not likely to be a widespread problem, we acknowledge there may be a problem in some situations. Accordingly, we propose today to revise the rule to: (1) Allow approval in the test plan for operations under a wider operating range for a

particular parameter based on information justifying that operating within the required range may be problematic; and (2) allow the Administrator to accept test results during the finding of compliance based on operations outside of the range specified in the confirmatory test plan.

Allowing the Administrator to accept test results based on operations outside of the range specified in the test plan would address when a source did not anticipate a problem in maintaining the operating levels within the required range (and therefore did not request advance approval to do so), but because of unforeseen factors, were unable to maintain the required range. This provision would give permit writers discretion to accept emissions data obtained when operating outside of the prescribed range so that sources would not have to incur the costs of an additional confirmatory test. In determining whether to accept test results from operations outside of the range specified in the test plan, permit writers would consider factors including: (1) The magnitude and duration of the deviation from the required range; (2) the historical range of the parameter (e.g., the range between the 10th and 90th percentile time-weighted average values for the parameter); (3) the proximity of the emission test results to the standard; and (4) the reason for not maintaining the required range. These factors determine whether the operations are reasonably representative of normal operations and how important it may be that test operations be truly representative of normal operations.

IX. Waiving Operating Parameter Limits During Performance Testing

Section 63.1207(h) automatically waives the operating parameter limits (OPLs) during subsequent comprehensive performance tests under an approved performance test plan. After promulgation, stakeholders raised two concerns. They believe that: (1) OPLs defined in the Documentation of Compliance should be waived during the initial comprehensive performance test and associated pretesting; and (2) OPLs should be waived during testing and pretesting irrespective of whether the test plan has been approved.

A. Should We Waive OPLs During the Initial Comprehensive Performance Test?

Section 63.1211(d) requires sources to include in the operating record a Documentation of Compliance (DOC) that establishes limits on the operating parameters under § 63.1209 that, based

on an engineering evaluation, will ensure compliance with the emission standards. The DOC may be revised at any time prior to submitting the Notification of Compliance. If additional engineering information becomes available that leads sources to conclude that they can operate under less stringent OPLs during the initial comprehensive performance test and demonstrate compliance with the emission standards, the DOC may be revised accordingly. Therefore, we do not believe that additional regulatory language is needed to enable source to operate during pretesting or the initial comprehensive performance test under OPLs less stringent than those identified in the DOC. We specifically request comment on this issue.

B. Should We Allow the OPLs To Be Waived if the Test Plan Has Not Been Approved?

Section 63.1207(h) waives the OPLs during performance testing under an approved test plan. We required pretesting and testing operations to be conducted under an approved test plan as a prerequisite for the waiver. This will ensure that operations, when the OPLs are waived, are likely to remain in compliance with the emission standards. In retrospect, however, we acknowledge that stack emissions measurements will be taken during both pretesting (see § 63.1207(h)(2)) and testing. Given that there will be documentation of any exceedance of an emissions standard during a performance test, potentially indicating a violation during such testing, it is not necessary to require that the test plan be approved before the OPLs can be waived. Similarly, if a source records the results of pretesting, the OPLs should be waived without approval of the test plan. Accordingly, we propose to revise the rule to waive the OPLs during pretesting (if the source records the results of the pretest) and performance testing. See proposed § 63.1207(h).

Although stakeholders have raised concerns about testing under an unapproved test plan (see Section VII above), there may be instances where a source may choose to test under such conditions. Consequently, the regulatory revision appears to be warranted.

X. Method 23 as an Alternative to Method 0023A for Dioxin/Furans

The final rule requires use of Method 0023A to determine compliance with the dioxin and furan emission standard. See § 63.1208(b)(1). Based on discussions with stakeholders after promulgation of the final rule, we

believe it is appropriate to request comment on amending the final rule to allow petitions for the use of Method 23 in lieu of Method 0023A.¹⁵

Method 23 is the Clean Air Act dioxin/furan air emission test method found in 40 CFR Part 60, Appendix A. Method 0023A is the RCRA dioxin/furan air emission test method found in SW-846.¹⁶ The final rule requires use of Method 0023A because this method is the updated version of Method 23. At the time of final rule publication, we believed that the improvements to the updated method warranted use of Method 0023A.

Stakeholders request that we give sources the option to use Method 23 or Method 0023A because: (1) The dioxin/furan standard is based on emissions data that was collected using Method 23 procedures; (2) Method 0023A is more expensive because of additional analytical costs; and (3) Method 0023A results in higher detection limits.

Method 23 and Method 0023A are similar methods. Method 23 combines the front half of the filter and probe rinse with the back half of the sorbent and rinses to perform a single extraction and analysis. Recovery of spiked standards into the sorbent are used to serve as an indicator of overall recovery. Method 0023A differs from Method 23, primarily in that Method 0023A uses the addition of standards to both the filter (front half) and sorbent (back half), and then separates the front half and back half for analysis in order to determine the recovery from each half. They are separated in order to better quantify recoveries for both the back half and front half fractions. This is important, because low recoveries in Method 23 are sometimes associated with dioxin/furan contained in solid phase particulate that may go unnoticed due to the combined front half and back half analysis. This may be of particular importance for sources that use activated carbon injection, or sources whose particulate matter contains significant levels of carbonaceous material. In other words, Method 0023A was designed as an improvement to Method 23 by incorporating separate recovery, spiking, and analysis of front half and back half samples to improve the quality assurance of the front half

and back half analysis. The benefits of Method 0023A compared to Method 23 include accurate recovery data and known data quality. The downsides to Method 0023A include higher analytical costs and possibly higher detection limits.

Although the detection limits of Method 0023A may be higher than Method 23 detection limits, we do not believe that these higher detection limits will adversely affect a source's ability to adequately demonstrate compliance with the dioxin/furan standard, as we explained in the technical support document to the final rule.¹⁷ This is true because analytical detection limits have decreased over recent years.

We request comment on whether we should amend the final rule to give the option to use Method 23 in lieu of Method 0023A. We are considering allowing sources to petition the authorized regulatory agency to use Method 23 in lieu of Method 0023A. Under such an approach, a source would have to justify why the use of Method 23 is warranted. Factors that could be considered by the regulatory official in reviewing these petitions include: (1) The carbonaceous content of the particulate that is emitted from the source; (2) analytical costs; (3) data quality; and (4) detection limits. For example, under this approach, we believe that a source could address Method 23 data quality concerns by submitting previous Method 0023A results to the regulatory official that document: (1) The recovery percentages of the front and back half of the analysis; and (2) the amount of dioxin and furans present in the front half. Method 0023A results that indicate good front half recoveries could support a source's claim that Method 23 is an appropriate method to demonstrate compliance with the dioxin/furan emission standard.¹⁸ The added data quality checks associated with Method 0023A may not be needed if the results of previous Method 0023A analyses indicate good front half recovery percentages. Method 23 may also be warranted if dioxin and furans are not detected, or are detected at low levels in the front half of Method 0023A.

¹⁵ Sources can currently petition EPA to use alternative test methods pursuant to § 63.7(f). The petition process that we are requesting comment on would not require sources to submit the results of a Method 301 validation process as is required under § 63.7(f).

¹⁶ Method 0023A was proposed on July 25, 1995 (see 60 FR 37974). EPA received comments on Method 0023A and later incorporated the method into SW 846 in a final rule on June 13, 1997 (see 62 FR at 32451).

¹⁷ See "Final Technical Support Document for HWC Standards, Volume IV: Compliance with HWC MACT Standards," Chapter 16, July 1999.

¹⁸ This assumes, however, that method recoveries do not significantly vary at a source for different emissions tests. Any petition to use Method 23 should address whether method recoveries are expected to change from one emission test to another.

XI. Calibration Requirements for Thermocouples

Section 63.1209(b)(2)(i) of the final rule requires verification of the calibration of each thermocouple or other temperature sensor at least once every three months. Stakeholders express concern that recalibration of each temperature measurement device every three months is a significant undertaking. Stakeholders explain that, for example, temperature measurement devices on the air pollution control train are typically flanged onto the process piping and/or vessels. To recalibrate these devices without shutting the combustor down is an involved process. Removing these measurement devices for recalibration would require the operator to enter a static value in the automatic waste feed cutoff system to avoid a cutoff, and have a technician equipped with appropriate personal protective equipment receive the appropriate line and equipment opening permits, and then try to safely remove the instrument from the process while the combustor is still running. For configurations that have pressurized portions of the air pollution control train, the combustor would be required to shut down to avoid release of fugitive emissions. Stakeholders question whether the benefits outweigh the burden of recalibrating each temperature device every three months.

Stakeholders also state that recalibration of pyrometers is particularly problematic. Optical pyrometers are often sealed at the factory to prevent adjustment of the calibration. To check calibration on an optical pyrometer is difficult and stakeholders believe it is not a task that should be undertaken every three months unless there are clear benefits.

It is not clear to us that recalibration of all types of temperature measurement devices every three months is as burdensome an undertaking as stakeholders suggest. Thermocouples are the most common temperature measurement device used for compliance assurance. We believe that their calibration can generally be confirmed without removing them from the combustor. Thermocouples may malfunction either by a failure in the circuit (e.g., the junction between the two wires at the bead may break) or the electronics may drift. If the circuit fails, the thermocouple will give clearly erroneous readings. Drift in the electronics can be corrected without removing the thermocouple. We specifically request comment on whether thermocouples can be

recalibrated without removing them from the combustor.

Although it may be impractical to calibrate the internal operations of a pyrometer every three months, as stakeholders suggest, there are other maintenance activities such as cleaning of the optics and alignment checks that will help ensure that the pyrometer is performing correctly. We specifically request comment on whether the rule should require that these and other maintenance activities should be performed every three months.

If based on review of comments to this notice and reevaluation we determine that recalibration of temperature monitoring devices every three months is not practicable, we would revise the rule to delete § 63.1209(b)(2)(i). In lieu of a generic recalibration requirement that applies to all temperature monitors, we would require that you develop an appropriate calibration procedure and frequency and include that information in the evaluation plan required by § 63.8(e)(3)(i).

XII. Alternative Approach To Establish Operating Parameter Limits

The rule requires sources to establish most operating parameter limits as the average of the test run averages of the comprehensive performance test. Each test run average is calculated by summing all the one-minute readings within the test run and dividing that sum by the number of one-minute readings. See 64 FR at 52922.

Stakeholders state that this is an unreasonably conservative approach to establish operating parameter limits in that sources would not be allowed to operate in the way that they did 50% of the time during the performance test (when demonstrating compliance with the emission standards). This may overstate the conservatism inherent in this approach.¹⁹ Nevertheless, we believe that a conservative approach is warranted because: (1) These parameters can have a significant effect on emissions; and (2) the approach is consistent with how manual method emissions results are determined (i.e.,

¹⁹ For example, if the duration of each run of the performance test were 60 minutes, establishing parameter limits based on the average of the run averages allow sources to continue to operate as during the performance test. This is because 1-minute values that are higher than the average would be off-set by 1-minute values that are correspondingly lower than the average. Because most performance test runs have a duration longer than 60 minutes, however, the "average of the run averages" approach coupled with an hourly rolling average averaging period for most parameter limits, will require that sources operate more conservatively than during the performance test as a practical matter.

manual method emission test results for each run represent average emissions over the entire run).²⁰

Stakeholders also maintain that it is not technically practicable to establish some operating parameter limits using the average of the test run averages. Stakeholders present examples including cement kiln minimum combustion chamber temperature (see discussion in Section XIV below), and secondary power input to an ionizing wet scrubber or wet electrostatic precipitator.

In light of stakeholders' concerns, we are considering an alternative approach to establish operating parameter limits that provides assurance of compliance with the emission standard: establishing multiple limits for a given parameter that ensures that the profile of the

²⁰ Petitioners in litigation challenging the underlying rule have maintained that the one-hour averaging time to demonstrate compliance with the dioxin standard effectively amends the standard. The argument goes that the one-hour averaging period is shorter than that used in the source's performance test. EPA disagrees; the dioxin standard does not prescribe any particular averaging time, or other monitoring regime, for achieving a temperature level, so that using a one-hour averaging time does not amend the standard. However, even if (against our view) the temperature monitoring requirement is considered to change the emission standard, it appears justifiable as a beyond the floor standard under CAA section 112(d)(2). First, the standard is readily achievable technically. Spray quenching, the means of control, merely requires turning of a control valve to allow quenching. USEPA, "Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume IV: Compliance with the Hazardous Waste Combustor Standards," July 1999, p. 2-16. Operators can readily determine when quenching is needed, since thermocouples report instantaneous temperature changes, allowing immediate reaction to temperature changes. *Ibid*, p. 2-10. Second, EPA has already considered this cost (i.e., the cost of quenching) in determining the standards for HWCs. EPA does not believe that there would be any incremental cost associated with the one-hour averaging requirement, because it is based on the same spray quenching technology which is the basis for the standards already adopted. See also 64 FR at 52892 (finding that the cost of spray quenching technology for lightweight aggregate kilns is reasonable, in adopting the beyond-the-floor standard for dioxin/furans). In addition, the one-hour averaging requirement is needed to prevent exceedances of the emission standard itself, see *Ibid*, at 2-8 to 2-9 and 3-8 to 3-9 (documenting how net dioxin/furan emissions would increase over the amounts allowed by the emission standard without this requirement, but further explaining why the ten-minute averaging time that EPA initially proposed is not essential). See also EPA's Brief in *CKRC v. EPA*, no. 99-1457 (D.C. Cir. 2001) at pp. 113-120 (a copy of this brief is part of the record for this proposal). Finally, we do not believe there are any adverse non-air or energy impacts associated with the averaging requirement (and again, EPA has already assessed energy impacts and waste generation impacts of the standard when promulgating the standard in the first place). See generally USEPA, "Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume V: Emissions Estimates and Engineering Costs," July 1999 (RC2F-S0011) chapter 10.

parameter does not exceed the profile documented during the comprehensive performance test. We call this the "matching-the-profile" approach.

Under the matching-the-profile approach, a source would establish multiple limits for a given parameter that ensure that the profile of the parameter does not exceed the profile documented during the comprehensive performance test. This approach has the advantage of allowing operations at

parameter levels above the average level of the performance test for the same period of time and at the same levels, as shown during the performance test. Provided that the source operates below the average level of the performance test for the same period of time, and at the same levels, as during the performance test. One disadvantage is that, to effectively implement the approach, sources would be required to establish

multiple operating limits for a single parameter.

As an example of how this matching-the-profile approach would work for establishing the gas temperature operating limit at the inlet to an electrostatic precipitator, consider the following hypothetical gas temperature data for three runs of a comprehensive performance test. The individual run times are presented, and the total of the run times is nine hours.

TABLE 1.—ALTERNATIVE APPROACH TO ESTABLISH AN OPL WHEREBY THE PARAMETER PROFILE DOCUMENTED DURING THE COMPREHENSIVE PERFORMANCE TEST CANNOT BE EXCEEDED

[Example Parameter: Gas temperature at the inlet to an ESP.]

[Assume Run Times as Follows: Run 1—180 minutes; Run 2—150 minutes; Run 3—210 minutes. Total time of 540 minutes (9 hrs).]

Percent of time	1-Min avg temperature that was not exceeded the specified % of Time (°F)			Average of run averages	Time that avg run avg can be exceeded in any 9-hr block
	Run 1	Run 2	Run 3		
100% (max T)	405	415	425	415	0 min
90%	395	398	390	394	54 min
50%	375	380	375	377	270 min
25%	370	350	360	360	405 min

In this example, we have assumed that four operating limits would be needed to ensure adequately that the performance test profile is not exceeded: a maximum temperature that could not be exceeded, and three temperature limits that could be exceeded for prescribed periods of time during each 9-hour block average. In practice, the number of parameter limits would be established on a site-specific basis and would be a function of factors including: (1) The variability of the parameter during the test (i.e., range from the high to low value²¹); (2) whether the performance test emission levels were close to or well below the emission standard; and (3) the relationship between the parameter and emission levels.²²

In the example presented above, 1-minute average temperature levels are ranked from highest to lowest for each run, and the temperature associated with various time percentiles (i.e., 100%, 90%, 50%, and 25%) are identified. In Run 1, for example,

temperatures below 395°F were achieved 90% of the time. Then, a time-weighted average temperature across the runs is calculated for each of the percentiles. Finally, the time percentiles are converted to the number of minutes in a block period of time (corresponding to the time required to conduct all runs of the performance test). We now have a series of temperature limits that can be exceeded only for a specified period of time. Compliance with these time/temperature limits should ensure that the temperature profile of the performance test is not exceeded during normal operations, and that the emission standard is not exceeded.

We request comment on whether this approach to establish operating parameter limits as an alternative to calculating the limit as the average of the test run averages would be less burdensome for regulated sources while ensuring compliance with the emission standards. We also note that sources can request alternative monitoring approaches under § 63.1209(g)(1) and may request to use this (or other) alternative approach whether or not EPA finalizes this proposal. We request comment on whether we should explicitly include this approach in the rule, or use this discussion as guidance recommendations. Explicitly defining the approach in the rule may better facilitate efforts by sources to adopt the approach to their needs, and review and approval of the approach by regulatory officials.

XIII. Extrapolation of Operating Parameter Limits

Stakeholders suggest that the rule inappropriately penalizes sources that achieve comprehensive performance test emission levels well below the standard by establishing operating parameter limits based on performance test operations at those low emission levels. Operating under conditions to artificially increase emissions during testing (e.g., by detuning emission control equipment) may not be feasible or desirable from a worker/public health and cost perspective.

To address this concern, we request comment on whether the rule should allow extrapolation of an operating parameter limit²³ established as currently required to a higher limit (or lower limit if the parameter limit is a minimum limit) using a site-specific, empirically-derived relationship between the parameter and emissions of the pollutant in question.²⁴ An example is extrapolation of the gas temperature limit at the inlet to the dry particulate matter control device to a higher limit based on the relationship between gas temperature and dioxin/furan emissions. To use this approach, a source must document the relationship

²¹ The greater the range of values for a parameter within a percentile, the less certain we can be that the performance test profile (and emission levels) will be maintained. This is because a source could theoretically operate for extended periods of time (i.e., longer than during the performance test) at the upper end of the range (or the lower end for parameters for which minimum limits are established).

²² For example, more rather than fewer parameter limits would be appropriate to characterize the profile for gas temperature at the inlet to an electrostatic precipitator given that dioxin/furan emissions relate exponentially to inlet gas temperature.

²³ Requests to extrapolate metal feedrates would continue to be considered under § 63.1209(n)(2)(ii).

²⁴ In addition to using site-specific, empirically-derived relationships, we also request comment on whether the rule should allow use of established engineering principles that define the relationship between operating parameters and emissions to extrapolate operating limits and emissions.

empirically for their source. To remain in compliance with the emission standard, however, the temperature limit could be extrapolated to levels higher than 400 °F only if the extrapolated dioxin/furan emissions were below 0.2 ng TEQ/dscm.

Sources could not take advantage of this extrapolated gas temperature limit in this example without also extrapolating the gas temperature limit for compliance assurance with the semivolatile and low volatile metals standards.²⁵ This is because gas inlet temperature is a compliance parameter for both dioxin/furans and semivolatile and low volatile metals. We would also consider allowing extrapolation of the metals compliance assurance inlet gas temperature limit using engineering calculations to a temperature limit that would correspond to metals levels close to the emission standards.

We believe that extrapolated limits should be less than 100% of the standard. Such conservatism is important because sources would not have actually demonstrated compliance with the emission standards at the extrapolated operating parameter limit. We request comment on what upper level of extrapolation would be appropriate (e.g., 75%, 80%) and whether the upper level of extrapolation should vary depending on the level of confidence in the empirical relationship or other approach that is used to calculate the extrapolation.

The Administrator would grant (or deny) a petition to extrapolate an operating parameter limit on a case-by-case basis considering factors including whether: (1) The operating parameter values during the performance test were at the upper (or lower for minimum limits) range of historical, normal levels; (2) the extrapolated level sources request is warranted considering historical levels of the parameter; (3) it is impracticable to demonstrate compliance with the emission standard when operating at the desired (i.e., extrapolated) operating limit during the

performance test; and (4) the extrapolation procedure will conservatively predict the relationship between the operating parameter and emissions. To determine if the extrapolation procedure conservatively relates the operating parameter to emissions, the Administrator would consider factors including how far the source requests to extrapolate the limit beyond the value calculated from the performance test and how close the emissions during the performance test were to the standard.

We also note that sources can request alternative monitoring approaches under § 63.1209(g)(1) and may request to use this (or other) alternative approach prior to promulgation of a final rule. We request comment on whether we should explicitly include this approach in the rule, or use this discussion as guidance recommendations. Explicitly defining the approach in the rule may better facilitate efforts by sources to adopt the approach to their needs, and review and approval of the approach by regulatory officials.

XIV. Limit on Minimum Combustion Chamber Temperature for Cement Kilns

Stakeholders have expressed concern that it is technically impracticable for cement kilns to establish a minimum combustion chamber temperature based on the average of the test run averages for each run of the comprehensive performance test. Stakeholders state that combustion chamber temperatures cannot be maintained at low enough levels for the duration of the comprehensive performance test to establish workable operating limits that would allow them to burn hazardous waste fuels economically without frequent waste feed cutoffs because of potential exceedences of the limit. Stakeholders indicate that combustion chamber temperature levels are fairly constant within a narrow range and note that there is a very narrow range of temperatures and feed composition in which a cement kiln must operate in order to produce quality clinker and a marketable product.

Stakeholders further note that they must take extreme actions under the current RCRA requirements to establish an economically viable minimum combustion chamber limit based on the average of the lowest hourly rolling averages for each run. Stakeholders relate that during one hour of each run of the RCRA compliance test, they must take unusual and potentially equipment-damaging steps to lower

temperatures.²⁶ Those problems are compounded by the requirement in the MACT rule to establish the limit based on the average temperature level.

In addition, stakeholders note that it is difficult to accurately monitor combustion chamber temperature in a cement kiln. We already acknowledge this concern and, accordingly, the rule allows measurement of the temperature at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. See § 63.1209(j)(1)(i). The rule also allows sources to petition the permit writer to request approval of an alternative temperature monitoring approach. See § 63.1209(g)(1).

We have responded, in the final rule Comment Response Document, to stakeholder's questions about the need for monitoring combustion chamber temperature by noting that combustion chamber temperature is a principal factor in ensuring combustion efficiency and destruction of toxic organic compounds. Although we acknowledge that a cement kiln inherently controls the kiln temperature to produce clinker, this inherent control may not be adequate to assure compliance with the dioxin/furan and destruction and removal efficiency emission standards. For example, we understand that cement kilns occasionally undergo upsets and produce substandard clinker. If lower than normal combustion chamber temperatures can result from an upset, we do not know how compliance with the emission standards can be assured.

Notwithstanding these reservations, and in light of stakeholders' continued concerns, we request comment on whether the rule should continue to require cement kilns to establish and comply with a minimum combustion chamber temperature limit. Stakeholders have indicated that they have produced additional data supporting their views. We also request comment on whether the alternative approaches discussed above which can be used to establish alternative operating parameter limits (i.e., match-the-profile and extrapolation) would address some of stakeholders' concerns with establishing a minimum

²⁵ A gas inlet temperature limit is not required, however, if the source feeds low levels of metals and complies with the semivolatile and low volatile metals standards without emissions testing by documenting compliance with the emissions standards assuming all metals that are fed are emitted. In addition, even if the source were required to comply with a lower gas temperature limit for compliance assurance for metals, there may still be advantages to establishing an extrapolated temperature limit for compliance with the dioxin/furan standard. For example, if the source had a performance test-based temperature limit (i.e., metals temperature limit) exceedance that did not exceed the extrapolated dioxin/furan-based limit, the temperature exceedance would not represent failure to maintain compliance with the dioxin/furan emission standard.

²⁶ We note that allowing sources to establish operating limits under current RCRA regulations based on the average minimum or maximum hourly rolling average (rather than the average of the average values as required under Subpart EEE) is intended to address routine deviations that can occur even though steady-state operating conditions are maintained. Modifying operating conditions during compliance testing to induce temporary, artificial perturbations is inappropriate. Such operations are not representative of operations under the test condition.

combustion chamber temperature limit for cement kilns. We note, again, that sources may use § 63.1209(g)(1) to request alternative monitoring approaches and need not wait for the Agency's final determinations subsequent to this notice.

XV. Revisions to Operating Requirements for Activated Carbon Injection and Carbon Bed Systems

The final rule requires sources using carbon beds or activated carbon injection systems to limit particulate matter emissions to the level achieved during the comprehensive performance test. See §§ 63.1209(k)(5) and 63.1209(l)(3). We have since determined that: (1) It is inappropriate to explicitly require a site-specific particulate matter limit if a carbon injection system is used; and (2) particulate matter control downstream of a carbon bed is not a critical operating parameter to ensure compliance with the dioxin/furan and mercury emission standards. We propose, therefore, to delete the site-specific particulate matter limit requirement for activated carbon injection systems. We also propose to delete the requirement for sources equipped with carbon beds to establish particulate matter operating parameter limits to ensure compliance with the dioxin/furan and mercury emission standards.

Dioxin/furan and mercury will adhere to the solid carbon used in an activated carbon injection systems. The final rule requires a site-specific particulate matter limit for this type of control system because an increase in particulate matter emissions could also correspond to an increase in dioxin/furan and mercury emissions. After considering stakeholder comments, we believe it is inappropriate to explicitly require a site-specific particulate matter limit if a carbon injection system is used because the rule does not require continuous monitoring of particulate matter emissions with a continuous emission monitor. The use of a site-specific particulate matter limit was originally thought to go in tandem with the requirement to use particulate matter CEMS. Since we do not require sources to use particulate matter CEMS for compliance purposes, we believe it is inappropriate to require site-specific particulate matter limits.²⁷ Particulate matter emissions are instead controlled by complying with operating limits on the particulate matter control devices

(e.g., minimum power to an electrostatic precipitator). Therefore, we propose to revise § 63.1209(k)(5) to require sources to establish operating limits on the particulate matter control device consistent with the approach used to control particulate emissions for compliance assurance with the semivolatile and low volatile metals emission standards.

We also believe that particulate matter control downstream of a carbon bed is not a critical operating parameter to ensure compliance with the dioxin/furan and mercury emission standards. We note that most, if not all, carbon bed systems in use today are positioned downstream from particulate matter control devices to minimize particulate buildup in the carbon bed. Carbon beds are also designed so that carbon leakage into the flue gas is minimized.²⁸ We, therefore, propose to delete the language in § 63.1209(k)(5) that requires control of particulate matter emissions to ensure compliance with the dioxin/furan and mercury standards for sources with a carbon bed.

XVI. Clarification of Requirements to Confirm Carbon Bed Age

When demonstrating compliance with the dioxin/furan (and mercury) emission standard during the initial comprehensive performance test, sources may use the manufacturer's specification for the limit on carbon bed age rather than the actual age of the bed during the performance test. If using the manufacturer's specification for carbon bed age, § 63.1209(k)(7)(i)(C) requires sources to recommend in the initial comprehensive performance test plan a schedule for subsequent dioxin/furan emissions testing, prior to the confirmatory performance test, that will be used to document to the Administrator that the initial limit on maximum bed age ensures compliance with the dioxin/furan emission standard.

Stakeholders express several concerns with these requirements: (1) How much testing and what type of testing is required to confirm bed life; (2) if the manufacturer's specification for bed life is such that it extends beyond the deadline to conduct the dioxin/furan confirmatory test, testing to confirm bed life should not be required before that dioxin/furan confirmatory test; and (3) given that a carbon bed controls mercury as well as dioxin/furan, testing to confirm bed life should be required to demonstrate compliance with both

the dioxin/furan and mercury emission standards. We address each of these issues below.

A. How Much Testing and What Type of Testing Is Required to Confirm Bed Life?

We intended that testing equivalent to the dioxin/furan confirmatory test would be required to confirm the life of the carbon bed. Therefore, a test comprised of at least three runs would be required. The operating conditions would be the same as required for the dioxin/furan confirmatory test under § 63.1207(g)(2).²⁹

B. What Happens If Bed Life Extends Beyond the Deadline for Dioxin/Furan Confirmatory Testing?

If the manufacturer's specification calls for a bed life beyond the deadline for confirmatory testing, the source must conduct the dioxin/furan confirmatory test by the deadline and also conduct the bed life confirmatory test at any time prior to the manufacturer's specification for bed life. We are proposing to revise the rule so that in this situation bed life confirmatory testing would not be required prior to dioxin/furan confirmatory testing.

If, for example, the manufacturer's specification for bed life was 3.5 years and the bed was installed just prior to the comprehensive performance test, the source must conduct the dioxin/furan confirmatory test within 2.5 years after the comprehensive performance test. In addition, the source must conduct a bed life confirmatory test within 3.5 years of the comprehensive performance test. Of course, sources may elect to forgo the additional year of bed life to avoid the expense of conducting the carbon bed life confirmatory test.

C. Should Bed Life Confirmatory Testing Include Testing To Confirm Compliance With Both the Dioxin/Furan and Mercury Emission Standards?

Given that carbon beds control both dioxin/furan and mercury emissions, bed life confirmatory testing must document compliance with both the dioxin/furan and mercury emissions standards. Not requiring mercury testing during bed life confirmatory testing was an oversight when we promulgated the rule. We are proposing to revise the rule accordingly. See proposed revision to § 63.1209(l)(4).

²⁹ Given that carbon bed removal efficiency is closely related to combustion gas temperature at the inlet to the bed system, we request comment on whether the carbon bed life confirmatory test should be conducted at inlet gas temperatures at or near the maximum allowed (i.e., rather than at levels within the range of normal levels to the maximum allowed).

²⁷ The issue of the use of site-specific particulate matter limits to assure compliance with metal and dioxin/furan standards, when sources use a particulate matter CEM, will likely be addressed in any future particulate matter CEM proposal.

²⁸ See memo from S. Schliesser to M. Galbraith, June 7, 2000, regarding "Carbon Bed Reentrainment Issue" for more information.

The bed life confirmatory testing for mercury must be conducted under normal conditions for the operating parameters used to control mercury emissions. See § 63.1209(l). This is the same concept that is used to confirm bed life for dioxins/furans, and for the dioxin/furan confirmatory test. Thus, the parameters specified under § 63.1209(l) must be held within the range of the average value over the previous 12 months and the maximum or minimum, as appropriate, that is allowed.

XVII. Revisions to Operating Parameter Limits for Wet Scrubbers

The final rule controls mercury emissions from hazardous waste combustors by: (1) Controlling the feedrate of mercury; (2) wet scrubbing to remove soluble mercury (e.g., mercuric chloride); and (3) carbon adsorption. See § 63.1209(l). There are specific operating parameter limits that apply to each control technology.

For hazardous waste combustors using wet scrubbers to control mercury, the operating parameter limits are identical to those that are required to assure compliance with the hydrochloric acid/chlorine gas emission standard. Specifically, those requirements include establishing hourly rolling average limits on minimum pH of the scrubber water based on operations during the comprehensive performance test. The hourly rolling average is established as the average of the test run averages. The pH of the scrubber water is an important parameter for chlorine control because, at low pH, the scrubber solution is more acidic and removal efficiency of hydrochloric acid and chlorine gas decreases.

A. What Is the Issue With the Minimum Operating Parameter Limit Requirement for Wet Scrubbers With Regard to Mercury Control?

Since promulgation of the rule, we've become aware of evidence that the scrubber liquid pH can have an important effect on the control and fate of mercury in wet scrubbers. In particular, various wet scrubber manufacturers and operators have observed that low pH (acidic) scrubber liquid solutions improve the control of mercury in hazardous waste combustor stack gases. There also is some recent work supporting the idea that scrubber liquid pH is an important factor in mercury capture and removal. In addition to low pH liquids increasing the control of elemental mercury, there's also evidence that high pH liquids may tend to reduce the captured soluble

mercury back to the elemental form of mercury, which would then be re-released with the liquid during the liquid recycle. This line of thinking suggests that it may be necessary to establish a maximum scrubber liquid pH during the compliance test to ensure sufficient mercury control. However, a maximum scrubber liquid pH is opposite to the minimum liquid pH limit that is set and used to control chlorine emissions.

B. How Would a Low pH Scrubber Liquid Improve Mercury Control?

There are a number of reasons why a low pH scrubber liquid is thought to improve mercury control:

—Most elemental mercury formed in combustion is thought to favor conversion (or oxidation) to ionic mercury, such as HgCl_2 , mercuric chloride, under typical air pollution control device conditions on hazardous and other waste combustors (e.g., see Lee and Kilgroe (1998), Hall (1991)).

—Oxidized mercury is very soluble in low pH scrubbing solutions (e.g., see Siret et al. (1997)). Also, strong reducing agents in scrubber liquid (which are more likely in higher pH scrubbing liquids) will reduce and revolatilize captured mercury.

—Scrubber liquids with high pH (i.e., added NaOH) may inhibit the oxidation of elemental mercury, and its subsequent absorption into the scrubber liquid (i.e., the ability to be controlled by the scrubber), see Soelberg (1998).

—In high pH reducing liquids, captured soluble ionic mercury may be reduced back to elemental forms in the scrubber liquid and then re-released during the liquid during recycle. The use of low pH solutions minimizes this possibility by favoring the formation of stable HgCl_4 (e.g., see Krivanek (1993)). Ionic mercury with a (Hg^{+2}) oxidation state is very soluble in water, especially in low pH scrubbing solutions. This enables the mercury to be readily absorbed from the flue gases. Elemental mercury has a low solubility and would typically pass through a wet scrubbing system unabsorbed. Without some way to avoid mercury revolatilization, it has been observed that elemental mercury emissions downstream of a wet scrubber can actually be higher than the inlet loading (see Siret et al. (1997), DeVito and Rosenhoover (undated)).

Alternatively, there is some work on mercury control in coal fired utility power plants with limestone-based wet scrubbers indicating that changes in scrubber liquid pH in the range of 5 to 7 does not impact mercury control (see Miller, (undated), McDermott Technology (undated)). However, these

data may not be directly applicable to the case of hazardous waste combustors due to the following: Basic scrubber liquids of pH greater than 7 were not evaluated; the use of limestone in these data, which is uncommon in hazardous waste combustor wet scrubbers; high levels of sulfur and lower levels of chlorine in coal stack gases; very low levels of mercury measured both upstream and downstream of the scrubber; and conflicting data on the predominant mercury species being emitted (whether it is elemental mercury or ionic mercury).

C. When Should a Maximum pH Limit Be Considered for Mercury Control?

The use of a operating parameter limits on maximum scrubber liquid pH may be appropriate to ensure that mercury emissions are minimized. In particular, there are several cases where requiring this as an operating parameter limit for mercury control may be desirable when:

—The scrubber is relied upon for achieving a certain mercury control efficiency in order to achieve the mercury emission standard.

—The facility has a history of a wide range of mercury concentrations in the feed waste streams.

—The facility has a history of a wide range of variations in scrubber liquid pH, oxidation potential, or composition.

—There is a wide range of HCl, NO_x , and SO_2 emission levels expected in the flue gas based on waste composition.

D. How Would We Set a Maximum pH Limit in the Scrubber Liquid?

If it is determined to be necessary to achieve a high level of mercury control, it may be appropriate to establish both an upper and a lower pH operating range. The lower pH limit maybe set based on either (1) manufacturer/designer recommendations (which would have to be reviewed and approved by the Agency and contained in the performance test plan), or (2) with a separate compliance test required for determining the lower pH operating parameter limit for chlorine. At that time, an operating range could be specified which would also consider the upper end of pH allowable for the desired mercury control. If the wet scrubber is staged, or if two wet scrubbers are operated in series, it may be appropriate to establish during the same performance test, a maximum pH limit on one scrubber for mercury control and a minimum pH limit on the other scrubber for chlorine control.

If a "total species" mercury continuous emissions monitor is used, then no monitoring of operating

parameters related to mercury is required. However, if only an elemental mercury monitor is used, wet scrubber operating parameters may also need to be monitored.

E. What Are Other Factors Affecting a Wet Scrubber's Ability to Control Mercury?

In addition to pH, there are a number of factors affecting the wet scrubber's ability to control mercury. For instance, it is well documented that the oxidizing potential of the scrubber solution has a direct impact on the control of elemental mercury. The recent use of scrubber liquid oxidizing additives such as NaClO₂, acidified KMnO₃, Na₂S, and Cl₂ has been shown to enhance elemental mercury control. Other factors influencing mercury control include: scrubber design, chloride concentration, mercury concentration and speciation at the inlet to the scrubber, and the use of special reagents (as mentioned above) to chemically convert and capture some of the elemental mercury.

F. What Are the Agency's Options To Ensure That the Scrubber Liquid pH Is Appropriate for Mercury Control?

We request comment on requiring sources with wet scrubbers to establish a maximum pH operating parameter limit for mercury control. This maximum pH level could be based on manufacturer specifications, compliance test results, or specified by the permit writer on a case-by-case basis. Another option is to require a scrubber liquid oxidation meter be used to comply with a minimum liquid oxidation potential limit. If chlorine is a concern, a pH range could be specified, or, as mentioned earlier, if two scrubbers are used, one could have a maximum pH specified for mercury control and a minimum pH specified for chlorine control.

XVIII. Reproposal of kVA Limits for Electrostatic Precipitators and Request for Comment on Approaches To Ensure Baghouse Performance

The final rule establishes operating parameter limits for electrostatic precipitators (ESPs) and baghouses: (1) Minimum kVA per field of an ESP; and (2) minimum and maximum pressure drop (delta P or dP) for each cell of a baghouse. See § 63.1209(m)(1)(ii and iii). At EPA's request, however, the D.C. Circuit has vacated these provisions in order that EPA repropose and seek additional comment on them. See 66 FR 24270. Today, we repropose the requirement to establish minimum limits on each field of an ESP and request comment on alternative

approaches to ensure such performance. For baghouses, we request comment on alternative approaches to ensure performance.

A. Requirements To Ensure Electrostatic Precipitator Performance

Stakeholders express concern that limiting the kVA to each field of an electrostatic precipitator is problematic because: (1) It precludes the flexibility to shut down one or more fields of a multi-field electrostatic precipitator for maintenance while continuing hazardous waste burning; (2) it is difficult to establish minimum kVA limits on each field of the ESP during the comprehensive performance test that provide a wide enough operating envelope for economical operations; and (3) kVA to the first few fields of a multi-field ESP are not that important and should not be limited.

We respond to these concerns by noting that power distribution across the fields of an ESP is very important to performance. EPA testing at a cement kiln showed that individual field power level distribution was critical to performance.³⁰ When power input to the last field of a four-field ESP was decreased while total power input was held constant (i.e., by slightly increasing the power to the second and third fields), emissions of particulate matter doubled from 0.06 to 0.12 gr/dscf. In addition, recent comparisons of the results from predictive emission models to actual emissions indicate that power input by field is an important refinement to the code predictions.

Furthermore, we do not believe that limits on kVA to each field of the ESP are as burdensome as stakeholders state. For example, we do not believe it is a common problem to have a situation where a single field is down for repair and, thus, not operating at its minimum kVA, while the ESP is kept on line. Generally, when an ESP field needs repair, the ESP is taken off line. In addition, the comprehensive performance test may be structured to provide operational flexibility as needed. For example, a source seeking flexibility to continue burning hazardous waste with one field down could conduct the performance test under that mode of operation. Alternatively, the source could simulate the operational flexibility during the comprehensive performance test. For example, the source could conduct each run of the performance test with all

fields operational 90% of the time, and with one field down 10% of the time. Then, the source would need to limit the time of operation with one field down to 10% of each block period of time (i.e., block average) equivalent to the time required to conduct the performance test.

Finally, another remedy may be to use the authority of § 63.1209(g)(1) to petition the permit writer for an alternative monitoring approach to ensure performance of the ESP is maintained.

Given that we believe that power distribution across the ESP is important to ensure performance and that minimum limits on power input to each field would not be overly burdensome, we today repropose the kVA limits originally promulgated at § 63.1209(m)(1)(iii).

Notwithstanding this proposal, however, we request comment on several alternatives to limiting kVA to each field of the ESP (which may ultimately serve as alternatives which can be pursued under § 63.1209(g)(1)), as discussed below. Note that several of these alternatives are not mutually exclusive. After considering comments and further evaluation, we also may decide to promulgate several alternatives.

1. Require an Increasing KVA Pattern Across the ESP

Under this approach, sources would be required to establish a minimum limit on total kVA to the ESP based on the performance test, and to assure that kVA levels increase from the inlet to outlet fields. In addition, we would require establishment of a minimum limit on total kVA to the ESP.

Maintaining a minimum total kVA with a pattern of progressively increasing kVA from the inlet fields to the outlet field is generally a good indicator that the entire ESP, as well as each field, is performing adequately. The rationale for this approach is that the power suppression effect from high particle concentrations progressively diminishes from the inlet field to the outlet field. Implementation of this approach would mean that the actual kVA levels for each field, or the absolute or relative difference in kVA from field to field that was achieved during the performance test, would not be considered in compliance assurance.

2. Limit KVA on Only the Back 1/3 of Fields

This approach would require establishment of minimum kVA to each of the last 1/3 of the fields in the ESP, as well as a minimum limit on total kVA

³⁰ See memorandum from Bruce Springsteen, EER-GC, to Bob Holloway, US EPA, entitled "Relationship Between PM Emissions and ESP Total kVA Vs Field kVA", dated November 21, 2000.

to the ESP based on the performance test.³¹ The rationale for this approach has a similar basis to the approach in paragraph 1, but with an altered interpretation. Given that high particle concentration suppresses ESP power levels, the outlet fields can only achieve high power levels when the inlet fields are performing adequately. If the inlet fields are not performing well (as well as during the performance test), then the minimum kVA on the last few fields cannot be maintained.

Under this approach, if the source has a 2 or 3-field ESP, they would establish a minimum kVA limit on the last field. If it's a 4, 5, or 6-field ESP, then establish minimum kVA limits on the last 2 fields. If it's a 7, 8, or 9-field ESP, then establish minimum kVA limits on the last 3 fields.

3. Use a Continuous Monitor That Measures Relative Particulate Matter Loadings

Under this approach, sources would use a continuous monitor that can detect relative particulate matter loadings. The device must be sensitive enough to detect subtle increases in baseline, normal emissions. The monitor could be a baghouse leak detector, an opacity monitor, or a particulate matter continuous emissions monitoring system. Given that the source would be continuously monitoring relative particulate matter emissions under this approach, they would not need to establish kVA limits on the ESP.

To implement this approach, the source would establish an operating parameter limit that is based on the response from the continuous monitor during the comprehensive performance test. In addition, we would require interconnection of the limit to the automatic waste feed cutoff system. The source would also be required to take corrective measures as prescribed in the operations and maintenance plan if there was an increase in the baseline, normal response (i.e., generally well below the response during the performance test). This would be similar to how a bag leak detector is used to ensure that performance of a baghouse is maintained.

4. Use of Predictive Emission Monitoring Systems

This approach would use one of the available ESP performance models to characterize and correlate ESP

performance with particulate matter emissions as a predictive emission monitoring system (PEMS). There are three personal-computer models (Electric Power Research Institute, EPA, and Southern Research Institute) that use the same first-principle equations. These models attest to using field-by-field electrical data, or similarly derived approaches, for compliance assurance. In combination with particulate matter measurements, each of these models has produced results with correlation coefficients greater than 0.98. Once adequately demonstrated to predict emissions, the model results would then serve as a compliance monitoring protocol able to account for any combination of power distribution levels and other contributing factors. If a source were to use this PEMS approach, they would have the flexibility to operate with a field out of operation and without the need for limits on field or total kVA while giving regulatory officials a means for ensuring compliance. This PEMS approach is based on a similar methodology advanced by industry that is undergoing review by EPA's Office of Air Quality Planning and Standards as a compliance assurance method (CAM).

Implementation of the PEMS could follow a two-pronged procedure:

a. Operations under the Green Zone. When particulate matter emissions are expected to be well below the particulate matter limit,³² referred to as the "green zone," the source would use a secondary indicator (e.g., opacity) to monitor compliance. For example, the green zone could be defined as when the secondary indicator is below 75% of the level predicted by the model when operating at the particulate matter limit.

³² The particulate matter limit would be the PM emission standard or a lower PM emission level that is extrapolated from comprehensive performance test emission levels to a level that ensures compliance with the semivolatile and low volatile emission standards (and the dioxin/furan emission standards if sources use activated carbon injection). For example, if during the performance test the PM emissions were 50% of the PM standard, but the semivolatile metal emissions were 75% of the semivolatile metal standard, the source's PM compliance limit to ensure compliance with the semivolatile metal standard would be 75% of the particulate matter standard. This compliance assurance approach is based on the reasonable assumption that for a percentage increase in PM emissions, emissions of metals (and dioxin/furan when activated carbon injection is used) will increase by that percentage or less. This is because low volatile metals are evenly distributed over the range of PM particle sizes, while semivolatile metals and dioxin/furan on adsorbed carbon, are enriched on the smaller particulates. As the performance of the PM control device degrades and PM emissions increase, some of the larger particles that were being captured would be emitted while the smaller particulates continue to be emitted as before.

There would be no need to apply the model when the secondary indicator (i.e., and therefore emissions) remains in the green zone.

b. Operations under the Red Zone. When the secondary indicator value exceeds 75% of the level predicted by the model when operating at the particulate matter limit, the source would be in the "red zone." During a red zone episode, they would apply the model at prescribed intervals (e.g., every 4 to 8 hours). Representative data (e.g., secondary voltage and current for each field, and gas temperature and flowrate) would be collected during the interval, averaged, and input to the model. Model results would predict the emission level and serve as the regulatory emission monitor for determining compliance. Depending on the model results, the source would respond appropriately.

If the results indicate that the particulate matter limit has not been exceeded, the source would continue to operate. If the source were still in the red zone, they would either continue to apply the model at the prescribed interval, or perform corrective measures (e.g., remedying the ESP performance problem) to return to the green zone. If the model results indicate that emissions exceeded the PM limit, then the source has failed to comply with one or more of the emission standards.³³

B. Requirements To Ensure Baghouse Performance

The final rule required sources to establish limits on minimum and maximum pressure drop (ΔP or dP) across each cell of the baghouse based on manufacturer specifications and to interconnect the limits with the automatic waste feed cutoff system. See § 63.1209(m)(1)(ii). The rule also required incinerators and lightweight aggregate kilns to install a bag leak detector and cement kilns to install opacity monitors. As noted earlier, this provision was vacated by the D.C. Circuit at EPA's request so that EPA could repropose and seek further comment on the issue.

We promulgated the requirement to establish dP limits because dP may provide an indication of adequate filter cake build-up to ensure performance. In addition, low dP may indicate the presence of filter holes or leakage between sections of the filter housing

³³ For example, if the predicted emissions were higher than the PM standard and the extrapolated PM emission levels associated with the semivolatile and low volatile metal standards, as well as the dioxin/furan standard if sources use activated carbon injection, the model results would be evidence that the source has exceeded all four emission standards.

³¹ Stakeholders also suggest another approach whereby limits would be established on minimum total kVA to the ESP, and minimum kVA only to the last field of the ESP. We request comment on this alternative approach as well.

while high dP may indicate the potential to create pinhole leaks, or bag blinding or plugging. We acknowledge, however, the minimum dP may not effectively detect fabric holes, especially in large facilities with multiple chamber filter housing units that operate in parallel.³⁴

In addition, since promulgation of the rule, stakeholders state that system or manifold dP is the same as the dP for each cell or compartment. Therefore, monitoring dP for each cell is redundant and unnecessary. Stakeholders also state that baghouses for sources with large gas flowrates (e.g., a cement kiln) can have 30 or more cells and because of the large number of cells, establishing limits on, or even monitoring, dP is impracticable.

Finally, stakeholders recently submitted data confirming our concern that cell dP is not sensitive to substantial increases in opacity for large baghouses.³⁵ Stakeholders conducted experimentation at a cement kiln with a baghouse where dP was monitored for a cell in which collection performance was intentionally degraded. The baghouse has 32 cells and each cell is comprised of 56 bags. Prior to degrading the cell's performance, cell dP was monitored for several hours. The detector appeared to be responding appropriately to pressure changes as the pressure dropped to zero each time the cell was cleaned on a 25-minute cycle and then rapidly increased to approximately 3.5 inches water column. The pressure then gradually increased to 4 to 5 inches water column prior to the next cleaning cycle. While performance of one cell was artificially degraded, opacity was also monitored. There was no discernable change in cell dP during the episode while opacity increased dramatically from baseline levels of 4 to 5 percent to 10 to 12 percent. These opacity levels represent particulate matter emissions on the order of 0.01 gr/dscf at 5 percent opacity to 0.02 gr/dscf at 10 to 12 percent opacity. Although this experiment indicates that dP is not always sensitive to significant changes in opacity, it also shows that an opacity monitor can detect significant changes in mass particulate matter emissions at concentrations in the 0.01 to 0.02 gr/dscf range.

We generally disagree with many of stakeholders' views on the value of monitoring cell dP. System or manifold

dP is usually higher than cell dPs because of the dP contributed by plenums (including dust buildup) and compartment isolation valving. Many baghouses operate with uneven cell dP because of complex factors.³⁶ For example, inlet flow design factors lead to gas flow imbalance among cells and to uneven cell dPs. Also, bag cleaning mechanisms degrade over time leading to varying levels of cleaning among cells and varying cell flow and dP. In addition, monitoring cell and system dPs is recommended by virtually all baghouse manufacturers and consultants because of the cost-effectiveness in preventing small problems from escalating into large ones.

We acknowledge again, however, that minimum cell dP may not effectively ensure performance of a large baghouse. Consequently, we are not reproposing limits on cell dP. Rather, we request comment on whether decisions to require monitoring of cell dP should be made on a site-specific basis (pursuant to § 63.1209(g)(1) or (g)(2)) considering factors such as: (1) Whether the baghouse is equipped with a device (e.g., bag leak detector) that is properly tuned and has the sensitivity to detect both broken bags (i.e., emission spikes) and gradual increases in baseline, normal emissions that may be caused by small holes; and (2) the approach that would be used to identify the poorly performing cell when the detector notes a gradual degradation in performance; and (3) size of the baghouse. In addition, in situations where commenters believe that monitoring cell dP should be required, we request comment on whether cell dP should be monitored as an operating parameter limit that is interconnected to the automatic waste feed cutoff system, or whether cell dP monitoring should simply be one component of the source's operation and maintenance plan (under which appropriate corrective measures would be taken if cell dP were to fall below or above manufacturer specifications).

Pending final action on this notice, regulatory officials should use the authority of § 673.1209(g)(2) to determine on a site-specific basis what operating requirements may be appropriate to ensure that baghouse performance is maintained at levels that ensure compliance with the particulate matter, semivolatile metals, and low volatile metals emission standards (and the dioxin/furan and mercury standards if activated carbon injection is used).

XIX. How To Comply Temporarily with Alternative, Otherwise Applicable MACT Standards

Section 63.1206(b)(1)(ii) allows sources to stop complying with the emission standards and operating requirements of Subpart EEE temporarily after the hazardous waste residence time has expired and to comply with otherwise applicable Clean Air Act requirements promulgated under Sections 112 and 129,³⁷ provided the source: (1) Submits a one-time notice to the Administrator documenting compliance with those alternative standards;³⁸ and (2) documents in the operating record that they are complying with those alternative standards.

Stakeholders have asked how the transition between the Subpart EEE standards and the otherwise applicable Section 112 or 129 MACT standards would work. Specifically, stakeholders question: (1) whether sources would alternate as affected sources under different MACT standards for stack emissions, or become affected sources under different MACT standards concurrently;³⁹ and (2) whether they should use § 63.1209(q) to identify operations under the alternative Section 112 or 129 MACT standards as an alternative mode of operation.

A. Hazardous Waste Combustors Are Affected Sources Only Under Subpart EEE

Even though sources may invoke § 63.1206(b)(1)(ii) to become temporarily exempt from the substantive requirements of Subpart EEE, they remain an affected source under Subpart EEE, and only Subpart EEE (with respect to stack emissions requirements⁴⁰), until the source meets

³⁷ If the Agency has not promulgated CAA Section 112 or 129 MACT standards for the non-hazardous waste burning class of sources in a particular source category, there are no "otherwise applicable" MACT standards for the source. For example, the Agency has not yet promulgated Section 129 standards for non-hazardous waste incinerators. In these cases, the source would not be subject to any MACT standards for stack emissions after the hazardous waste residence time has expired. The source must define such operations as a mode of operation under § 63.1209(q), and must note in the operating record when they begin this mode of operation.

³⁸ Note that, in a separate rulemaking, EPA would delete the requirement for the one-time notification.

³⁹ For example, the hazardous waste burning cement kiln MACT standards of Part 63, Subpart EEE and the Portland Cement manufacturing MACT standards of Part 63, Subpart LLL.

⁴⁰ Note, however, that sources may be an affected source under different MACT standards concurrently for control of HAPs from different sources at the facility. For example, all hazardous waste burning cement kilns are affected sources

Continued

³⁴ US EPA, "Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume IV: Compliance with the Hazardous Waste Combustor Standard," July 1999, p. 4-6.

³⁵ Data submitted by Norris Johnson, Lone Star Industries, Inc., to Bob Holloway, US EPA, on November 16, 2000.

³⁶ See H.H. Nierman and A.M. Hood, "How to Monitor Pulse Jet Baghouses," Chemical Engineering, March 1996, pp. 114-119

the requirements specified in Table 1 to § 63.1200 for no longer being an affected source. Because those requirements include being in compliance with the RCRA closure requirements of Subpart G, Parts 264 or 265, they remain an affected source until it is determined they no longer burn hazardous waste.

To implement this clarification, we propose revising the rule to require that, if a source becomes temporarily exempt from the substantive requirements of Subpart EEE by halting hazardous waste burning activities, they must comply, during that temporary period, with all otherwise applicable Section 112 or 129 MACT standards. We use the term "otherwise applicable" because, after the hazardous waste residence time has expired, and if the source was not an affected source only under Subpart EEE, they would be subject to any and all Section 112 and 129 MACT standards we have promulgated for sources in the particular source category that do not burn hazardous waste (e.g., the MACT standards for Portland cement kilns in Part 63, Subpart LLL).

In addition, we propose revising the rule to clarify that otherwise applicable Section 112 and 129 MACT standards are applicable requirements under Subpart EEE, if the source elects to comply with those requirements after the hazardous waste residence time has expired. This term has significant implications in that applicable requirements are implemented and enforced under Subpart EEE as discussed below.

B. How Are Otherwise Applicable Requirements Implemented and Enforced Under Subpart EEE

Section 63.1209(q) requires establishment of operating requirements under different modes of operation. When electing to comply with the otherwise applicable MACT requirements (promulgated under Section 112 or 129 of the CAA) after the hazardous waste residence time has transpired, the source must use § 63.1209(q) to identify operating parameter limits that apply during that mode of operation. Section 63.1209(q) also requires documentation in the operating record when changing a mode of operation and beginning to comply with a different set of operating limits. In addition, that paragraph requires sources to begin calculating rolling averages anew (i.e., without considering previous recordings) when changing modes of operation.

Upon reevaluation of the requirement to begin calculating rolling averages anew when sources change modes of operation, we now believe that it would be more appropriate to use the most recent continuous monitoring system recordings when operating under a mode of operation to calculate rolling averages when renewing operations under that mode.⁴¹ For example, if operating a hazardous waste burning cement kiln and electing to switch to the Part 63, Subpart LLL, requirements after the hazardous waste residence time has expired, the first rolling hourly average value for gas temperature at the inlet to the electrostatic precipitator would be calculated after the first minute of compliance with the Subpart LLL requirements based on the last 59 minutes of operations under the Subpart LLL requirements and the first minute of renewed operations under the Subpart LLL requirements. This would be the case regardless of how long ago the source last operated under the mode of operation in question.

In the Documentation of Compliance (DOC) under § 63.1211(d) and the Notification of Compliance (NOC) under § 63.1207(j) the source must specify the operating parameter limits that apply when operating under the mode of operation when complying with otherwise applicable requirements.⁴² This requirement applies to all other modes of operation as well. For the mode of operation when complying with otherwise applicable requirements, however, the source must specify in the DOC and NOC any otherwise applicable Section 112 or 129 MACT standards and requirements that apply, including monitoring and compliance requirements and notification, reporting, and recordkeeping requirements. We limit this requirement to otherwise applicable Section 112 or 129 MACT standards because the source may be subject to other Clean Air Act standards while being an affected source under Subpart EEE, but it is not an affected source under any Section 112 or 129 MACT standards other than Subpart EEE. Thus, the source would not be subject to any otherwise applicable Section 112 or 129 MACT requirements that were not included in the DOC, NOC, and, ultimately, title V permit for that mode of operation.

⁴¹ Note, however, that may average operating parameter values continuously across various modes of operation provided that the averaging periods and limits for the parameter are the same under the various modes of operation.

⁴² Furthermore, the title V permit must contain terms and conditions for all reasonably anticipated modes of operation (see 40 CFR 70.6(a)(9)).

C. Exemption From All Substantive Requirements of Subpart EEE During the Mode of Operation When Complying With Otherwise Applicable Section 112 or 129 MACT Standards

Section 63.1206(b)(1) exempts sources from the emission standards and operating requirements of Subpart EEE when operating under otherwise applicable Section 112 or 129 MACT standards after the hazardous waste residence time has expired. We propose to revise this requirement to exempt sources from all substantive Subpart EEE standards during this mode of operation such that the source would only be subject to the § 63.1209(q) provisions that it specifies for this mode of operation. This is appropriate because, as discussed above, sources must specify under § 63.1209(q) that, during this mode of operation, they will comply with all requirements of the otherwise applicable requirements of Section 112 or 129 MACT standards. Accordingly, we propose to exempt sources during this mode of operation from the emission standards of §§ 63.1203–63.1205; the monitoring and compliance standards of §§ 63.1206–63.1209, except the modes of operation requirements of § 63.1209(q); and the notification, reporting, and recordkeeping requirements of §§ 63.1210–63.1212.

XX. RCRA Permitting Requirements for Sources Entering the RCRA Process Post-Rule Promulgation

A. What Are We Proposing To Amend?

We are proposing to amend the language in 40 CFR 270.19, 270.22, 270.62, 270.66, 266.100, 265.340, and 264.340 regarding the applicability of those sections to hazardous waste burning incinerators, cement kilns and lightweight aggregate kilns. In particular, we want to clarify that any of these types of sources newly entering the RCRA permitting process or the hazardous waste burning universe after promulgation of the hazardous waste combustor MACT rule on September 30, 1999 are not subject to certain specified RCRA permit requirements, or to the RCRA combustor performance standards.

Since we are revisiting these sections to clarify their applicability, we are taking this opportunity to clarify a point about the Notification of Compliance, as referenced in these sections. Under § 63.1207(j), sources must postmark within 90 days of completing a comprehensive performance test an NOC documenting compliance or noncompliance with the emissions standards. We are clarifying that in

under Subpart EEE for stack emissions, and Subpart LLL for other sources of HAP emissions (e.g., clinker handling).

order for the part 270 requirements to no longer apply, the NOC must document compliance.

1. How Had We Changed Part 270 in the HWC Rule?

In the final rule, we amended language in part 270 to accommodate the permit transition from RCRA to the CAA. In § 270.19, we added new paragraph (e) and in §§ 270.22, 270.62, and 270.66 we added similar language as introductory text (with slight variations in 270.22 and 270.66 to specify cement kilns and lightweight aggregate kilns). In brief, the amended language in these sections said that once a source demonstrates compliance with the standards in 40 CFR part 63 subpart EEE, the requirements in the specified part 270 sections would no longer apply. In order to retain a procedural framework for any risk burns⁴³ that might prove to be necessary under RCRA, we also included a provision allowing the Director to apply the provisions of those sections, on a case-by-case basis, for purposes of information collection in accordance with §§ 270.10(k) and 270.32(b)(2).

2. Why Do We Need To Revisit these Sections in Part 270?

As they were written for the final rule, these sections will continue to apply until a source demonstrates compliance with the standards in 40 CFR part 63 subpart EEE. This approach makes sense for sources who were currently in the RCRA permitting process at the time we published the final rule. Our primary concern at that time was on the transition from the RCRA process to the CAA. Since sources do not have to complete performance testing until May 2003, it is appropriate for sources already in the RCRA permitting process to continue the combustor portions of the process, including the trial burn requirements. We did not want the new rule to result in unnecessarily delayed testing, particularly if the testing is needed to ensure performance and to generate data for a risk assessment. In the preamble to the final rule, we discussed how sources already in the process of obtaining a RCRA permit could be transitioned to a title V permits (see 64 FR 52989, September 30, 1999). We identified some factors to be considered, as well as some examples to assist permit writers and facility owners or operators in developing a sound

approach. We neglected to consider, however, what this approach would mean for new sources that did not exist at the time the final rule was promulgated.

Under RCRA, new sources must obtain a permit (or permit modification) before they may start construction of a new unit. Since new sources subject to the final rule will not be able to demonstrate compliance with the part 63 standards until after the units are built and they conduct performance testing, the part 270 language as currently promulgated would force them to complete the entire RCRA permitting process (including combustion portions) beforehand. For new facilities, this means they would have to submit a trial burn plan with their RCRA permit application and also submit suggested conditions for the various phases of operation—start-up/shake-down, trial burn, post-trial burn, and final operations. The permit writer would have to review this information and write conditions into the RCRA permit governing all phases of combustor operations.

It is our intent that new sources subject to the HWC final rule not follow the traditional RCRA combustion permitting process. Although new sources still must obtain a RCRA permit (or permit modification) prior to construction, our intent was that the permit instead focus on the other RCRA requirements applicable to all units (i.e., general facility standards, corrective action, financial responsibility, and closure), any non-emissions related combustor-specific concerns (i.e., materials handling, and requirements related to other RCRA units on site. In addition, if the alternative to the particulate matter standard revisions proposed today are promulgated, incinerators that comply with these alternative requirements would need to have the RCRA particulate matter performance standard and related operating conditions included in their RCRA permits. Also, if the permit writer determines that additional risk-based conditions for the combustion unit are necessary to supplement the MACT requirements, those conditions will be part of the RCRA permit.⁴⁴ We would not expect new sources to follow the

⁴⁴ We expect that, in most cases, any additional risk-based conditions imposed under RCRA omnibus authority will reside in RCRA permits. However, a state regulatory agency may choose to incorporate those conditions into the title V permit as a matter of convenience or as part of developing a multi-media permit. In this situation, the conditions would still remain under RCRA authority and the permit would have to be signed by all appropriate officials (unless the state has omnibus-type authority in its air statute).

RCRA requirements governing development and submittal of trial burn plans and setting of operating conditions for the various phases of operation, because these activities implement RCRA performance standards which are being replaced by the HWC NESHAP standards. We included requirements in the HWC NESHAP governing implementation of the MACT performance standards. For example, sources must submit performance test plans and must identify operating parameters that they anticipate will ensure compliance with the emission limits in their Documentation of Compliance. The CAA process, not RCRA, is the appropriate mechanism to ensure compliance with the MACT standards. Under the CAA permitting programs, these sources will be subject to New Source Review permits prior to construction as well as to title V operating permits which will incorporate the applicable requirements from the HWC NESHAP.⁴⁵

3. What Are We Proposing To Amend in Parts 264, 265, 266?

In today's notice, we also propose to make conforming changes in parts 264, 265, and 266 for the above mentioned reasons. Specifically, we propose to revise 40 CFR 264.340(b), 265.340(b), and 266.100(b) to specify that hazardous waste burning incinerators, cement kilns, and lightweight aggregate kilns that are newly constructed, reconstructed, or modified such that they become affected sources following September 30, 1999 are not subject to the RCRA combustor treatment standards (except as noted) of parts 264, 265, and 266.

Part Three: Analytical and Regulatory Requirements

I. Executive Order 12866

Under Executive Order 12866, EPA must determine whether a regulatory action is significant and, therefore, subject to comprehensive review by the Office of Management and Budget (OMB), and the other provisions of the Executive Order. A significant

⁴⁵ Only those sources that meet the definition of a major source under the New Source Review permitting program are subject to federal New Source Review permits. The definition of "major" within the context of New Source Review permitting is different from that used when establishing MACT standards. Therefore, a new source subject to the Phase I MACT standards may not be required to obtain a federal New Source Review permit prior to construction. However, since all states have minor New Source Review permitting programs, it is likely that the source would still have to obtain a minor New Source Review permit.

⁴³ A risk burn is any emissions testing performed for the purpose of collecting data for subsequent evaluation in a site-specific risk assessment. The testing may occur in conjunction with a RCRA trial burn or MACT performance test, or the risk burn may consist of a completely separate test effort.

regulatory action is defined by the Order as one that may:

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

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

- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or rights and obligations or recipients thereof; or

- Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in Executive Order 12866.

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is a "significant regulatory action" because it may be considered significant under point four above: "Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in Executive Order 12866." As such, this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

The aggregate annualized compliance costs for this rule, as proposed, are estimated to be less than \$100 million. Furthermore, this proposed rule is not expected to adversely affect, in a material way, the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities. The benefits to human health and the environment resulting from today's proposed action have not been monetized but are deemed to be less than \$100 million per year.

We have prepared two economic support documents for this proposed action. These are: Assessment of Potential Costs, Benefits and Other Impacts NESHAP: Standards for Hazardous Air Pollutants for Hazardous Waste Combustors—Technical Amendments (Assessment), and, Regulatory Flexibility Screening Analysis (RFSA) For NESHAP: Standards for Hazardous Air Pollutants for Hazardous Waste Combustors—Technical Amendments. The Assessment addresses economic impacts of the twenty proposed amendments to the Phase I MACT final rule. The Assessment also briefly examines equity considerations and other impacts. The Regulatory

Flexibility Screening Analysis (RFSA) briefly examines small entity impacts potentially resulting from this proposed action. This Part presents a summary of findings from the Assessment and the RFSA documents. The complete Assessment and RFSA documents are available in the RCRA docket established for this action. Interested readers are encouraged to read and comment on these documents.

A. Why Is This Proposed Rule Necessary?

The environmental regulations promulgated by EPA seek to correct market failures through the internalization of negative environmental externalities. That is not the case with today's proposed rule. This action is necessary in order to clarify and improve compliance, testing, and monitoring requirements associated with the final rule NESHAP: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors. See 64 FR 52828.

B. Were Non-Regulatory Alternatives First Considered?

Section 1(b)(3) of Executive Order 12866 instructs Executive Branch Agencies to consider and assess available alternatives to direct regulation prior to making a determination for regulation. This regulatory determination assessment should be considered, "to the extent permitted by law, and where applicable." The ultimate purpose of the regulatory determination assessment is to ensure that the most efficient tool, regulation, or other type of action is applied in meeting the targeted statutory objective(s).

We have already employed education and outreach programs designed to accomplish the objectives of the amendments proposed in this rule. We believe that technical clarification and improved implementation efficiency will be best accomplished through a regulatory approach in order to fully accomplish our objectives.

C. What Regulatory Options Were Considered?

For this action we considered the proposed regulatory approach for all the technical amendments as a group, or in some cases, for an amendment that was presented for comment only. We also considered the "no action" option, which would result in zero cost impacts beyond the baseline established in the final rule.

D. What Are the Potential Costs or Cost Savings of This Proposed Rule?

The twenty proposed amendments presented in today's action vary considerably in scope and substance. Nearly all of the amendments, however, are anticipated to result in minor to negligible incremental cost impacts (savings or increases) to both the regulated community and the Agency. Two or three of the amendments may result in more substantive cost impacts. These findings are briefly summarized below. The complete Assessment document presents a detailed review of our methodology, data, findings, and analytical limitations.

Cost Savings:

The amendments resulting in projected minor cost savings to the regulated community are generally associated with the increased compliance and administrative flexibility, technical clarifications, time extensions, and reduced monitoring/testing requirements. One amendment, however, may result in significant net incremental cost savings to the regulated community. Amendment number X (Method 23 as an Alternative to Method 0023A for Dioxin/Furans), is designed to provide flexibility in selection of test methods for dioxins and furans. To test for dioxins and furans under the CAA, Appendix A of 40 CFR Part 60 prescribes Method 23. This method combines the front half of the filter and probe rinse with the back half of the sorbent and rinses to perform a single extraction and analysis. Recovery of spiked standards into the sorbent are used to serve as an indicator of overall recovery.

Method 0023A is the RCRA dioxins/furans air emission test method found in SW-846 (incorporated within SW-846 in June, 1997). The updated Method 0023A differs from Method 23 primarily in that the former uses the addition of spike standards to both the filter (front half) and sorbent (back half), and then separates the front half and back half for analysis in order to determine the recovery from each half. While more expensive, this process helps to quantify recoveries more accurately for both the back half and front half fractions.

The final rule requires sources to use Method 0023A. At that time we believed the improvements method 0023A offered over Method 23 warranted a requirement that all sources use the new method. By incorporating separate recovery, spiking, and analysis of front half and back half samples the new method helps better quantify recoveries for both the back half and front half fractions thereby improving quality

assurance. The benefits of Method 0023A compared to Method 23 thus include more accurate recovery data and improved data quality. The downside to Method 0023A is its higher analytical cost and, possibly higher detection limits. Furthermore, we have not documented the potential magnitude of the incremental benefits of Method 0023A.

We estimate that potentially significant cost savings may result from the reduced analytical expenses of using Method 23 as an alternative to Method 23A for dioxin/furans. The difference in unit cost between the methods is approximately \$3,000 per source. Industry estimates indicate that about half of all facilities are likely to make use of this alternative. However, this test is only required to be performed every two and a half years. Based on these factors, we estimate total cost savings to the regulated community at about \$102,600 per year.

Cost Increases:

There may be cost increases associated with some of the proposed amendments. Many of the amendments associated with potential cost increases, however, propose alternatives that a source may voluntarily choose to apply. Cost increases would occur to both the regulated community and the regulatory agency and/or states. Most of these cost increases are expected to be minor, resulting from development and submission of alternative plans and/or test data. There may also be some minor additional cost burdens associated with potential increases in violations.

We estimate that five of the proposed amendments may result in measurable incremental cost burdens to industry and the regulatory agency. These amendments are projected to result in aggregate cost increases to industry of \$199,300 per year. The government cost increase is estimated at \$161,800 per year. Amendment V (Operator Training and Certification) is the single largest cost contributor to the cost increase for both industry and government. This amendment is projected to result in an aggregate incremental cost increase of nearly \$154,000 to industry and \$150,700 to the regulatory agency.

We estimate a net cost increase of \$258,500 per year from all proposed amendments for which we were able to develop quantified cost impact estimates. This cost impact estimate will marginally increase the total annual social cost projection of \$50 to \$63 million⁴⁶ estimated for compliance

with the final rule. We believe that our net cost impact (increase) estimate of \$258,500 may be high because it was not feasible to quantify some of the potential cost savings that are likely to result from many of the proposed amendments. All cost impacts are dependant upon the regional enforcement regime.

II. Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 USC 601 et. seq.

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 Procedure 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 today's proposed rule on small entities, a small entity is defined as: (1) A small business that has fewer than 750, or 500 employees per firm depending upon the SIC code the firm is primarily classified in; (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 which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. We have determined that only amendment X (Method 23 as an Alternative to Method 0023A for Dioxin/Furans) is likely to impact one or more of the six small hazardous waste combustors. Under our assumed worst-case scenario where the maximum cost impacts of this amendment (\$102,600 savings) are attributed to only these six small sources, we find that no source would experience impacts beyond 0.48 percent of annual gross revenues⁴⁷. This does

not represent a significant economic impact.

Although this proposed rule will not have a significant economic impact on a substantial number of small entities, we nonetheless tried to reduce the impact of this rule on small entities. Although not specifically directed toward small business outreach, we have met with industry representatives during the developmental phase and requested comment and suggestions on all aspects of this proposed rulemaking. No small business concerns were brought up by these industry representatives. We continue to be interested in the potential impacts of the proposed rule on small entities and welcome comments on issues related to such impacts.

We have completed the analysis: Regulatory Flexibility Screening Analysis (RFSA) For NESHA: Standards for Hazardous Air Pollutants for Hazardous Waste Combustors—Technical Amendments, in support of the proposed rule. This RFSA document is available for review in the docket established for today's action.

III. Executive Order 13045: "Protection of Children From Environmental Health Risks and Safety Risks"

"Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency. This proposed rule is not subject to the Executive Order because it is not economically significant as defined in Executive Order 12866. Furthermore, we do not have reason to believe that environmental health or safety risks addressed by this action present a disproportionate risk to children.

In addition, these amendments, as part of the HWC MACT standards, are exempt from the requirements of Executive Order 13045 because the rule is a technology-based regulation rather than a risk-based one. Nevertheless, the proposed amendments would not result in any incremental environmental harm that would affect children's health.

Hazardous Waste Combustion MACT Standards: Final Rule, July 23, 1999.

⁴⁷ Based on July 1999 Assessment, we found that the smallest annual firm revenue associated with the six small facilities were \$3.6 million. Dividing \$102,600 by the six facilities results in \$17,100 maximum impact per small facility. (\$17,100/\$3.6 million = 0.48 percent).

⁴⁶ U.S. Environmental Protection Agency, Office of Solid Waste, Addendum to the Assessment of the Potential Costs, Benefits, and Other Impacts of the

IV. Environmental Justice Executive Order 12898

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (February 11, 1994), is designed to address the environmental and human health conditions of minority and low-income populations. EPA is committed to addressing environmental justice concerns and has assumed a leadership role in environmental justice initiatives to enhance environmental quality for all citizens of the United States. The Agency's goals are to ensure that no segment of the population, regardless of race, color, national origin, income, or net worth bears disproportionately high and adverse human health and environmental impacts as a result of EPA's policies, programs, and activities. In response to Executive Order 12898, and to concerns voiced by many groups outside the Agency, EPA's Office of Solid Waste and Emergency Response (OSWER) formed an Environmental Justice Task Force to analyze the array of environmental justice issues specific to waste programs and to develop an overall strategy to identify and address these issues (OSWER Directive No. 9200.3-17).

We have no data indicating that today's proposal would result in disproportionately negative impacts on minority or low income communities. The public is invited to comment and submit data related to environmental justice issues potentially associated with today's proposal.

V. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any single year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with

applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

We have determined that this rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any single year. The amendments, as proposed, may result in increased costs to all states (or the Agency) of no more than approximately \$160,000 per year. Thus, today's rule is not subject to the requirements of sections 202 and 205 of the UMRA.

VI. Executive Order 13132 (Federalism)

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

This proposed rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This rule, as proposed, is projected to result in economic impacts to privately owned hazardous waste combustion facilities. Marginal administrative burden impacts may occur to selected States and/or EPA Regional Offices if these entities experience increased administrative

needs, enforcement requirements, or information requests. However, this rule, as proposed, will not have substantial direct effects on the States, intergovernmental relationships, or the distribution of power and responsibilities. Thus, Executive Order 13132 does not apply to this rule.

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

VII. Consultation With Tribal Governments

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." "Policies that have tribal implications" is defined in the Executive Order to include regulations that have "substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes."

This proposed rule does not have tribal implications. It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes, as specified in Executive Order 13175. Today's proposal would not significantly or uniquely affect the communities of Indian tribal governments, nor would it impose substantial direct compliance costs on them. Tribal communities are not known to own or operate any hazardous waste combustion facilities, nor are these communities disproportionately located adjacent to or near such facilities. Finally, tribal governments will not be required to assume any administrative or permitting responsibilities associated with this proposed rule.

In the spirit of Executive Order 13175, and consistent with EPA policy to promote communications between EPA and tribal governments, we specifically request comment on this proposed rule from tribal officials.

VIII. Paperwork Reduction Act

We have prepared an Information Collection Request (ICR) document (ICR No. 1773.03) listing the information collection requirements of this proposed rule, and have submitted it for approval to the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* OMB has assigned a control number 2050-0171 for this ICR. A copy of this ICR may be obtained from Sandy Farmer, OPIA Regulatory Information Division, U.S. Environment Protection Agency (2137), 1200 Pennsylvania Avenue NW, Washington, DC 20460, or by calling (202) 260-2740.

Some of the amendments proposed today pertain to RCRA provisions of the rule (i.e. to 40 CFR parts 260 thru 271), and were covered under an earlier ICR No. 1361.08. Today's amendments to these RCRA provisions are all de-regulatory, and do not impose any burden on the regulated community. They only reduce the existing burden shown in that ICR. The ICR No. 1361.08 will be revised to show the reduced burden when the final rule is promulgated. The public burden associated with other provisions of this proposed rule (which are under the Clean Air Act) is projected to affect approximately 171 HWC units and is estimated to average 8.7 hours per respondent annually. The reporting and recordkeeping cost burden is estimated to average \$511 per respondent annually. Burden means total time, effort, or financial resources expended by persons to generate, maintain, retain, disclose, or provide information to or for a Federal agency. That includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

Comments are requested on the need of this information, accuracy of the provided burden estimates, and any suggested methods for minimizing the respondent burden. Send comments to Sandy Farmer at the address given above, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th St. NW, Washington, DC 20503, marked

"Attention: Desk Officer for EPA." The final rule will respond to all OMB and public comments on the information collection requirements contained in this proposal.

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

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15. The EPA will amend the table in 40 CFR part 9 of currently approved information collection request (ICR) control numbers issued by OMB upon finalization of this rule and list the information collection requirements contained in the final rule.

IX. National Technology Transfer and Advancement Act of 1995

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law 104-113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards 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 voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This proposed rulemaking does not involve technical standards. Therefore, we are not considering the use of any voluntary consensus standards. We welcome comments on this aspect of the proposed rulemaking and, specifically, invite the public to identify potentially applicable voluntary consensus standards and to explain why such standards should be used in this regulation.

Part Four: State Authority

States can implement and enforce the new MACT standards through their delegated 112(l) CAA program and/or by having title V authority. A State's title V authority is independent of whether it has been delegated section 112(l) of the CAA. Additional information on

state authority under the CAA may be found in the HWC MACT rule (64 FR at 52991).

List of Subjects

40 CFR Part 63

Environmental protection, Air pollution control, Hazardous substances, Reporting and recordkeeping requirements.

40 CFR Part 264

Environmental protection, Air pollution control, Hazardous waste, Insurance, Packaging and containers, Reporting and recordkeeping requirements, Security measures, Surety bonds

40 CFR Part 265

Environmental protection, Air pollution control, Hazardous waste, Insurance, Packaging and containers, Reporting and recordkeeping requirements, Security measures, Surety bonds, Water supply.

40 CFR Part 266

Environmental protection, Energy, Hazardous waste, Recycling, Reporting and recordkeeping requirements

40 CFR Part 270

Environmental protection, Administrative practice and procedure, Confidential business information, Hazardous materials transportation, Hazardous waste, Reporting and recordkeeping requirements, Water pollution control, Water supply.

Dated: June 18, 2001.

Christine Todd Whitman,
Administrator.

For the reasons set out in the preamble, it is proposed that title 40 of the Code of Federal Regulations is amended as follows:

PART 63—NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

1. The authority citation for part 63 continues to read as follows:

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

2. Section 63.14 is amended by adding paragraph (i) to read as follows:

§ 63.14 Incorporations by reference.

* * * * *

(i) *ASME standard.* This standard is available from the American Society of Mechanical Engineers, 345 East 47th Street, New York, N.Y. 10017; Standard for the Qualification and Certification of Hazardous Waste Incinerator Operators, ASME QHO-1-1994.

3. Section 63.1201 is amended by revising the definition of “Instantaneous monitoring” in paragraph (a) to read as follows:

§ 63.1201 Definitions and acronyms used in this subpart.

(a) * * *

Instantaneous monitoring for combustion system leak control means detecting and recording pressure, without use of an averaging period, at a frequency adequate to detect combustion system leak events from hazardous waste combustion.

* * * * *

4. Section 63.1206 is amended by revising paragraph (c)(5)(ii) and (c)(6) to read as follows:

§ 63.1206 When and how must you comply with the standards and operating requirements?

* * * * *

(c) * * *

(5) * * *

(ii) You must specify in the performance test workplan and Notification of Compliance the method that will be used to control combustion system leaks. If you control combustion system leaks by maintaining the combustion zone pressure lower than ambient pressure using an instantaneous monitor, you must also specify in the performance test workplan and Notification of Compliance the monitoring and recording frequency of the pressure monitor, and specify how the monitoring approach will be integrated into the automatic waste feed cutoff system.

(6) Operator training and certification.

(i) You must establish training programs for all categories of personnel whose activities may reasonably be expected to directly affect emissions of hazardous air pollutants from the source. Such persons include, but are not limited to, chief facility operators, control room operators, continuous monitoring system operators, persons that sample and analyze feedstreams, persons that manage and charge feedstreams to the combustor, persons that operate emission control devices, and ash and waste handlers. Each training program shall be of a technical level commensurate with the person's job duties specified in the training manual. Each commensurate training program shall require an examination to be administered by the instructor at the end of the training course. Passing of this test shall be deemed the “certification” for personnel, except that, for control room operators, the training and certification program shall

be as specified in paragraphs (c)(6)(iii) through (c)(6)(vi) of this section.

(ii) You must ensure that the source is operated and maintained at all times by persons who are trained and certified to perform these and any other duties that may affect emissions of hazardous air pollutants. A certified control room operator must be on duty at the site at all times the source is in operation.

(iii) Hazardous waste incinerator control room operators must:

(A) Be trained and certified under a site-specific, source-developed and implemented program that meets the requirements of paragraph (c)(6)(v) of this section; or

(B) Be trained under the requirements of, and certified under, the American Society of Mechanical Engineers Standard Number QHO-1-1994 (incorporated by reference—see § 63.14(e)). If you choose to use the ASME program:

(1) Control room operators must, prior to the compliance date, achieve provisional certification, and must submit an application to ASME and be scheduled for the full certification exam. Within one year of the compliance date, control room operators must achieve full certification;

(2) New operators and operators of new sources must, before assuming their duties, achieve provisional certification, and must submit an application to ASME, and be scheduled for the full certification exam. Within one year of assuming their duties, these operators must achieve full certification; or

(C) Be trained and certified under a State program.

(iv) Cement kiln and lightweight aggregate kiln control room operators must be trained and certified under:

(A) A site-specific, source-developed and implemented program that meets the requirements of paragraph (c)(6)(v) of this section; or

(B) A State program.

(v) Site-specific, source developed and implemented training programs for control room operators must include the following elements:

(A) Training on the following subjects:

(1) Environmental concerns, including types of emissions;

(2) Basic combustion principles, including products of combustion;

(3) Operation of the specific type of combustor used by the operator, including proper startup, waste firing, and shutdown procedures;

(4) Combustion controls and continuous monitoring systems;

(5) Operation of air pollution control equipment and factors affecting performance;

(6) Inspection and maintenance of the combustor, continuous monitoring systems, and air pollution control devices;

(7) Actions to correct malfunctions or conditions that may lead to malfunction;

(8) Residue characteristics and handling procedures; and

(9) Applicable Federal, state, and local regulations, including Occupational Safety and Health Administration workplace standards; and

(B) An examination designed and administered by the instructor; and

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

(vi) To maintain control room operator qualification under a site-specific, source developed and implemented training program as provided by paragraph (c)(6)(v) of this section, control room operators must complete an annual review or refresher course covering, at a minimum, the following topics:

(A) Update of regulations;

(B) Combustor operation, including startup and shutdown procedures, waste firing, and residue handling;

(C) Inspection and maintenance;

(D) Responses to malfunctions or conditions that may lead to malfunction; and

(E) Operating problems encountered by the operator.

(vii) You must record the operator training and certification program in the operating record.

* * * * *

5. Section 63.1207 is amended by:

a. Revising paragraphs (g)(2)(i) and (g)(2)(ii).

b. Revising paragraph (h)(2) introductory text.

c. Revising paragraph (j)(1)(i).

d. Adding paragraph (e)(3).

e. Adding paragraph (g)(2)(iv).

f. Adding paragraph (j)(5).

The revisions and additions read as follows:

§ 63.1207 What are the performance testing requirements?

* * * * *

(e) * * *

(3) *Petitions for time extension if Administrator fails to approve or deny test plans.* You may petition the Administrator under § 63.7(h) to obtain a “waiver” of any performance test—initial or periodic performance test; comprehensive or confirmatory test. The “waiver” would be implemented as an extension of time to conduct the performance test at a later date.

(i) *Qualifications for the waiver.* (A) You may not petition the Administrator for a waiver under this section if the Administrator has issued a notification of intent to deny your test plan(s) under § 63.7(c)(3)(i)(B).

(B) You must submit a site-specific emissions testing plan and a continuous monitoring system performance evaluation plan at least one year before a comprehensive performance test is scheduled to begin as required by paragraph (c)(1) of this section, or at least 60 days before a confirmatory performance test is scheduled to begin as required by paragraph (d) of this section. The test plans must include all documentation required to be included, including the substantive content requirements of paragraph (f) of this section and § 63.8(e); and

(C) You must make a good faith effort to accommodate the Administrator's comments on the test plans.

(ii) *Procedures for obtaining a waiver and duration of the waiver:* (A) You must submit to the Administrator a waiver petition or request to renew the petition under § 63.7(h) separately for each source at least 60 days prior to the scheduled date of the performance test.

(B) The Administrator will approve or deny the petition within 30 days of receipt and notify you promptly of the decision.

(C) The Administrator will not approve an individual waiver petition for a duration exceeding 6 months;

(D) The Administrator will include a sunset provision in the waiver ending the waiver within 6 months;

(E) You may submit a revised petition to renew the waiver under § 63.7(h)(3)(iii) at least 60 days prior to the end date of the most recently approved waiver petition;

(F) The Administrator may approve a revised petition for a total waiver period up to 12 months.

(iii) *Content of the waiver.* (A) You must provide documentation to enable the Administrator to determine that the source is meeting the relevant standard(s) on a continuous basis as required by § 63.7(h)(2). For extension requests for the initial comprehensive performance test, you must submit your Documentation of Compliance to assist the Administrator in making this determination.

(B) You must include in the petition information justifying your request for a waiver, such as the technical or economic infeasibility, or the impracticability, of the affected source performing the required test, as required by § 63.7(h)(3)(iii).

(iv) *Public notice.* You must notify the public (e.g., distribute public mailing

list) of your petition to waive a performance test.

* * * * *

(g) * * *

(2) * * *

(i) Carbon monoxide (or hydrocarbon) CEMS emissions levels must be within the range of the average value to the maximum value allowed, except as provided by paragraph (g)(2)(iv) of this section. The average value is defined as the sum of the hourly rolling average values recorded (each minute) over the previous 12 months divided by the number of rolling averages recorded during that time;

(ii) Each operating limit (specified in § 63.1209) established to maintain compliance with the dioxin/furan emission standard must be held within the range of the average value over the previous 12 months and the maximum or minimum, as appropriate, that is allowed, except as provided by paragraph (g)(2)(iv) of this section. The average value is defined as the sum of the rolling average values recorded over the previous 12 months divided by the number of rolling averages recorded during that time. The average value must not include calibration data, malfunction data, and data obtained when not burning hazardous waste;

* * * * *

(iv) The Administrator may approve an alternative range to that required by paragraphs (g)(2)(i) and (ii) of this section if you document in the confirmatory performance test plan that it may be problematic to maintain the required range during the test. In addition, when making the finding of compliance, the Administrator may consider test conditions outside of the range specified in the test plan based on a finding that you could not reasonably maintain the range specified in the test plan and considering factors including whether the time duration and level of the parameter when operations were out of the specified range were such that operations during the confirmatory test are determined to be reasonably representative of normal operations. In addition, the Administrator will consider the proximity of the emission test results to the standard.

* * * * *

(h) * * *

(2) Current operating parameters limits are also waived during pretesting prior to comprehensive performance testing for an aggregate time not to exceed 720 hours of operation under an approved test plan or if the source records the results of the pretesting. Pretesting means:

* * * * *

(j) * * *

(1) * * *

(i) Except as provided by paragraphs (j)(4) and (j)(5) of this section, within 90 days of completion of a comprehensive performance test, you must postmark a Notification of Compliance documenting compliance or noncompliance with the emission standards and continuous monitoring system requirements, and identifying operating parameter limits under § 63.1209.

* * * * *

(5) *Early compliance.* If you conduct the initial comprehensive performance test prior to September 30, 2002 (or a later compliance date approved under § 63.6(i)), you need not postmark the Notification of Compliance within 90 days of completion of the performance test.

* * * * *

6. Section 63.1209 is amended by:

- Revising paragraphs (k)(5) and (k)(7)(i)(C).
- Revising paragraphs (l)(3) and (l)(4).
- Revising paragraph (p).
- Revising paragraph (q).
- Adding paragraph (k)(6)(iv).

These revisions and additions read as follows:

§ 63.1209 What are the monitoring requirements?

* * * * *

(k) * * *

(5) *Particulate matter operating limit.* If your combustor is equipped with an activated carbon injection system, you must establish operating parameter limits on the particulate matter control device as specified by paragraph (m)(1) of this section;

(6) * * *

(iv) Control device operating parameter limits (OPLs). You must establish operating parameter limits on the particulate matter control device as specified by paragraph (m)(1) of this section.

(7) * * *

(i) * * *

(C) For the initial comprehensive performance test, you may base the initial limit on maximum bed age of the carbon in each segment of the bed on manufacturer's specifications. If you use manufacturer's specifications rather than actual bed age to establish the initial limit, you must also conduct a bed life confirmatory test prior to the manufacturer's specification of bed age. That bed life confirmatory test must be conducted under the procedures required for a dioxin/furan confirmatory test as specified by § 63.1207(g)(2). The purpose of the bed life confirmatory test is to document to the Administrator that

the initial limit on maximum bed age ensures compliance with the dioxin/furan emission standard. If you fail to confirm compliance with the dioxin/furan emission standard during this testing, you must conduct additional testing as necessary to document that a revised lower limit on maximum bed age ensures compliance with the dioxin/furan standard.

* * * * *

(1) * * *

(3) *Activated carbon injection.* If your combustor is equipped with an activated carbon injection system, you must establish operating parameter limits prescribed by paragraphs (k)(5) and (k)(6) of this section.

(4) *Activated carbon bed.* If your combustor is equipped with a carbon bed system, you must establish operating parameter limits prescribed by paragraph (k)(7) of this section. In addition, if you elect to establish the initial limit on carbon bed age based on the manufacturer's specification, you must:

(i) Operate the combustor during the bed life confirmatory test required by paragraph (k)(7)(i)(C) of this section such that each operating limit specified in paragraph (l) of this section is held within the range of the average value over the previous 12 months and the maximum or minimum, as appropriate, that is allowed. The term "average value" is defined in § 63.1207(g)(2)(ii); and

(ii) Conduct mercury emissions testing to document compliance with the mercury emission standard. If you fail to confirm compliance with the mercury emission standard during this testing, you must conduct additional testing as necessary to document that a revised lower limit on maximum bed age ensures compliance with the standard.

* * * * *

(p) *Maximum combustion chamber pressure.* If you comply with the requirements for combustion system leaks under § 63.1206(c)(5) by maintaining the maximum combustion chamber zone pressure lower than ambient pressure to prevent combustion system leaks from hazardous waste combustion, you must perform instantaneous monitoring of pressure and the automatic waste feed cutoff system must be engaged when negative pressure is not adequately maintained.

(q) *Operating under different modes of operation.* If you operate under different modes of operation, you must establish operating parameter limits for each mode. You must document in the operating record when you change a

mode of operation and begin complying with the operating limits for an alternative mode of operation.

(1) *Operating under otherwise applicable standards after the hazardous waste residence time has transpired.* As provided by § 63.1206(b)(1)(ii), you may operate under otherwise applicable requirements promulgated under sections 112 and 129 of the Clean Air Act in lieu of the substantive requirements of this subpart.

(i) The otherwise applicable requirements promulgated under sections 112 and 129 of the Clean Air Act are applicable requirements under this subpart.

(ii) You must specify (e.g., by reference) the otherwise applicable requirements as a mode of operation in your Documentation of Compliance under § 63.1211(d), your Notification of Compliance under § 63.1207(j), and your title V permit application. These requirements include the otherwise applicable requirements governing emission standards, monitoring and compliance, and notification, reporting, and recordkeeping.

(2) *Calculating rolling averages under different modes of operation.* When you transition to a different mode of operation, you must calculate rolling averages anew using the continuous monitoring system values previously recorded for that mode of operation (i.e., you ignore continuous monitoring system values recorded under other modes of operations when you transition back to a mode of operation).

PART 264—STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

7. The authority citation for part 264 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6924, and 6925.

8. Section 264.340 is amended by redesignating paragraph (b)(2) as paragraph (b)(3); revising the first sentence in paragraph (b)(1); and adding new paragraph (b)(2) to read as follows:

§ 264.340 Applicability.

* * * * *

(b) * * *

(1) Except as provided by paragraph (b)(3) of this section, the standards of this part no longer apply when an owner or operator demonstrates compliance with the maximum achievable control technology (MACT) requirements of part 63, subpart EEE of this chapter by conducting a

comprehensive performance test and submitting to the Administrator a Notification of Compliance under §§ 63.1207(j) and 63.1210(d) of this chapter documenting compliance with the requirements of part 63, subpart EEE of this chapter. * * *

(2) Except as provided by paragraph (b)(3) of this section, the standards of this section do not apply to an owner or operator of a hazardous waste incinerator (as defined at § 63.1201 of this chapter) that begins construction, reconstruction, or becomes an affected source of part 63, subpart EEE of this chapter, after September 30, 1999.

* * * * *

PART 265—INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

9. The authority citation for part 265 continues to read as follows:

Authority: 42 U.S.C. 6905, 6906, 6912, 6922, 6923, 6924, 6925, 6935, 6936, and 6937.

10. Section 265.340 is amended by redesignating paragraph (b)(2) as paragraph (b)(3); revising the first sentence in paragraph (b)(1); and adding a new paragraph (b)(2) to read as follows:

§ 265.340 Applicability.

* * * * *

(b) * * *

(1) Except as provided by paragraph (b)(3) of this section, the standards of this part no longer apply when an owner or operator demonstrates compliance with the maximum achievable control technology (MACT) requirements of part 63, subpart EEE of this chapter by conducting a comprehensive performance test and submitting to the Administrator a Notification of Compliance under §§ 63.1207(j) and 63.1210(d) of this chapter documenting compliance with the requirements of part 63, subpart EEE of this chapter. * * *

(2) Except as provided by paragraph (b)(3) of this section, the standards of this section do not apply to an owner or operator begins construction, reconstruction, or becomes an affected source of part 63, subpart EEE of this chapter, after September 30, 1999.

* * * * *

PART 266—STANDARDS FOR THE MANAGEMENT OF SPECIFIC HAZARDOUS WASTES AND SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES

11. The authority citation for part 266 continues to read as follows:

Authority: Secs. 1006, 2002(a), 3004, 6905, 6906, 6912, 6922, 6925, and 6937.

12. Section 266.100 is amended by redesignating paragraph (b)(2) as paragraph (b)(3); revising the first sentence of paragraph (b)(1); and adding new paragraph (b)(2) to read as follows:

§ 266.100 Applicability.

* * * * *

(b) * * *

(1) Except as provided by paragraph (b)(3) of this section, the standards of this part no longer apply when an affected source demonstrates compliance with the maximum achievable control technology (MACT) requirements of part 63, subpart EEE, of this chapter by conducting a comprehensive performance test and submitting to the Administrator a Notification of Compliance under §§ 63.1207(j) and 63.1210(d) of this chapter documenting compliance with the requirements of subpart EEE. * * *

(2) Except as provided by paragraph (b)(3) of this section, the standards of this section do not apply to an owner or operator of a hazardous waste burning cement kiln, or hazardous waste lightweight aggregate kiln (as defined at § 63.1201 of this chapter) that begins construction, reconstruction, or becomes an affected source of part 63, subpart EEE of this chapter, after September 30, 1999.

* * * * *

PART 270—EPA ADMINISTERED PERMIT PROGRAMS: THE HAZARDOUS WASTE PERMIT PROGRAM

13. The authority citation for part 270 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912, 6924, 6925, 6927, 6939, and 6974.

14. Section 270.19 is amended by revising paragraph (e) to read as follows:

§ 270.19 Specific part B information requirements for incinerators.

* * * * *

(e) When an owner or operator who submitted a permit application under this part before September 30, 1999, demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE (i.e., by conducting a comprehensive performance test and submitting a

Notification of Compliance documenting compliance with all applicable requirements of part 63, subpart EEE), the requirements of this section do not apply. When an owner or operator submits a permit application under this part on or after September 30, 1999, the requirements of this section do not apply. Nevertheless, the Director may apply the provisions of this section, on a case-by-case basis, for purposes of information collection in accordance with §§ 270.10(k) and 270.32(b)(2).

15. Section 270.22 is amended by revising the introductory text to read as follows:

§ 270.22 Specific part B information requirements for boilers and industrial furnaces burning hazardous waste.

When an owner or operator of a cement or lightweight aggregate kiln demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE (i.e., by conducting a comprehensive performance test and submitting a Notification of Compliance documenting compliance with all applicable requirements of part 63, subpart EEE), the requirements of this section do not apply. When an owner or operator of a cement or lightweight aggregate kiln submits a permit application under this part on or after September 30, 1999, the requirements of this section do not apply. Nevertheless, the Director may apply the provisions of this section, on a case-by-case basis, for purposes of information collection in accordance with §§ 270.10(k) and 270.32(b)(2).

* * * * *

16. Section 270.62 is amended by revising the introductory text to read as follows:

§ 270.62 Hazardous waste incinerator permits.

When an owner or operator who submitted a permit application under this part before September 30, 1999, demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE (i.e., by conducting a comprehensive performance test and submitting a Notification of Compliance documenting compliance with all applicable requirements of 40 CFR part 63, subpart EEE), the requirements of this section do not apply. When an owner or operator submits a permit application under this part on or after September 30, 1999, the requirements of this section do not apply. Nevertheless, the Director may apply the provisions of this section, on a case-by-case basis, for purposes of information collection in

accordance with §§ 270.10(k) and 270.32(b)(2).

* * * * *

17. Section 270.66 is amended by revising the introductory text to read as follows:

§ 270.66 Permits for boilers and industrial furnaces burning hazardous waste.

When an owner or operator of a cement or lightweight aggregate kiln who submitted a permit application under this part before September 30, 1999, demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE (i.e., by conducting a comprehensive performance test and submitting a Notification of Compliance documenting compliance with all applicable requirements of 40 CFR part 63, subpart EEE), the requirements of this section do not apply. When an owner or operator of a cement or lightweight aggregate kiln submits a permit application under this part on or after September 30, 1999, the requirements of this section do not apply. Nevertheless, the Director may apply the provisions of this section, on a case-by-case basis, for purposes of information collection in accordance with §§ 270.10(k) and 270.32(b)(2).

* * * * *

[FR Doc. 01-16426 Filed 7-2-01; 8:45 am]

BILLING CODE 6560-50-U

DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

49 CFR Part 171

[Docket No. RSPA-99-5013 (HM-229)]

RIN 2137-AD21

Hazardous Materials: Revisions to Incident Reporting Requirements and the Hazardous Materials Incident Report Form

AGENCY: Research and Special Programs Administration (RSPA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: RSPA is proposing revisions to the current incident reporting requirements of the Hazardous Materials Regulations and the hazardous materials incident report form, DOT Form F 5800.1. The major changes proposed by RSPA in this NPRM include: collecting more specific information on the incident reporting form; expanding reporting exceptions; expanding reporting requirements to persons other