lead to upset conditions and potentially damage the integrity of the manufacturing equipment. Other commenters oppose, however, deletion of the minimum combustion chamber temperature limit for cement kilns. These commenters state that all combustion sources, including cement kilns, must meet a minimum combustion chamber temperature limit to control dioxin/furans and organic HAP emissions given that some cement kilns feed hazardous waste at locations other than the high temperature clinker-forming zone of the kiln.

Response: We are deleting as proposed the requirement to establish a minimum combustion chamber temperature limit for dioxin/furan under § 63.1209(k)(2) for cement kilns. See 69 FR at 21343. However, we retain the requirement for cement kilns to establish and comply with a minimum combustion chamber temperature limit for the destruction and removal efficiency standard under § 63.1209(j)(1).[224]

As discussed in the 1999 rule, nondioxin/furan organic hazardous air pollutants are controlled by the DRE standard and the carbon monoxide and hydrocarbon standards. See 64 FR at 52848–52852. This standard was not reopened in the present rulemaking. We note, however, that the DRE standard determines appropriate process controls necessary for the combustion of hazardous waste. Establishing and monitoring a minimum temperature of the combustion chamber is a principal factor in ensuring combustion efficiency and destruction of toxic organic compounds. As discussed in the previous response, we believe this is especially true given the industry trend to convert to the more thermally efficient preheater/precalciner kiln manufacturing process, which use two separate combustion processes. We conclude that it is necessary, in spite of the concerns raised by commenters, to retain the minimum combustion chamber temperature limit as related to the DRE standard to ensure that combustion efficiency within the entire kiln system is maintained for the control of nondioxin/furan organic HAP.

However, we acknowledge the difficulties that cement kiln operators face in establishing a minimum combustion chamber temperature limit, including the stressful operating conditions necessary to establish the limit. As we stated at proposal, our data indicate that limiting the gas temperature at the inlet to the particulate matter control device is a critical parameter in controlling dioxin/furan emissions in cement kilns. See 69 FR at 21344. Therefore, we believe that an operating limit on the minimum combustion chamber temperature is less important to ensure compliance with the dioxin/furan standard than to ensure compliance with the DRE standard. Thus, we remove the requirement to establish a minimum combustion chamber temperature limit for dioxin/furan under § 63.1209(k)(2) for cement kilns. This change does not affect the other operating parameter limits under § 63.1209(k) that must be established for dioxin/furans, including a limit on the gas temperature at the inlet to the particulate matter control device.

Comment: One commenter supports the use of previous minimum combustion zone temperature data, regardless of the test age, in lieu of conducting new, stressful DRE testing. That is, if a cement kiln is required to conduct future DRE tests, then the source should not have to re-establish a minimum combustion chamber temperature limit during the new test. Rather, the source should have the option to submit minimum combustion chamber temperature results in lieu of re-establishing the limit.

Response: We reject the commenter's suggestion for reasons discussed above. We believe that it is necessary to retain the link between the minimum combustion chamber temperature limit and the DRE test itself, which will ensure that the combustion efficiency of the entire system will be maintained for the control of nondioxin/furan organic HAP.

Comment: One commenter supports deletion of the minimum combustion chamber temperature requirement for dioxin/furan under § 63.1209(k)(2) for lightweight aggregate kilns.

Response: We reject the commenter's suggestion. Our data base of dioxin/furan emissions data shows substantial variability in test results at each source.[225] This may indicate that factors other than limiting kiln exit gas temperatures may be influencing significantly dioxin/furan formation in lightweight aggregate kilns. As such, we conclude that removing the minimum combustion chamber temperature limit would not be appropriate at this time due to the uncertain nature of dioxin/furan formation in lightweight aggregate kilns. Thus, we are retaining the requirement to establish a minimum combustion chamber temperature limit for dioxin/furans under § 63.1209(k)(2) and § 63.1209(j)(1) for lightweight aggregate kilns.

L. One Time Dioxin and Furan Test for Sources Not Subject to a Numerical Limit for Dioxin and Furan

Comment. Commenters support the one-time dioxin/furan test for sources not subject to a numerical dioxin and furan standard. Commenters agree that previous testing should be allowed to document the one time test.

Response. The final rule requires sources that are not subject to a standard with numerical dioxin and furan levels [226] to conduct a one-time dioxin and furan test as part of their initial comprehensive performance testing: lightweight aggregate kilns that elect to control the gas temperature at the kiln exit rather than comply with a dioxin/furan standard of 0.20 ng TEQ/dscm, solid fuel boilers, liquid fuel boilers with wet or no air pollution control systems, and HCl production furnaces. We will use these data as part of the process of addressing residual risk under CAA section 112(f) and evaluating future MACT standards under section 112(d)(6). The results may also be used as part of the RCRA omnibus permitting process.

Comment. EPA proposed that source not subject to a numerical dioxin and furan limit conduct a dioxin and furan test under worst-case conditions. Commenters state that operating under worst-case conditions is inconsistent with the CAA Section 112(f) process, which is to consider actual (i.e., normal) emissions. Commenters suggest that we require the tests be conducted under normal to above normal conditions.

Response. Section 112 (f) standards evaluate allowable emission levels, although actual emissions levels may also be considered. See 70 FR at 19998–

[224] Under the interim standards, cement kilns must establish and continuously monitor limits on minimum gas temperature in the combustion zone for both the dioxin/furan and DRE standards. As discussed in the preceding paragraph, a source may not need to conduct DRE testing during each comprehensive performance test. If DRE testing is required, then the source will need to establish a minimum combustion zone temperature limit as required under the DRE standard. However, if DRE testing is not required, then (according to the changes made today) the cement kiln will not be required to establish the minimum combustion chamber temperature limit under the dioxin/furan standard during a subsequent comprehensive performance test. The minimum combustion chamber temperature operating limit established during previous testing remains in effect, however.

[225] For example, dioxin/furan emissions from source number 307 range from a low of 0.024 to a high of 57.9 ng TEQ/dscm. See ''Source Category Summary Sheets'' available in the docket or USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume II: HWC Data Base,'' September 2005.

[226] These sources do, however, need to comply with the carbon monoxide or hydrocarbon standards, as well as the DRE standard as surrogates to comply with today's dioxin and furan emissions control requirements.

19999 (April 15, 2005). Although we agree with the commenter that, in general, emissions in the range of normal to maximum are considered for section 112(f) determinations, we believe that dioxin/furan testing to provide information of use in section 112(f) residual risk determinations should be conducted under conditions where controllable operating conditions are maximized to reflect the full range of expected variability of those parameters which can be controlled. This is because dioxin/furan emissions may relate exponentially with the operating conditions that affect formation. We believe that dioxin/furan emissions relate exponentially with gas temperature at the inlet to an ESP or fabric filter,[227] and are concerned that emissions may also relate exponentially with the operating parameters (discussed below) that affect emissions from sources subject to the one-time dioxin/furan emissions test. Emissions testing under operating conditions that are in the range of ''normal to above normal'' may be exponentially lower than emissions under operating conditions reflecting maximum daily variability of the source. Since testing under normal operating conditions makes no effort to assess operating variability, emissions during such testing would fail to reflect expected daily maximum operating variability and so would not represent time-weighted average emissions and would under-represent health risk from chronic exposure.

Although we acknowledge that sources will not exhibit maximum operating variability each day of operation, we believe that it is important to assess the upper range of emissions that these sources may emit to properly evaluate under section 112(f) whether the MACT standards for dioxin/furan for these sources (i.e., absent a numerical emission standard) protect public health with an ample margin of safety.[228]

In addition, we note that emissions reflecting daily maximum variability would be most useful for section 112(d)(6) determinations in the future because they would represent the full range of emissions variability that results from controllable operating conditions.

For these reasons, the final rule requires sources to test under feed and operating conditions that are most likely to reflect maximized expected daily variability of dioxin/furan emissions, as proposed. Such testing is similar to a comprehensive performance test to demonstrate compliance with a numerical dioxin/furan emission standard where operating limits would be established based on operations during the test. As a practical matter, however, we note that many of the operating parameters discussed below, although controllable to some extent, cannot be quantified and cannot be controlled to replicate the condition in a future test. In addition, some operating parameters we identify may not have as strong a relationship to dioxin/furan emissions as others. Consequently, the operating conditions are generally described subjectively.

Based on currently available research, you should consider the following factors to ensure that you conduct the test under operating conditions that seek to fully reflect maximum daily variability of dioxin/furan emissions: (1) Dioxin/furan testing should be conducted at the point in the maintenance cycle for a boiler when the boiler tubes are more fouled and soot-laden, and not after maintenance involving soot or ash removal from the tubes; (2) dioxin/furan testing should be performed following (or during) a period of feeding normal or greater quantities of metals; (3) dioxin/furan testing should be performed while feeding normal or greater quantities of chlorine; (4) the flue gas temperature in some portion of the heat recovery section of a boiler should be within the dioxin formation temperature window of 750 to 400°F during the testing; (5) the testing should not be conducted under optimal combustion conditions (e.g., combustion chamber temperature should be in the range of normal to the operating limit; hazardous waste feedrate and combustor through put should be in the range of normal to maximum); (6) for units equipped with wet air pollution control systems, the testing should be conducted after a high solids loading has developed in the scrubber system (consistent with normal operating cycles); and (7) for solid fuel boilers, the sulfur content of the coal should be equivalent to or lower than normal coal sulfur levels (within the range of sulfur levels that the source utilizes), and the gas temperature at the inlet to the electrostatic precipitator or fabric filter should be close to the operating limit. In addition, unless sulfur compounds are routinely fed to the boler, dioxin/furan testing should not be performed after a period of firing high sulfur fuel or injection of sulfur additives. See 69 FR at 21308 for more information.

Comment: Commenters state that we should delete the one-time testing requirement for dioxin and furans. The Clean Air Act at Section 114(a)(1)(D) allows EPA to request ''any person'' to sample emissions. Applying the Section 114 authority to an entire subcategory of sources is overly broad, particularly in the context of having already established appropriate surrogates for dioxin and furan in a MACT rule. Commenters are not aware of EPA taking this approach in previous efforts. (Section 114 requests have focused on collecting existing information from sources facing future MACT standards). Commenters oppose this approach because it established a precedent they do not favor, and will bring about significant costs and difficulties to provide the data. They suggest that we delete the proposed requirements for a one-time dioxin and furan test.

Response: We believe that section 114(a)(1)(D) of the Clean Air Act provides us the authority to require sources to conduct a one time test to generate data which can be used in making later section 112 (f) determinations for the source category. The results of the testing may also inform the section 112(d)(6) review and the RCRA omnibus permitting processes. The fact that section 114 specifically indicates that a purpose of gathering information under section 114 is to assist in developing national rules indicates that the provision can have wide sweep extending to all sources in a category. See 69 FR at 21307–308 for a full explanation.

We believe a dioxin and furan test costs approximately $10,000 when conducted along with other testing. We do not believe this cost is significant, and sources must only perform this test once, not more frequently as would be the case to ensure compliance with a standard. We also allow sources to use prior testing to meet this requirement, and allow sources to use ''data in lieu'' so they can test one source if they have more than one of the same identical sources.

We do not believe that obtaining these data will be difficult, and note that the permitting authority can assist sources in planning their tests.

M. Miscellaneous Compliance Issues

Comment: Several commenters state that § 63.1206(c)(3)(iv) requiring an automatic waste feed cutoff (AWFCO) if

[227] See USEPA, ''Technical Support Document for HWC MACT Standards, Volume IV: Compliance,'' July 1999, Chapter 3.

[228] Dioxin/furan are some of the most toxic compounds known due to their bioaccumulation potential and wide range of health effects, including carcinogenesis, at exceedingly low doses. Exposure via indirect pathways is a chief reason that Congress singled out dioxin/furan for priority MACT control in CAA section 112(c)(6). See S. Rep. No. 128, 101st Cong. 1st Sess. at 154–155.

a parameter linked to the AWFCO is exceeded should be revised to reflect § 63.1206(c)(2)(v)(A)(1). Section 63.1206(c)(2)(v)(A)(1) states that, if the AWFCO is affected by a malfunction such that the malfunction itself prevents immediate and automatic cutoff of the hazardous waste feed, you must cease feeding hazardous waste as quickly as possible.

Response: We agree with commenters in principle, but note that the automatic waste feed cutoff system may fail for reasons other than a malfunction. That is, equipment or other failures are malfunctions only if they meet the definition of malfunction at § 63.2. Failures that result from improper maintenance or operation are not malfunctions. Consequently, the final rule revises § 63.1206(c)(3)(iv) to state that if the AWFCO is affected by a failure such that the failure itself prevents immediate and automatic cutoff of the hazardous waste feed, you must cease feeding hazardous waste as quickly as possible. Revised § 63.1206(c)(3)(iv) does not refer to malfunctions, however, because the AWFCO system may fail for reasons other than a malfunction. The reference in § 63.1206(c)(2)(v)(A)(1) to malfunctions is appropriate because that paragraph addresses requirements during malfunctions.

Comment: Several commenters note that the proposed rule did not include a sunset provision for the Interim Standards applicable to incinerators, cement kilns, and lightweight aggregate kilns after the compliance date of the standards we promulgate today (i.e., the ''permanent replacement standards''). Commenters are concerned that, although the Agency intends for the replacement standards to be more stringent than the Interim Standards, that may not be the case in all situations because of the different format used for some of the replacement standards. For example, several of the replacement standards for cement kilns and lightweight aggregate kilns are expressed as hazardous waste thermal emissions.

Response: Although we are promulgating the replacement standards in a format that ensures they are not less stringent than the Interim Standards, we agree with commenters that not sunsetting the Interim Standards may lead to confusion as to which standards apply. Consequently, we include a sunset provision in today's rule for the Interim Standards. The Interim Standards will be superseded by the final rule promulgated today on the compliance date.

We note, however, that the Interim Standards for total chlorine continue to apply to sources that establish health-based limits for total chlorine under § 63.1215. Consequently, we have incorporated the total chlorine Interim Standards in § 63.1215 as they apply as a cap to the health-based emission limits.

Comment: Several commenters state that the rule should allow extrapolation of ash and chlorine feedrates to establish feedrate limits corresponding to the particulate matter and total chlorine standards. Commenters believe the rationale we use to allow extrapolation of metals feedrates is also applicable to ash and chlorine.

Response: The final rule does not allow you to extrapolate ash and chlorine feedrates achieved during the comprehensive performance test to establish feedrate limits comparable to the particulate matter and total chlorine emission standards.

We do not allow extrapolation of ash to the particulate matter emission standard because particulate matter (i.e., soot) may form in the combustor, particularly at times of unstable combustion conditions. Consequently, extrapolating from ash feedrates may underestimate particulate matter emissions and may not ensure compliance with the particulate matter emission standard.

We do not allow extrapolation of chlorine feedrates to the total chlorine emission standard because chlorine feedrate is an operating parameter limit to ensure compliance with the semivolatile metal emission standard. Because an increase in chlorine feedrate can increase the volatility of semivolatile metals and we do not know the precise relationship among chlorine feedrate, metal volatility, and metals emissions, extrapolating the chlorine feedrate achieved during the comprehensive performance test to a feedrate comparable to the total chlorine emission standard may not ensure compliance with the semivolatile metal emission standard. If a source complies with the semivolatile metals emission standard under § 63.1207(m)(2) where the performance test is waived, however, by assuming zero system removal efficiency and limiting the semivolatile feedrate (expressed as a maximum theoretical emission concentration) to the level of the emission standard, the source may request under § 63.1209(g)(1) to extrapolate chlorine feedrates during the comprehensive performance test up to the total chlorine emission standard.

Comment: Several commenters state that the proposed regulatory language under §§ 63.1206(b)(9)(i) and 63.1206(b)(10)(i) is inconsistent with the proposed preamble, which states that sources should be allowed to petition for alternative standards provided they submit information showing that HAP contributions to emissions from the raw materials are preventing the source from achieving the emissions standard though the source is using MACT control.[229] The commenters state that the proposed regulatory language, despite the intent signaled in the proposed preamble, inappropriately excludes the provisions of §§ 63.1206(b)(9)(i) and 63.1206(b)(10)(i) as an alternative option when complying with the replacement emission standards under §§ 63.1220 and 63.1221.

Response: We agree with the commenters. The proposed regulatory text inadvertently excluded the alternative standard provisions from use by cement and lightweight aggregate kilns under the replacement standards. Accordingly, we are revising the introductory text of §§ 63.1206(b)(9)(i) and 63.1206(b)(10)(i) by making the alternative standards available under the replacement standards.

Comment: One commenter states that the availability of the alternative standard for mercury under § 63.1206(b)(10)(i) should not be conditioned upon mercury being present only at levels below the detection limit in raw materials, as specified under § 63.1206(b)(10)(i)(B). The commenter suggests that the approach for mercury should be the same as for other HAP such as semi- and low volatile metals under § 63.1206(b)(10)(i)(A).

Response: The commenter misreads the alternative standard provisions under § 63.1206(b)(10)(i). We note that § 63.1206(b)(10) includes two separate provisions for cement kilns. The first provision allows sources to petition for an alternative standard when a source cannot achieve a standard because of HAP metal or chlorine concentrations in their raw material feedstocks cause an exceedance of a standard despite the source's use of MACT control. See § 63.1206(b)(10)(i)(A). The term ''regulated metals'' specified in § 63.1206(b)(10)(i)(A) includes mercury, semivolatile metals, and low volatile metals. The second provision allows a source to petition for an alternative mercury standard when mercury is not present at detectable levels in the source's raw materials. § 63.1206(b)(10)(i)(B). These two provisions are indeed separate as

[229] For example, see 69 FR at 21268.

discussed in the 1999 rule. See 64 FR at 52962–967. Also note that the conjunction separating paragraphs (b)(10)(i)(A) and (b)(10)(i)(B) is ''or,'' not ''and.''

Given the potential confusion of the term ''regulated metals,'' we are clarifying the regulatory text by specifying the three metal HAP volatility groups that comprise the term ''regulated metals.'' See revised § 63.1206(b)(10)(i)(A). Finally, given that the alternative standard provisions are similar for lightweight aggregate kilns, we are also clarifying §§ 63.1206(b)(9)(i)(A) and (b)(9)(iv).

IX. Site-Specific Risk Assessment Under RCRA

A. What Is the Site-Specific Risk Assessment Policy?

The Site-Specific Risk Assessment (SSRA) Policy has undergone several revisions since its inception in the 1993 draft Combustion Strategy. Currently, it is the same policy as we expressed in the 1999 final rule preamble. In the 1999 rule, we recommended that for hazardous waste combustors subject to the Phase 1 MACT standards, permitting authorities should evaluate the need for an SSRA on a case-by-case basis. Further, while SSRAs are not anticipated to be necessary for every facility, they should be conducted where there is some reason to believe that operation in accordance with the MACT standards alone may not be protective of human health and the environment. For hazardous waste combustors not subject to the Phase 1 standards, we continued to recommend that SSRAs be conducted as part of the RCRA permitting process. See 64 FR 52841. Since 1999, we have provided additional clarification of the appropriate use of the SSRA policy and technical guidance in an April 10, 2003 memorandum from OSWER's Assistant Administrator to the EPA Regional Administrators entitled, ''Use of the Site-Specific Risk Assessment Policy and Guidance for Hazardous Waste Combustion Facilities'' (see Docket # OAR–2004–0022–0083). Most importantly, in this memorandum we reiterated that where a permitting authority concludes that a risk assessment is necessary for a particular combustor, the basis for this decision must be substantiated in each case. The factual and technical basis for any decisions to conduct a risk assessment must be included in the administrative record for the facility per 40 CFR 124.7, 124.8, 124.9, and 124.18. In addition, if the facility, or any other party, files comments on a draft permit decision objecting to the permitting authority's conclusions regarding the need for a risk assessment, the permitting authority must respond fully to the comments. Any permit conditions determined to be necessary based either on the SSRA, or because the facility declined to conduct an SSRA, also must be documented and supported in the administrative record.

Today, we are codifying additional regulatory language providing authority for SSRAs while maintaining the same basic SSRA policy. It is important to note that all of the requirements of Part 124 referred to above will continue to apply to actions taken in accordance with the additional regulatory language we are codifying. The SSRA regulatory provisions, which establish that the need for an SSRA should be determined on a case-by-case basis, apply equally to both Phase 1 and Phase 2 sources.

B. Why Might SSRAs Continue To Be Necessary for Sources Complying With Phase 1 Replacement Standards and Phase 2 Standards?

EPA conducted a national evaluation of human health and ecological risk for the MACT standards as proposed in the 1996 NPRM and then revised the evaluation to include more facilities for the 1999 final rulemaking. Based on the results of the final national risk evaluation for hazardous air pollutants (excluding non-dioxin products of incomplete combustion), we concluded that sources complying with the MACT standards generally would not pose an unacceptable risk to human health or the environment. For today's final rule, we did not conduct another national risk assessment as we did for the 1999 rule. Rather, for both the April 20, 2004 NPRM and today's final rule we conducted a comparative risk analysis, comparing the Phase 1 Replacement and Phase 2 Standards to the 1999-promulgated Phase 1 Standards, to determine if there were any significant differences that might influence or impact the potential risk. Similar to the proposal, the comparative analysis conducted for today's final rule focused on several key characteristics: emission rates, stack height, stack gas buoyancy, meteorological conditions (which include a number of variables), population parameters including density and radial distribution, and correlations among the characteristics themselves. The results of the comparative analysis suggest that the MACT standards for both Phase 1 and Phase 2 sources are generally protective. Therefore, separate national emissions standards under RCRA are unnecessary. See Part Seven: How Does the Final Rule Meet the RCRA Protectiveness Mandate? Although we have concluded that the Phase 1 Replacement and Phase 2 standards are generally protective, as we discussed in the 2004 proposal (69 FR 21325), there may be instances where we cannot assure that emissions from each source will be protective of human health and the environment, and therefore an SSRA may be necessary. Furthermore, it should be noted that, just as for the risk assessment for the 1999 rule, the comparative analysis does not account for cumulative emissions at a source or background exposures from other sources.

Before discussing factors that may lead permit authorities to consider whether or not to conduct an SSRA, it should be noted that the Agency generally does not expect that facilities that have conducted risk assessments will have to repeat them. As we explained in the 1999 final rule preamble, changes to comply with the MACT standards should not cause an increase in risk for the vast majority of facilities given that the changes will likely be the addition of pollution control equipment or a reduction in the hazardous waste being burned (see 64 FR 52842). Instances where a facility may need to repeat a risk assessment would be related to changes in conditions that would likely lead to increased risk. For example, if the only changes at a facility relate to the exposed population (a new housing development is constructed within a few square miles of the source), what was once determined to be protective under a previous risk assessment may now be beyond acceptable levels. Another example would be where a hazardous waste burning cement kiln that previously monitored hydrocarbons in the main stack elects to install a mid-kiln sampling port for carbon monoxide or hydrocarbon monitoring to avoid restrictions on hydrocarbon levels in the main stack. Thus, the stack hydrocarbon emissions may increase (64 FR 52843, footnote 29). In such situations, we would anticipate that the risk assessment would not have to be entirely redone. It may be as limited as collecting relevant new data for comparison purposes, leading to a decision not to repeat any portion of a risk assessment. Or, it may be more inclusive such that modifications would be made to specific inputs to or aspects of the risk assessment using data from a previous risk assessment, risk burn or comprehensive performance test. In recognition of this, we have added an additional factor to the list of factors at § 270.10(l)(1) to indicate that a previously conducted risk assessment

would be relevant in evaluating changes in conditions that may lead to increased risk. The factor reads as follows: ''Adequacy of any previously conducted risk assessment, given any subsequent changes in conditions likely to affect risk.'' The following discussion is intended mainly to address facilities that have not yet conducted an SSRA (i.e., where it has been determined that one is needed).

In the proposal we discussed our conclusion that almost all of the proposed standards for Phase 1 sources were equivalent to or more stringent than the 1999 final standards, with the exception of the mercury standard for new and existing LWAKs and the total chlorine standard for new LWAKs. However, there are additional standards for Phase 1 sources finalized in today's rulemaking that are less stringent than the 1999 final standards. In addition to those discussed in the proposal, the following standards are less stringent than the 1999 final standards: mercury for new cement kilns and semi-volatile metals for existing cement kilns; dioxin/furan for existing and new LWAKs, mercury for existing and new LWAKs, and total chlorine for existing and new LWAKs. Because these standards exceed the levels which were evaluated in the 1999 national risk assessment, especially with respect to mercury and dioxin/furan standards for which the national risk assessment showed high end risks at or near levels of concern, permit authorities may decide on a case-by-case basis that an SSRA is appropriate to determine whether the less stringent Replacement standards are protective. In addition, the comparative analysis results suggest concern regarding the dioxin/furan standard for LWAKs and thus, permit authorities may consider site-specific factors in determining whether the standard is sufficiently protective.

Specific to Phase 2 sources, we mentioned earlier that we conducted the same comparative risk analysis for Phase 2 sources as we did for Phase 1 sources (i.e., by comparing the Phase 2 standards to the 1999 final standards for Phase 1 sources). Although several MACT standards for Phase 2 sources are more stringent than the BIF standards under RCRA, there are a few MACT standards that may be cause for concern on a case-by-case basis, as they are either less stringent than some of the 1999 final standards or the comparative risk analysis suggests concern. They are: The particulate matter standard (and certain metals such as antimony and thallium), mercury standard, and total chlorine standard for solid fuel-fired boilers (SFBs); the dioxin/furan standard (carbon monoxide or total hydrocarbon as surrogate controls, versus a numerical standard) for HCl production furnaces; and the dioxin/furan standard for liquid fuel-fired boilers (LFBs) with dry APCDs. In addition, dioxin/furan emissions data for LFBs with wet or no APCDs indicate an observed level (1.4 ng TEQ/dscm) of more than three times the highest dioxin/furan standard evaluated in the 1999 national risk assessment (69 FR 21285).[230] Thus, these standards may warrant site-specific risk consideration, especially with respect to the dioxin/furan standards. That is, due to the complexity of the dioxin/furan formation mechanism and given the toxicity of dioxin/furans,[231] an SSRA may be needed based on the specific emission levels of each source not subject to a numerical standard. For additional discussion on the protectiveness of standards, please refer to Part Seven: How Does the Final Rule Meet the RCRA Protectiveness Mandate?

There are also site-specific factors beyond the standards that can be important to the SSRA decision making process. As discussed in the proposal, examples include a source's proximity to a water body or endangered species habitat, repeated occurrences of contaminant advisories for nearby water bodies, the number of hazardous air pollutant emission sources within a facility and the surrounding community, whether or not the waste feed to the combustor is made up of persistent, bioaccumulative or toxic contaminants, and sensitive receptors with potentially significantly different exposure pathways, such as Native Americans (69 FR 21326). Also, there are several uncertainties inherent in the 1999 national risk assessment.[232] Thus, the same uncertainties related to the fate and transport of mercury in the environment and the biological significance of mercury exposures in fish (i.e., once mercury has been transformed into methylmercury, it can be ingested by the lower trophic level organisms where it can bioaccumulate in fish tissue), as well as the risk posed by non-dioxin products of incomplete combustion, remain today and may influence a permitting authority's decision. Last, we are finalizing the option for Phase 2 area sources to comply with specific MACT standards as provided by CAA § 112(c)(6) specific pollutants authority. These area sources may need to conduct an SSRA for the remaining RCRA standards that they choose to comply with (i.e., since they do not address the potential risk from indirect exposures to long-term deposition of metals onto soils and surface waters).[233]

In addition to the examples provided in the previous paragraph, we also expressed that an SSRA may be necessary with respect to the proposed thermal emission standards. With respect to Phase 1 sources, we had noted in the proposal that the thermal emission standards for semi-volatile and low volatile metals for cement kilns and LWAKs may be of concern because they directly address emissions attributable to hazardous waste versus a source's total HAP metal emissions. See 69 FR 21326. However, we are requiring sources to comply with both the thermal emission standards and the Interim Standards in today's final rulemaking, since compliance with the thermal emission standards may not always assure compliance with the Interim Standards. As a result, the thermal emission standards for cement kilns and LWAKs no longer pose the uncertainties that they had in the proposal.[234] In regard to Phase 2 sources, the concern at the time of proposal was with respect to the thermal emission standards for liquid fuel-fired boilers. However, the comparative analysis for today's final rulemaking for liquid fuel-fired boilers, which is based on total stack emissions from these sources while assuming compliance with the thermal standards, does not suggest that risks for LFBs are cause for concern (except as otherwise noted, e.g., dioxins).

C. What Changes Are EPA Finalizing With Respect to the Site-Specific Risk Assessment Policy?

In the 1999 final rule preamble, we included a revised site-specific risk assessment (SSRA) policy recommendation to account for promulgation of the new technology-based CAA MACT standards for Phase

[230] The comparative analysis did not specifically suggest concern as it has for other source categories, but per the reference to the proposal, we have some concern regarding the protectiveness of the standard.

[231] There is ongoing uncertainty in cancer and other health effects levels for chlorinated dioxins and furans.

[232] Uncertainties stem from a lack of information regarding the behavior of mercury in the environment and a lack of sufficient emissions data and parameter values (e.g., bioaccumulation values) for nondioxin products of incomplete combustion. See 64 FR 52840–52841.

[233] Currently, there are only five area sources that this may apply to; they are interim status units in the process of conducting an SSRA as part of their final permits.

[234] An exception would be the semivolatile metal Interim standard for existing cement kilns, which is less stringent than the 1999 final standard. As we noted, permit authorities may consider the need for an SSRA as a result.

1 sources. We recommended that permitting authorities evaluate the need for an SSRA on a case-by-case basis for hazardous waste combustors subject to the Phase 1 MACT standards. For hazardous waste combustors not subject to the Phase 1 standards, we continued to recommend that SSRAs be conducted as part of the RCRA permitting process if necessary to protect human health and the environment. We indicated that the RCRA omnibus provision authorized permit authorities to require applicants to submit SSRA results where an SSRA was determined to be necessary. For the reasons described in the previous subsection, we believe that additional controls may be necessary on a site-specific basis to ensure that adequate protection is achieved in accordance with RCRA.

Consequently, because SSRAs are likely to continue to be necessary at some facilities (mainly those that have not previously conducted an SSRA), we concluded that it is more appropriate to include a regulatory provision that explicitly provides for the permit authority to require SSRAs on a case-by-case basis and add conditions to RCRA permits based on SSRA results. Therefore, instead of relying on RCRA § 3005(c)(3) and its associated regulations at § 270.10(k) when permitting authorities conduct or require a risk assessment on a site-specific basis (i.e., as applicable to those newly entering the RCRA permit process), we had proposed to codify the authorities provided by sections 3004(a) and (q) and 3005(b). See proposed regulations at 69 FR 21383–21384, §§ 270.10(l) and 270.32(b)(3). In proposing to codify these authorities, we stated that we were not requiring that SSRAs automatically be conducted for hazardous waste combustion units, but that the decision of whether or not a risk assessment is necessary must be made based upon relevant factors associated with an individual combustion unit and that there are combustion units for which an SSRA will not be necessary. Further, we explained that the proposed language would provide notice to the regulated community that an SSRA may be necessary to support a source's permit, while reminding the permit agency of the need to evaluate whether an SSRA would be necessary on a site-specific basis.

Despite our efforts to explain that by codifying these provisions, we are only modifying the statutory authority under which we implement the SSRA policy while maintaining the same SSRA policy from a substantive standpoint, commenters generally opposed EPA's proposed codification. The comment most frequently presented was that the proposed regulatory language is not helpful to anyone (i.e., regulated community, the public or permitting agencies), is redundant with the omnibus authority, and sets an extremely low hurdle for regulators to require SSRAs.

We disagree that the new regulatory language is not helpful and that it sets an extremely low hurdle for regulators to require SSRAs. We believe that the new provisions are beneficial in two ways: (1) They provide notice to the regulated community and public that an SSRA may be necessary to support a source's permit; and (2) they remind the permitting agencies of the importance of evaluating whether an SSRA would be necessary on a site-specific basis. The new regulatory provision in no way expands or supplements the authority on which EPA had previously relied—i.e., omnibus and § 270.10(k), thus it does not provide any more or less authority to permit authorities (i.e., lower or raise the hurdle) to require SSRAs. We agree that, because the proposed language provides permitting authorities with no greater authority than the omnibus authority, it is somewhat duplicative of § 270.10(k). However, as noted, EPA believes this provision offers important benefits to both the agency and the regulated community, and as explained further below, EPA has adopted a slightly modified version of the proposal pursuant to RCRA § 3004(a) and § 3005(b). See also discussion in subsection F.

Another common view expressed by commenters is that, although extensive risk assessments that have been performed for more than a decade, showing lack of risk to human health and the environment, EPA continues to require SSRAs without a technical evaluation of the historical results. To the contrary, EPA Regional permit writers have found that certain chemicals (especially dioxin and mercury)[235] pose excess risk in certain circumstances—even under the Interim Standards—and consequently find it necessary to assess risk to human health and the environment based on site-specific conditions at the facility. In EPA Regions 7 and 10 for example, some facilities have RCRA risk-based permit conditions that establish more frequent sampling or limits on feed rate for specified metals to ensure that ecologically sensitive areas are not adversely impacted.

Many commenters also state that CAA § 112(f) residual risk process is the appropriate method to assess risk for hazardous waste combustors complying with MACT, not RCRA risk assessments. Specifically, one commenter argued that EPA lacked statutory authority to rely on the omnibus provisions to require SSRA and SSRA-based controls on the grounds that § 112(f) of the Clean Air Act establishes a specific provision to control any residual risk from combustor emissions. We disagree with commenters for two reasons. First, as we explained in the 1999 final rule preamble, the omnibus provision is a RCRA statutory requirement and the CAA does not override RCRA. Promulgation of the MACT standards, therefore, does not duplicate, supersede, or otherwise modify the omnibus provision or its applicability to the sources covered by today's rule. Second, the SSRA under RCRA is usually conducted prior to issuance of the final permit. The CAA residual risk determination is generally made eight years after promulgation of the MACT standards for a source category. Accordingly, a permit authority currently facing a permit decision could not rely on these yet unwritten residual risk standards to resolve its identified concern that the MACT standard may not be sufficiently protective at an individual site. In addition, even though we believe that § 3005(c)(3) and its associated regulations provide the authority to require and perform SSRAs and to write permit conditions based on SSRA results, we are not relying on these provisions as the authority for § 270.10(l). Rather, we are relying on §§ 3004(a) and (q) and 3005(b). See 69 FR 21327.

With respect to the costs incurred when conducting an SSRA, several commenters raised the concern that our approximations do not include portions of actual costs (e.g., data gathering, QA/QC, and third party consultants, risk assessors, and plant personnel time to coordinate and review SSRA efforts and collect facility data), thus resulting in artificially low costs. Commenters cited additional reasons why they feel that EPA's cost estimates are too low including our assumptions that: (1) SSRAs are a one-time or infrequent cost; (2) most SSRAs fall under ''normal'' versus ''unusual'' situations; and (3) the cost of conducting a risk burn during a

[235] Dioxin is a common risk driver due to ongoing uncertainty in cancer and other health effects levels for chlorinated dioxins and furans. Mercury is also a common risk driver due to uncertainties implicit in the quantitative mercury analysis. See discussion in Part Seven, Section II. and 65 FR 52997. Thus, it is not uncommon for permit authorities to require risk-based RCRA permit limits (based on risk assessment results) to control emissions of these pollutants.

trial burn adds only 20% more to the cost.

Regarding the comment that we did not include actual costs for our estimates of overall costs to conduct an SSRA, we agree that some costs were overlooked. We did include the costs related to conducting an SSRA under ''normal'' and ''unusual'' conditions, SSRA data collection in conjunction with a regular performance burn, and a full independent risk burn including protocol, sampling, analysis, and report. However, we did not capture facility time associated with data collection and management related to the SSRA. Consequently, we have revised our cost estimate for performing these activities; see chapter 4 of the background document entitled, Assessment of the Potential Costs, Benefits, and Other Impacts of the Hazardous Waste Combustion MACT Replacement Standards—Final Rule, October 12, 2005.

In response to the broader comment that our cost estimates are too low (for several reasons mentioned previously), we agree that our estimate of a 20% additional cost to conduct a risk burn with a trial burn may have been conservative and therefore, we have adjusted our previous estimate to include a range of 20% to 40%. The total SSRA cost range has also been updated from $141K–$370K to $157K–$815K.[236] With respect to our assumption that the majority of SSRAs are conducted under ''normal'' conditions (lending to overall lower cost estimates), we do believe that the majority of future SSRAs will fall under the ''normal'' conditions.[237] We believe this is appropriate due to: lack of new facilities coming on-line for which there is no previous test data; availability of commercial modeling software; and finalization of the ''Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities'' guidance, or ''HHRAP'' guidance. However, we do recognize that some facilities can be more complex than others in the hazardous waste combustion universe. Therefore, we have identified a portion of facilities that are likely to incur ''unusual'' costs for a future SSRA and have revised our cost analysis to reflect inclusion of these higher-cost facilities. See background document, Assessment of the Potential Costs, Benefits, and Other Impacts of the Hazardous Waste Combustion MACT Replacement Standards—Final Rule, October 12, 2005.

Also, we maintain our assumption that SSRAs generally represent a one-time cost unless a facility significantly changes its operations or if receptors change such that an increase in risk is anticipated as a result. Even so, as explained earlier in subsection B., we would anticipate that the risk assessment would not have to be entirely redone. It may be as limited as collecting relevant new data for comparison purposes, leading to a decision not to repeat any portion of a risk assessment. Or, it may be more inclusive such that modifications would be made to specific inputs to or aspects of the risk assessment using data from a previous risk assessment, risk burn or comprehensive performance test. With respect to chemical weapons demilitarization facilities, we recognize that due to their specialized waste streams and multiple treatment units, SSRAs, in many cases, are not one-time events and as a result, their SSRA costs are relatively high. The high costs can be attributed to the necessity for each chemical weapons demilitarization facility to perform surrogate trial burns and then agent trial burns for each furnace and each agent campaign (e.g., GB (Sarin), VX, and HD (Sulfur Mustard)). For example, a chemical weapons demilitarization facility would conduct GB trial burns on all the furnaces and then complete destruction of the GB stockpile, followed by VX trial burns and VX stockpile and finally, the HD trial burns and the HD stockpile. This effectively extends the input to the risk assessment of the trial burn data over most of the operational life of the facility.

Last, several commenters raised the concern that EPA's proposal to codify the authority to require SSRAs on a case-by-case basis and add conditions to RCRA permits based on SSRA results, violates the due process protections afforded under the current structure, where SSRAs are required and performed pursuant to RCRA § 3005(c)(3) omnibus authority. Commenters were further concerned that the proposed language in § 270.10(l) would remove existing procedural safeguards by allowing the Agency to require a very expensive SSRA before the draft permit is even issued, thus violating EPA's own procedural standards as well as due process. It appears as though commenters believe that the procedures (and procedural protections) currently applicable whenever an SSRA is conducted are unique to circumstances in which the permitting authority proceeds under the authority of RCRA § 3005(c)(3)—the ''omnibus'' provision. This is incorrect. All of the specific procedural requirements the commenters have raised would be applicable whether the permitting authority proceeded under § 270.10(l), as EPA proposed, or pursuant to RCRA § 3005(c)(3) and § 270.10(k), as is the current practice.

All of the requirements established in Part 124 continue to apply, whether EPA proceeds under § 270.10(l) or under § 270.10(k). As we discussed in the proposal, the basis for the decision to conduct a risk assessment, or to request additional information to evaluate risk or determine whether a risk assessment is necessary, must be included in the administrative record for the facility and made available to the public during the comment period for the draft permit. See 40 CFR 124.7 [statement of basis]; 124.9 [administrative record for draft permit]; 124.18 [administrative record for final permit]. If the facility, or any other party, files comments on a draft permit decision objecting to the permitting authority's conclusions regarding the need for a risk assessment, the permitting authority must respond fully to the comments. Any permit conditions determined to be necessary based either on the SSRA, or because the facility declined to conduct an SSRA, also must be documented and supported in the administrative record.

The commenters' concern that § 270.10(l) allows the permitting authority to require the SSRA prior to the issuance of a draft permit, and therefore the applicant would have no opportunity to comment or challenge that determination, is equally unfounded. There is effectively no practical or substantive distinction between the circumstance when a permit authority communicates the decision that an SSRA is necessary to issue the permit prior to issuing the draft permit, or as part of the draft permit. In either case, if a facility refuses to provide a risk assessment or data to support a risk assessment requested under this provision, the regulations at part 124 make clear that the appropriate recourse is for the permit authority to deny the permit (See 40 CFR 124.3(d); 124.6(b) and 270.10(c). The basis for the denial would essentially be the same in either case—that the information before the agency gives rise to a concern that the MACT may not be sufficiently protective,

[236] The high end of this range applies only to those systems operating under ''unusual conditions'' (the available data suggest that there are only five such facilities).

[237] Normal conditions assume use of previously collected performance burn data, use of standard commercial modeling software that meet Agency guidance, and limited interactions with State and Federal oversight authorities. Unusual conditions assume the need for site-specific modeling, extensive interactions with stakeholders and regulators, an extended time frame, and targeted ecological analyses.

which the agency is unable to dispel based on the information before it. Consequently, the permit authority cannot determine that the permit meets RCRA's standard for permit issuance. An as noted above, all of the requirements of Part 124 would apply to actions taken in accordance with § 270.10(l). For additional discussion on this issue, please refer to the Response to Comments background document for this final rule.[238]

Despite the many reasons offered by commenters opposing our proposal, we continue to believe that our proposed approach is appropriate. As discussed in the proposal (69 FR 21327) and in the previous subsection, although the Phase 1 Replacement and Phase 2 standards provide a high level of protection (i.e., they are generally protective) to human health and the environment, thereby allowing us to nationally defer the RCRA emission requirements to MACT, additional controls may be necessary on an individual source basis to ensure that adequate protection is achieved in accordance with RCRA. Until today, we have relied exclusively upon RCRA § 3005(c)(3) and its associated regulations at § 270.10(k) when conducting or requiring an SSRA. We continue to believe that § 3005(c)(3) and its associated regulations provide the authority to require and perform SSRAs and to write permit conditions based on SSRA results. In fact, as the next subsection will explain, EPA will likely continue to include permit conditions based on the omnibus authority in some circumstances when conducting these activities, and state agencies in states with authorized programs will continue to rely on their own authorized equivalent. However, because SSRAs are likely to continue to be necessary at some facilities, we are finalizing the authority to require them on a case-by-case basis and add conditions to RCRA permits based on SSRA results under the authority of RCRA §§ 3004(a) and (q) and 3005(c). Therefore, we are finalizing §§ 270.10(l) and 270.32(b)(3) with some minor modifications to provide further clarification of the Agency's intent.

D. How Will the New SSRA Regulatory Provisions Work?

The new regulatory provisions are finalized under both base program authority (§ 3004(a) and § 3005(b)) and HSWA authority (§ 3004(q)). That is, changes made to regulations applicable to boilers are promulgated under HSWA authority, whereas changes made to regulations applicable to incinerators are promulgated under non-HSWA authority. Consequently, when it is determined that an SSRA is needed, the applicability of these provisions will vary according to the type of combustion unit (whether it is regulated under 3004(q), or only 3004(a) and 3005(b)), and the authorization status of the state. Depending on the facts, the new authority would be applicable, or the omnibus provision would remain the principal authority for requiring SSRAs and imposing risk-based conditions where appropriate. See 69 FR 21327.

According to the state authorization section of this preamble (see Part Five, Section IV.), EPA does not consider these provisions to be either more or less stringent than the pre-existing federal program, since they simply make explicit an authority that has been and remains available under the omnibus authority and its implementing regulations. Thus, states with authorized equivalents to the federal omnibus authority will not be required to adopt these provisions, so long as they interpret their omnibus authority broadly enough to require risk assessments where necessary.[239]

The provisions of §§ 270.10(l) and 270.32(b)(3) adopted in today's rule are substantially similar to the provisions EPA proposed. Section 270.10(l) continues to explicitly provide that a permit authority has the authority to evaluate, on a case-by-case basis, the need for an SSRA. EPA has also retained its proposed language that explicitly provides that, where an SSRA is determined to be necessary, the permit authority may require a permittee or an applicant to conduct an SSRA, or to provide the regulatory agency with the information necessary to conduct an SSRA on behalf of the permittee/applicant. The final provision also essentially retains the standard laid out in the proposal: that a permit authority may decide that an SSRA is warranted based on a conclusion that additional controls beyond those required pursuant to 40 CFR parts 63, 264, 265, or 266 may be needed to ensure protection of human health and the environment under RCRA. In § 270.32(b)(3), EPA has also explicitly codified the authority for permit authorities to require that the applicant provide information, if needed, to make the decision of whether an SSRA should be required.

However, EPA has adopted some further clarifications to the final provisions in response to comments. In response to comments that the regulatory language EPA had proposed still fails to provide the regulated community with adequate notice that an SSRA might be required, and what that might entail, EPA has included additional language to address those issues. Specifically, EPA has included a sentence stating that the information required under § 270.10(l) can include the information necessary to evaluate the potential risk to human health and/or the environment resulting from both direct and indirect exposure pathways. EPA has also added language to remind permit authorities that the determination that the MACT standards may not be sufficiently protective is to be based only on factors relevant to the potential risk from the hazardous waste combustion unit at the site, and has provided a list of factors to guide the permit authority in making that determination. See subsections E. and F. for further discussion. The applicability language of §§ 270.19, 270.22, 270.62, and 270.66 also has been amended to allow a permit authority that has determined that an SSRA is necessary to continue to apply the relevant requirements of these sections on a case-by-case basis and as they relate to the performance of the SSRA after the source has demonstrated compliance with the MACT standards.

As previously noted, the requirements at 40 CFR Part 124 continue to apply to actions taken to implement § 270.10(l). Thus, if the permitting authority concludes that a risk assessment or additional information is necessary for a particular combustor, the permitting authority must provide the factual and technical basis for its decision in the permit's administrative record and must make it available to the public during the comment period for the draft permit. If the facility or any other party files comments on a draft permit decision objecting to the permitting authority's conclusions regarding the need for an SSRA, the authority must respond fully to the comments. In addition, the SSRA must be included in the administrative record and made available to the public during the comment period. Any additional conditions and limitations determined to be necessary as a result of the SSRA must be documented and supported in the administrative record as well.[240]

[238] See final Response to Comment to the HWC MACT Standards, Volume 5, Miscellaneous.

[239] Authorized states are required to modify their programs only when EPA enacts federal requirements that are more stringent or broader in scope than existing federal requirements. This applies to regulations promulgated under both HSWA and non-HSWA authorities.

[240] Additional clarification on the appropriate use of the SSRA policy and technical guidance is provided in the April 10, 2003 memorandum from Marianne Lamont Horinko entitled ''Use of the Site-

E. What Were Commenters' Reactions to EPA's Proposed Decision Not To Provide National Criteria for Determining When an SSRA Is or Is Not Necessary?

In the proposal, we stated that we were not proposing national criteria (e.g., guiding factors) for determining when an SSRA is necessary. Although we had developed a list of qualitative guiding factors for permit authorities to consult when considering the need for an SSRA in the September 1999 final rulemaking (revised from the April 1996 NPRM), we never intended for them to comprise an exclusive list for several reasons. Mainly, we felt that the complexity of multi-pathway risk assessments precluded the conversion of the qualitative guiding factors into more definitive criteria. See 69 FR 21328.

Commenters generally agreed that the risk assessment guidance and policy should not be codified. They agreed in principle that it is important to keep the decision to require an SSRA flexible because factors vary from facility to facility. However, several commenters raised the concern that the proposed language of § 270.10 (l) was too vague. For example, one commenter suggested that any additional guidance clarifying how risk assessments should be performed and that providing standards or goals to be achieved by the operating conditions would be helpful. Another commenter felt that EPA should identify specific factors that the regions and authorized states should consider, and specific criteria that should be met, before requiring an SSRA or additional emission controls or other standards. We agree with commenters that additional guidance would be beneficial and have taken a number of actions in this regard. First, EPA is adopting a more detailed regulatory provision that provides a non-exclusive list of guiding factors for permit authorities to use in determining whether the MACT will be sufficiently protective at an individual site, and consequently, whether an SSRA is warranted. Section 270.10(l) now requires that the permit writer's evaluation of whether compliance with the standards of 40 CFR part 63, Subpart EEE alone is protective of human health or the environment be based on factors relevant to the potential risk from a hazardous waste combustion unit, including, as appropriate, any of the specifically enumerated factors. These factors reflect the eight guiding factors that EPA has discussed in several rule preambles. See 61 FR 17372, 64 FR 52842, and 69 FR 21328. However, EPA has also incorporated a few minor revisions to reflect the standards promulgated today, and to reflect the fact that the factors will be codified.

EPA has revised the language of the factors so that the language is consistent between the provisions. Consistency of phrasing is generally more important in regulations, which are binding, than in guidance. For example, some of the factors listed in the 1999 preamble used the phrase ''presence or absence'' while other used the phrase ''identities and quantities.'' EPA has adopted the phrase ''identities and quantities,'' on the grounds that it more precisely expresses the concept intended by both phrases. EPA has also made minor revisions to reduce redundant text, and to shorten the provisions, in the interests of clarity. For example, rather than addressing the proximity of receptors in two factors, EPA addresses this issue in a single factor. However, nothing contained in either of the original factors was deleted as part of this revision. None of the revisions described here substantively change the issues to be considered from those contained in the original eight guiding factors.

In addition to these minor technical revisions, EPA has included language to clarify that one potentially relevant factor for consideration is the ''identities and quantities of persistent, bioaccumulative or toxic pollutants considering enforceable controls in place to limit those pollutants.'' This reflects changes made between the proposed and final MACT standards (e.g., the proposed rule called for beyond-the-floor dioxin limits for some sources; those were not promulgated in the final rule).

Another change is the EPA has deleted the factor that listed ''concerns raised by the public.'' The regulation will allow the decision to be based on any one of the listed factors, and public concern, unaccompanied by an identifiable risk, would not provide an adequate basis for determining that an SSRA was warranted.

Finally, as discussed previously in subsection B., EPA has added an additional factor to indicate that a previously conducted risk assessment would be relevant in evaluating changes in conditions that may lead to increased risk. The factor reads as follows: ''Adequacy of any previously conducted risk assessment, given any subsequent changes in conditions likely to affect risk.'' See § 270.10(l)(1).

One commenter raised the concern that the eight guiding factors the Agency specified in its **Federal Register** notice at 64 FR 52842 (September 30, 1999) did not adequately focus on the central question of whether there are likely to be emissions that would be uncontrolled under the Subpart EEE final rule. They argued that, as an example, under guiding factor #5, if the waste containing highly toxic constituents are being addressed by the Subpart EEE standards, the fact that there might be such wastes should not justify an SSRA. The commenter apparently misunderstands that the factors were not intended to function as stand-alone criteria for requiring an SSRA—i.e., to use their example, the commenter believes that the mere fact that highly toxic constituents are present in the waste would justify an SSRA without consideration of whether the MACT emission standards were sufficiently protective. This is an incorrect reading of EPA's proposed regulation. Rather, the factors were always intended to function as considerations that might be relevant to the determination of whether the MACT was sufficiently protective. However, the regulatory structure EPA has adopted in the final rule makes perfectly clear that the critical determination is that ''compliance with the standards of 40 CFR part 63, Subpart EEE alone may not be protective of human health or the environment.'' Further, the provision states that this determination is to be based only on factors relevant to the potential risk from the hazardous waste combustion unit, including, as appropriate, the listed factors. EPA believes that these provisions make clear that the determination of whether to require an SSRA is to be based on consideration of the conditions at the facility site, including, for example, an evaluation of all enforceable controls in place to limit emissions. Further discussion of EPA's revised provisions can be found in subsection F.

Second, as discussed in more detail below, EPA is issuing a revised risk assessment guidance document that we believe will provide additional insight to help users. While clearly delineating between risk management and risk assessment, the HHRAP explains in great detail a recommended process for performing and reporting on cost-effective, scientifically defensible risk assessments. It includes numerous recommended defaults, while at the same time is flexible enough to incorporate site-specific values. Although the HHRAP provides numerous recommendations, it remains merely guidance and consequently leaves the final decisions up to the permitting authority. We believe that

Specific Risk Assessment Policy and Guidance for Hazardous Waste Combustion Facilities.'' (See Docket # OAR–2004–0022–0083).

the revised HHRAP guidance will provide further assistance to permit writers, risk assessors and facilities in determining whether or not to conduct an SSRA and what and how much information is required for the SSRA.

F. What Are EPA's Responses to the Cement Kiln Recycling Coalition's Comments on the Proposal and What is EPA's Final Decision on CKRC's Petition?

In the proposal, we provided a lengthy discussion in response to CKRC's petition for rulemaking (69 FR 21325–21331). In its petition, CKRC presented two requests with respect to SSRAs: (1) That EPA repeal the existing SSRA policy and technical guidance because CKRC believes that the policy and guidance ''are regulations issued without appropriate notice and comment rulemaking procedures''; and (2) after EPA repeals the policy and guidance, ''should EPA believe it can establish the need to require SSRAs in certain situations, CKRC urges EPA undertake an appropriate notice and comment rulemaking process seeking to promulgate regulations establishing such requirements.'' Additionally, CKRC stated that it does ''not believe that these SSRAs are in any event necessary or appropriate'' and that they disagree with EPA's use of the RCRA omnibus provision as the authority to conduct SSRAs. Finally, CKRC raised three general concerns: (1) Whether an SSRA is needed for hazardous waste combustors that will be receiving a RCRA permit when the combustor is in full compliance with the RCRA boiler and industrial furnace regulations and/or with the MACT regulations; (2) how an SSRA should be conducted; and (3) what is the threshold level for a ''yes'' or ''no'' decision that additional risk-based permit conditions are necessary. We believe our tentative decision in the proposal addressed each request and concern presented in their petition. However, in its comments, CKRC has restated many of the same issues with new emphasis. Thus, we believe it is appropriate to address their major comments in the following paragraphs.[240a]

1. Whether SSRAs Are Necessary for Facilities in Full Compliance With BIF or MACT Regulations

In its comments, CKRC continues to question the need for any SSRAs at facilities that are in full compliance with the MACT EEE standards. CKRC also states that ''[our] Petition challenged EPA to explain why, if there is any need for SSRAs at all under RCRA, there is a rational basis for why it has limited the entire SSRA program to hazardous waste combustors.'' They argue that, ''The point is that if the ''omnibus'' words in RCRA mean what EPA says they mean for hazardous waste combustors, why do they not mean the same thing for all of the other TSD facilities that also pose the same kind of ''what-if'' hypotheticals that EPA throws out in its preamble?''

As discussed above in subsection B., and in greater detail below, EPA believes that risk assessments will continue to be necessary at some facilities. For example, based on the inconclusive results from the national risk assessment conducted for the 1999 final rule and the comparative risk analysis conducted for today's rule, EPA is not able to conclude that all MACT standards will be sufficiently protective for every facility (e.g., non-dioxin PICs not previously modeled, no numerical dioxin/furan emission standard for solid fuel-fired boilers, liquid fuel-fired boilers with wet or no APCDs, and hydrochloric acid production furnaces, etc.). EPA also provided examples of site-specific factors that might lead risk assessors to decide that the MACT standards may not be sufficiently protective, and therefore an SSRA may be necessary (e.g., if a source's emissions are comprised of persistent bioaccumulative or toxic contaminants). EPA also discussed this issue at length in both the 2004 proposal, and the 1999 rule preamble. See 69 FR 21326 and 64 FR 52842. Given these uncertainties, the SSRA provides significant support for the Agency's 1006(b) determination supporting the elimination of separate RCRA emission standards for MACT EEE facilities.

We disagree that our discussion of standards (and site-specific factors) that may warrant a risk evaluation at certain types of facilities are mere ''what-if'' hypotheticals. The examples that we discussed in both the earlier preambles and above were based on the 1999 national risk assessment and a comparative risk analysis, which concluded that either there was not enough information to make a definitive protectiveness determination or that uncertainty in cancer and other health effects levels of dioxin and furans, for instance, make it difficult to draw conclusions about potential risks. Furthermore, the discussions with respect to the protectiveness of certain standards (i.e., some are less stringent today than the 1999 standards) in subsection B., present a reasonable basis for permitting authorities to consider whether or not risk should be evaluated. In support of our position that the examples we have provided in the 1999 final rule preamble, the 2004 proposed rule preamble, and this final rule, are more than ''what-if'' hypotheticals, we have placed copies of completed risk assessments where risk-based limits were found to be necessary in the docket for today's final rule (see OAR–2004–0022).

The CKRC fails to acknowledge that there are many aspects of hazardous waste combustors and the combustion process itself, which make this category of TSD facilities different from others, and which factor heavily into our SSRA policy. Consider that many combustion facilities feed a wide array of waste streams comprised of many hazardous constituents. The combustion of these constituents results in complex chemical processes (which are difficult to predict) occurring throughout the combustion unit. The end product is stack emissions comprised of a variety of compounds different from those that enter the process, and thus are difficult to predict because they can vary greatly based on the many variables of the individual combustion unit, making them difficult to address (*i.e.*, there are no specific emissions standards to limit certain compounds such as products of incomplete combustion). For example, in attempting to maximize the destruction of organic compounds, products of incomplete combustion are often generated as a consequence. Further, due to stack dispersion, hazardous waste combustors have the potential to affect several square miles. Other types of TSD facilities' operations typically do not encompass such complex processes or have the potential to adversely affect receptors for several square miles.

It should be noted that hazardous waste combustors are not the only type of TSD subjected to site-specific evaluations of risk. We take a site-specific approach to regulating miscellaneous units under Part 264, subpart X. Because it is not possible to develop performance standards and emission limits for each type of treatment unit that may fall under this broad category, we rely on general environmental performance standards to meet our mandate under §§ 3004 (a) and (q) that standards governing the operation of hazardous waste facilities be protective of human health and the environment. For example, § 264.601(c) requires ''Prevention of any release that may have adverse effects on human

[240a] CKRC provided numerous comments organized by subtitles. Rather than relying on this format in the preamble, we have organized the comments and responses according to the concerns initially raised in the petition, and consistent with the discussion presented in the proposal.

health or the environment due to migration of waste constituents in the air, considering: * * * (6) the potential for health risks caused by human exposure to waste constituents; and * * *'' For all intents and purposes, subparts X units are subject to SSRAs as well.

In addition, the question of whether an SSRA continues to be necessary is partly a function of the fact that EPA is seeking to rely on CAA MACT standards in order to eliminate RCRA emissions standards for these facilities. As noted above, because the MACT is technology-based, and because of uncertainties in our national risk assessments, permit writers' ability to conduct an SSRA in individual cases provides important support for our deferral.

RCRA §§ 3004(a) and (q) mandate that standards governing the operation of hazardous waste combustion facilities be protective of human health and the environment. To meet this mandate, we originally developed national combustion standards under RCRA, taking into account the potential risk posed by direct inhalation of the emissions from these sources. With advancements in risk assessment science since promulgation of the original national standards (*i.e.*, 1981 for incinerators and 1991 for boilers and industrial furnaces), it became apparent that the risk posed by indirect exposure (*e.g.*, ingestion of contaminants in the food chain) to long-term deposition of metals, dioxins/furans and other organic compounds onto soils and surface waters should be assessed in addition to the risk posed by direct inhalation exposure to these contaminants. We also recognized that the national assessments performed in support of the original hazardous waste combustor standards did not take into account unique and site-specific considerations which might influence the risk posed by a particular source. Therefore, until EPA was able to revise its regulations, to ensure the RCRA mandate was met on a facility-specific level for all hazardous waste combustors, we strongly recommended that site-specific risk assessments (SSRAs), including evaluations of risk resulting from both direct and indirect exposure pathways, be conducted as part of the RCRA permitting process. In those situations where the results of an SSRA showed that a facility's operations could pose an unacceptable risk (even after compliance with the RCRA national regulatory standards), additional risk based, site-specific permit conditions could be imposed pursuant to RCRA's omnibus authority, § 3005(c)(3).

Rather than establish separate emission standards under RCRA, EPA decided to coordinate its revisions to the RCRA emissions standards for hazardous waste combustors with the adoption of the MACT standards pursuant to § 112(d) of the CAA. See 64 FR 52832. In the rulemaking establishing the MACT standards for incinerators, cement kilns and lightweight aggregate kilns (Phase 1 sources), relying on RCRA § 1006(b), EPA determined that in most cases, the MACT standards would be sufficiently protective that separate RCRA emission standards and operating conditions would not need to be included in the facility's RCRA permit. However, for a variety of reasons, EPA lacked sufficient factual basis to conclude that a complete deferral of RCRA requirements could be supported for all facilities.

Section 1006(b) conditions EPA's authority to reduce or eliminate RCRA requirements on the Agency's ability to demonstrate that the integration meets RCRA's protectiveness mandate (42 U.S.C. 6005(b)(1)). See *Chemical Waste Management* v. *EPA*, 976 F.2d 2, 23, 25 (D.C. Cir. 1992). To support its RCRA § 1006(b) determination, EPA conducted a national evaluation of both direct and indirect human health and ecological risks to determine if the MACT standards would satisfy the RCRA mandate to protect human health and the environment. That evaluation, however, did not quantitatively assess the proposed standards with respect to mercury and nondioxin products of incomplete combustion. This was due to a lack of adequate information regarding the behavior of mercury in the environment and a lack of sufficient emissions data and parameter values (*e.g.*, bioaccumulation values) for nondioxin products of incomplete combustion. Since it was not possible to suitably evaluate the proposed standards for the potential risk posed by mercury and nondioxin products of incomplete combustion, in order to support our 1006(b) determination, we continued to recommend that SSRAs be conducted for some facilities as part of the permitting process until we could conduct a further assessment once final MACT standards were promulgated and implemented. Specifically, we recommended that for hazardous waste combustors subject to the Phase 1 MACT standards—hazardous waste burning incinerators, cement kilns and light-weight aggregate kilns—permitting authorities should evaluate the need for an SSRA on a case-by-case basis. We further stated that while SSRAs are not anticipated to be necessary for every facility, they should be conducted where there is some reason to believe that operation in accordance with the MACT standards alone may not be protective of human health and the environment. For hazardous waste combustors not subject to the Phase 1 standards, we continued to recommend that SSRAs be conducted as part of the RCRA permitting process. See 64 FR 52841. As discussed in subsection B., EPA believes that SSRAs may continue to be necessary for some Phase 1 facilities. For the Phase 2 sources, our comparative risk analysis generally indicates that, although the MACT standards for Phase 2 sources are appreciably more stringent than the current RCRA BIF standards, an SSRA may be necessary to confirm that a facility will operate in a way that is protective of human health and the environment.

Thus, for both Phase 1 and Phase 2 sources, we continue to believe that SSRAs may be necessary for some facilities.[241] We generally believe the MACT standards will be protective; in most cases they are substantially more protective than the existing RCRA part 264, 265, and 266 requirements. However, because HWCs manage hazardous waste and process it by burning and emitting the by-products into the air, a multitude of potential exposure pathways exist. These exposure pathways can also vary substantially based on site-specific factors associated with an individual combustion unit and the surrounding site. Such factors make it difficult for the Agency to conclude that a single, national risk assessment provides adequate factual support for its determination that the technology-based MACT standards will be sufficiently protective. This is further complicated by the fact that, for certain parameters, the Agency lacked sufficient information to quantitatively assess the risk, but is relying on a combination of quantitative and qualitative assessments of the MACT standards' protectiveness.

Nonetheless, EPA does not believe that the uncertainty is so great that it would preclude a deferral under 1006(b) for the affected categories of facilities; nor does EPA believe that these uncertainties necessarily support requiring a risk assessment for all such facilities. Conditions at the facility

[241] As discussed in section B., we expect that facilities that have previously conducted an SSRA will not need to conduct another in consideration of today's final standards. Only those facilities newly subject to the RCRA permitting requirements, or existing sources where changes in conditions could lead to increased risk, may need to conduct or modify an existing SSRA.

might confirm that the MACT standards are sufficiently protective, without the need for a facility-wide risk assessment. For example, if the results of the MACT testing demonstrated that the facility's dioxin emissions fall below the levels estimated in the database EPA used for its comparative risk assessment, the uncertainties in EPA's comparative risk assessment would not, by itself, support a decision to require an SSRA. Such decisions require an evaluation of the conditions at the site, and EPA believes it important to retain the flexibility for permit authorities to take these conditions into account. Accordingly, EPA believes that the regulatory structure adopted in today's rule strikes the appropriate balance between these competing factors.

In response to EPA's statement in the proposal that non-HAP emissions, which were beyond the direct scope of MACT, may pose risk which could necessitate an SSRA (69 FR 21326), CKRC pointed out that the same could be said for other types of TSDs, such as landfills, land treatment systems, etcetera, and EPA has not addressed this point in its preamble. As previously noted, combustion units are distinct from other types of TSDs due to the wide array of waste streams being fed to the unit, the complex chemical processes throughout the combustion unit, stack emissions comprised of a wide variety of compounds that are difficult to address, and the potential to impact receptors for several square miles due to stack dispersion. A further distinction is that EPA is seeking to rely on the MACT standards to eliminate national RCRA stack emissions standards under § 1006(b). Unless EPA can affirmatively demonstrate that RCRA's protectiveness standards are met, the Agency cannot eliminate RCRA requirements. A number of uncertainties remain concerning the protectiveness of the MACT standards based on the uncertainties remaining in the supporting national risk assessment and comparative analysis, and the variability of site-specific factors from one facility to another. Permitting authorities' ability to resolve these uncertainties through the use of the SSRA, where appropriate, provides important support for the Agency's 1006(b) finding. Furthermore, as we have noted, under omnibus, to the extent permitting authorities believe there are problems with other types of TSDs, they can impose requirements and request additional information, including an SSRA in accordance with § 270.10(k). Also as previously noted, Part 264, subpart X specifically incorporates site-specific consideration of risk into its regulatory framework.

Next, CKRC comments that EPA has a non-discretionary duty under CAA § 112(f) to address and take care of any ''residual risk'' from MACT facilities in the future in any event. We discussed why we do not believe that the residual risk process should or can take the place of an SSRA under RCRA in subsection C. of this SSRA preamble, as well as in the 1999 rule preamble (64 FR 52843). In short, because the residual risk standards have not yet been established, permit writers cannot rely on this process in reaching current permitting decisions or in acting on currently pending permit applications.

2. Codification of EPA's Technical Guidance

In response to our explanation in the proposal that risk assessment guidelines should be flexible and reflect current science, CKRC gave three comments: (1) Not a word of the current SSRA guidelines has been changed in 3 years; (2) it is easy to write regulations that have provisions that might be applied differently in different situations, and at least many basic, fundamental points can go in regulations, while some details can be in guidance—EPA writes regulations accompanied by ''fill in the small details'' guidance all the time; and (3) EPA seems to have no real problems with regulatory fixes anyway. In addition, CKRC provides several comments related to the previous three throughout their comment document, which are addressed below.

None of these comments address the specific issue EPA raised, which is that, while it certainly is possible to codify our risk assessment guidance, for a variety of reasons, we disagree that it would be appropriate to issue these technical recommendations as a regulation. As we previously explained, risk assessment—especially multi-pathway, indirect exposure assessment—is a highly technical and evolving field. Any regulatory approach EPA might codify in this area is likely to become outdated, or at least artificially constraining, shortly after promulgation in ways that EPA cannot anticipate now. In support of this, we noted specific examples of problems we experienced in implementing the BIF regulations. See 69 FR 21330. Further, we explained that at the time of codification, BIF risk assessments were not intended to address indirect routes of exposure, thus making the parameters easier to implement. Today, however, risk assessments are more complex due to the necessary inclusion of multi-pathway and indirect exposure routes. Given the complexity of multi-pathway and indirect exposure assessments and the fact that risk science is continuously evolving, it would be difficult and again, overly constraining, to codify risk parameters today. We note as well, in this regard, that several commenters agreed that codification of EPA's risk assessment guidance would be too constraining for both the agency and the regulated community.

We also believe that a guidance approach is consistent with the fact that permit authorities must make site-specific decisions whether to do risk assessments at all. We think that it makes little sense to allow this kind of flexibility regarding whether to do a risk assessment and for what purposes, while prescribing how one must be conducted if one is required. In fact, permitting authorities, in some cases, have developed their own guidance methodologies responsive to the specific needs associated with their facilities. For example, North Carolina, Texas, and New York have each developed their own risk assessment methodologies. Further, facilities that choose to conduct SSRAs themselves can choose alternative approaches in applying methodologies as well. We think this flexibility employed in the field supports our judgment that risk assessment methodologies should not be codified. CKRC's comments failed to address any of these issues.

Turning to the remainder of CKRC's specific points—CKRC's assertion that the technical guidance has not been amended in the past three years is inaccurate. A revised HHRAP guidance, that has been amended to take into account the technical recommendations from both the public comments and peer review, is published in conjunction with this rule. In addition, as noted above, in some cases, permitting authorities have developed their own methodologies responsive to the specific needs associated with their facilities.

With respect to CKRC's third point, the regulatory corrections made to the MACT rules were necessary either to fix an error or omission or to resolve potential legal issues. To codify technical tools and chemical information pertinent to the risk process simply is not prudent, as this information is continually changing and would almost always be out of date. Granted, when this information is presented in guidance, it can just as easily become outdated, however, facilities and risk assessors are free to use the most up-to-date air modeling tools and toxicity values available (i.e., they would not be bound to regulations requiring the use of obsolete tools and

information). We continue to believe that publishing our technical recommendations as regulation would remove much of the flexibility that is important in evaluating risk on a site-specific basis.

CKRC discounts EPA's statement that codification of risk assessment is the exception arguing that ''Neither TSCA or CERCLA, however, specifically commands EPA to define the type of information necessary for a permit application through the rulemaking process as RCRA does. Moreover, the TSCA and CERCLA examples EPA cites are not analogous to the situation where a permit applicant can be denied a permit—or at least strung through months or years of tortuous and costly submissions, revision, and resubmission—to obtain a permit.''

Even if TSCA and CERCLA were not considered to be analogous, that does not change EPA's fundamental rationale that codification of highly technical risk assessment guidance is not appropriate. EPA does not believe that RCRA § 3005(b) requires EPA to codify an exhaustive list of every possible piece of information that might be required in a permit. To some extent, that is the reason for having a permit process—to allow site specific conditions to be taken into account. Nevertheless, EPA has revised part 270, pursuant to RCRA § 3004(a) and § 3005(b) to specifically provide that a risk assessment may be necessary, where there is reason to believe that the MACT standards may not be sufficiently protective. This was done wholly to address the petitioner's concern that the current regulations do not adequately provide notice that an SSRA might be necessary as part of a permit application. This provision, while it does not provide as much detail as the petitioner wishes, clearly ''defines the type of information necessary for a permit application.''

CKRC complains that the Agency did not address in its proposed response the petitioner's discussion of the ''strong case law compelling the conclusion that 'guidance' documents EPA has issued for conducting SSRAs must be subjected to notice-and-comment rulemaking.'' EPA has chosen not to respond to CKRC's legal interpretation because we believe that it is clear that the guidance documents do not impose mandatory requirements, and therefore need not be issued by notice and comment rulemaking. Nevertheless, EPA notes that in the proposal, the Agency explained that we were in the process of reviewing the guidance documents, and, to the extent we found language that could be construed as limiting discretion, we committed to revise the documents to make clear that they are non-binding. See 69 FR 21329. We specifically noted that CKRC indicated in its petition that, in its view, the documents contain language that could be construed as mandatory. While EPA does not necessarily agree, and believes that, in context, it is clear that the recommendations in the documents are discretionary, EPA nonetheless reviewed the documents to ensure that they are carefully drafted. Consequently, under the standards articulated in *Appalachian Power Co.* v. *EPA*, 208 F.3d 1015 (D.C. Cir. 2000) and subsequent case law, the final HHRAP guidance is truly guidance and does not require notice-and-comment rulemaking. The HHRAP explains in great detail an acceptable process for performing and reporting on cost-effective, scientifically defensible risk assessments. It includes numerous recommended defaults, while at the same time provides the risk assessor or facility full opportunity to incorporate site-specific values in place of the defaults. The HHRAP offers numerous recommendations, but requires nothing. EPA has placed a copy of the final guidance document in the docket for today's action (see OAR–2004–0022).

CKRC believes that EPA's technical guidance imposes information requirements upon the RCRA permit applicant that are not contained in any regulations and in fact exceed by orders of magnitude any information requirements contained in the part 270 regulations. We disagree that anything contained in HHRAP is ''required'' in any way. Moreover, to the extent any individual facility believes the information requested is inappropriate or unnecessary, they can challenge that as part of the permitting process.

Lastly, CKRC argues that ''The procedures EPA has been using to issue and revise the SSRA guidance do not by any measure comply with the full panoply of procedures and protections offered by the APA process. Most critically, when EPA merely solicits comments on draft guidance documents, it has no duty to respond to comments and provide a rational basis and justification in defense of its choices in the face of comments. EPA is essentially running its entire SSRA program on the basis of ''draft'' guidance versions for which EPA has never to this day prepared any response to comments.'' As previously noted, EPA believes the final HHRAP is merely guidance and therefore, EPA is not required to proceed through notice and comment rulemaking pursuant to § 553 of the APA. However, because we want the HHRAP guidance to be useful and clear, we have solicited public review and comment. As a result, it has been improved over the years by including revisions to the guidance based upon feedback from users of the guidance and from experience in the field. A response to comments document has been prepared and released along with the final HHRAP and final MACT rules, even though the Agency was not required to do so. More to the point, because it is only guidance, sources will have the opportunity to raise questions or comments on anything in the guidance as part of the permitting process and the permitting authority will be required to respond to those comments as part of the permitting process. See 40 CFR part 124. Sources will also have the right to challenge the responses or use of the guidance as part of the permitting process.

3. Codification of Criteria for Determining That Additional Risk-Based Permit Conditions or an SSRA Is Necessary

CKRC argues that EPA's proposed regulatory changes should not be considered as a partial grant because EPA has not codified specific criteria in the proposed regulations for permit authorities to use to decide whether to require an SSRA; to set the risk levels that are deemed protective; or to otherwise provide any further definition as to what it means to protect human health and the environment.

In its petition, CKRC requested that after we repeal the policy and guidance (per the first request), ''should EPA believe it can establish the need to require SSRAs in certain situations, CKRC urges EPA to undertake an appropriate notice and comment rulemaking process seeking to promulgate regulations establishing such requirements.'' As discussed at length in both the proposal (69 FR 21325–21327) and the preceding paragraphs, we believe that we have established certain circumstances where the MACT standards may not be protective and that an SSRA may be warranted, based on relevant site-specific factors associated with an individual combustion unit. Consequently, we are finalizing regulations that explicitly authorize permitting authorities to conduct or require an SSRA on a site-specific basis. This, in our view, grants the second of CKRC's requests. Our response directly addresses a number of CKRC's concerns: (1) Through a notice and comment rulemaking process, EPA has established circumstances in which an SSRA may be necessary; and (2) EPA's regulations will now explicitly

acknowledge that an SSRA might be necessary as part of the permitting process, thereby addressing the petitioner's concern that EPA's past approach of relying on RCRA's omnibus authority to implement this policy violates the requirements of RCRA § 3005(b). And as discussed further below, EPA has codified criteria for permit authorities to use to determine whether to require an SSRA.

While it does not provide exactly what CKRC requested, the regulated community has had a full opportunity to comment on the need for an SSRA both as part of the 1999 rulemaking and, again, as part of this rulemaking to adopt the provisions of § 270.10(l), which contain an explicit reference to the potential need for an SSRA as part of the permitting process pursuant to RCRA § 3004(a) and § 3005(b). As previously explained, § 270.10(k) does not explicitly mention the potential for an SSRA to be required. Although the rule does not identify a priori that an SSRA will be required in an individual circumstance, but defers that determination to the permitting process, the final rule reflects EPA's findings that an SSRA is not anticipated to be necessary in every circumstance—only where site-specific conditions give the permit authority reason to believe that additional controls beyond those required pursuant to 40 CFR parts 63, 264, 265, or 266 may be necessary to protect human health and the environment.

CKRC argues that EPA's decision not to codify national criteria renders the regulation impermissibly vague, and therefore, ''in their view totally deficient as a legal matter.'' The petitioner argues that the rule is essentially ''a bootstrap attempt to avoid rulemaking requirements by establishing 'rules' that give no more guidance or direction than general terms in the statute and in no way channel the decision maker's discretion or put the public on notice of anything.'' According to CKRC, this unbridled discretion is manifest in three ways: (1) No criteria explain how a permit writer is to decide whether to require an SSRA; need merely to conclude ''reason to believe''; (2) there are absolutely no limits on what type of information or assessments the permit writer may demand and the proposed reg. does not even hint at what type of information or assessments might be demanded; and (3) there is not a word of guidance or specification as to what it means to ''ensure protection of human health and the environment.'' The petitioner argues that as a consequence, the proposed § 270.10(l) would be struck down as a ''standardless regulation.''

EPA disagrees that the provisions at § 270.10(l) are impermissibly vague, or otherwise inconsistent with the cases the petitioner cites. In the cited cases the courts found that the regulated entity bore the entire burden of determining how to comply with the challenged regulation in the complete absence of a government-generated standard or guidance. See *Maryland* v. *EPA*, 530 F.2d 215, 220 (4th Cir. 1975); *South Terminal Corp* v. *EPA*, 504 F.2d 646, 670 (1st Cir. 1974). This is entirely distinct from the regulations codified at § 270.10(l).

In § 270.10(l) EPA identified the standard for when a risk assessment may be necessary: where the regulatory authority identifies factors or conditions at the facility that indicate that the MACT standards may not be sufficiently protective, and defers the articulation of the more precise requirement to the permitting process, where the onus falls on the permitting authority to identify the basis for its determination. Until the permitting authority provides this further guidance, the regulated entity incurs no obligation. The mere fact that specific factors or facility conditions that form the basis for the determination that an SSRA is warranted will be subsequently identified through the permitting process does not invalidate the regulation. See *Ethyl Corp* v. *EPA*, 306 F.3d 1144, 1149–1150 (D.C. Cir. 2002).

The regulation also identifies the categories of information that might be required for MACT EEE facilities: The information must be necessary to determine whether additional controls are needed to ensure protection of human health and the environment; it can include the information necessary to evaluate the potential risk from both direct and indirect exposure pathways; or it can include the information necessary to determine whether such an assessment is necessary. Here as well, EPA's reliance on the permitting process to provide further specification of the required information is not improper.

Moreover, as discussed above in subsection C., in response to commenters' concerns, EPA has revised § 270.10(l) to provide more detail, both with respect to the basis for the determination that an SSRA is necessary, and with respect to the type of information the permit authority might need. EPA has added language to remind permit authorities that the determination that the MACT standards may not be sufficiently protective is to be based only on factors relevant to the potential risk from the hazardous waste combustion unit at the site. EPA has also added language to § 270.10(l) to identify guiding factors for permitting authorities to consult in determining whether the MACT will be sufficiently protective at an individual site. Although the list of guiding factors is not all-inclusive, they offer a structure for risk managers (as well as the regulated community) to use to frame the evaluation of whether a combustor's potential risk may or may not be acceptable.

Finally, we note that, unlike the circumstances in the cited cases, § 270.10 is promulgated in the context of an existing permitting regime. The regulatory standards at 40 CFR part 124 provide further structure for both the regulated community and the permit authority. For similar reasons, EPA disagrees that the cited cases compel the Agency to establish risk levels that are deemed protective, or to otherwise provide any further definition as to what it means to protect human health and the environment. We discussed at length throughout the proposal the reasons we believe it would not be appropriate to codify either an exclusive set of national criteria for determining that an SSRA (or additional risk-based permit conditions) would be necessary, or a uniform risk level. The decision to require an SSRA is inherently site specific, thus permitting authorities need to have the flexibility to evaluate a range of factors that can vary from facility to facility. See 69 FR 21328–21331. CKRC has neither presented new factual or policy reasons that would cause the Agency to reconsider the tentative decisions presented in the proposal, nor specifically addressed the issues underlying EPA's decision. Instead, the petitioner has merely reiterated the concerns presented in its petition and its general disagreement with EPA's decision.

EPA also disagrees that its new regulatory structure grants permit writers unbridled discretion for many of the same reasons that EPA does not believe that § 270.10(l) is impermissibly vague. As EPA has previously explained, the requirements at Part 124 continue to apply to actions taken to implement § 270.10(l). Moreover, the language of § 270.10(l) makes clear that the onus initially falls on the permitting authority to identify the basis for its conclusion that the MACT standards may not be sufficiently protective. As both part 124 et. seq., and EPA's preamble discussions make clear, facilities will continue to have the opportunity to comment on and challenge the determination. See §§ 124.10, 124.11, and 124.19. The

regulatory structure adopted in § 270.10(l) mirrors the structure Congress established in sections 3004 and 3005; although 3004 directs EPA to establish national standards, section 3005 recognizes that those standards will be applied on a case-by-case basis through the permitting process, to allow site-specific conditions to be taken into account, and to supplement those standards as necessary.

EPA has also provided recommendations through guidance on how an SSRA can be conducted. Although the recommendations are not binding, they provide risk managers (as well as the facility) with a starting point from which to determine whether a combustor's potential risk may or may not be acceptable.

CKRC argues that it appears that rather than following the statutory authorities and requirements to review and amend regulations every 3 years as necessary (RCRA § 2002(b)), EPA decided to take the easy way out and impose, through non-rulemaking ''guidance'', massive, costly, and confusing requirements leaving unbridled discretion to its permit writers.

We disagree that the Agency has attempted to avoid rulemaking in this context. EPA has conducted several rulemakings to amend our regulations. The first was in 1999, when we adopted revised emission standards under the authority of both § 112(d) of the CAA and RCRA to more rigorously control toxic emissions from burning hazardous waste in incinerators, cement kilns, and lightweight aggregate kilns. See 64 FR 52828. At the time, we noted that ''today's rule fulfills our 1993 and 1994 public commitments to upgrade emission standards for hazardous waste combustors.'' We have continued to revise our regulations consistent with and based on the facts before the Agency, taking into account the arguments presented in CKRC's petition. As explained above, we believe that the facts do not support granting all of CKRC's requests. Rather we believe that the MACT standards will generally be protective, and that permit authorities should reach the decision to require an SSRA based on a variety of factors and concerns specific to their sites. In addition, as previously addressed, we believe that our risk assessment guidance should remain as guidance. Several other commenters agree that the guidance should not be codified.

The petitioner argues that the regulation EPA has proposed to adopt is so vague, that it is essentially not a regulation, and that consequently, even if finalized, it would not be sufficient to comply with the requirement in RCRA § 3005(b) to specify in regulations, the information necessary to obtain a permit. They compare the level of detail in § 270.10(l) to the lengthy regulations (codified in 40 CFR part 270) specifying in great detail the information required when one is submitting a RCRA permit application, arguing that ''these regulations cover 75 pages of fine print in Code of Federal Regulations,'' to demonstrate that this regulation would be insufficient under RCRA § 3005(b). In further support of this argument, CKRC cites *Ethyl Corporation* v. *EPA*, 306 F.3d 1144 (D.C. Cir. 2002).

EPA disagrees that its regulations are in any way inconsistent with the decision in *Ethyl Corp.* At issue in that case was a regulation issued pursuant to section 206(d) of the CAA. Section 206(d) provides that EPA ''shall, by regulation, establish methods and procedures for making tests under this section.'' 42 U.S.C. 7525(d). The court found that ''with CAP 2000, [the challenged regulation] the EPA does not claim to have itself articulated even a vague durability test. Rather CAP 2000 requires that 'the manufacturer shall propose a durability program' for EPA approval. 40 CFR 86.182301(a). It thus falls on the forbidden side of the line.'' *Ethyl Corp.*, 306 F.3d at 323–324. The Court distinguished the challenged regulation from the situation in which an agency issues a ''vague'' regulation, and relies on subsequent proceedings to flesh out the specific details. And as the court explained, where ''Congress had not specified the level of specificity expected of the agency, we held that the agency was entitled to broad deference in picking the suitable level.'' 306 F.3d at 323 (citing *American Trucking Associations* v. *DOT*, 166 F.3d 374 (D.C. Cir. 1999) and *New Mexico* v. *EPA,* 114 F.3d 290 (D.C. Cir. 1997).

In § 270.10(l) EPA has articulated the standard for when a risk assessment may be necessary: where the regulatory authority has identified factors or conditions at the facility that indicate that the MACT standards may not be sufficiently protective. EPA has also adopted a list of factors on which permit writers are to rely in reaching this determination. EPA has also identified the categories of information that might be required for MACT EEE facilities: The information must be necessary to determine whether additional controls are needed to ensure protection of human health and the environment; it can include the information necessary to evaluate the potential risk from both direct and indirect exposure pathways; or it can include the information necessary to determine whether such an assessment is necessary. While it does not provide as much detail as the petitioner wishes, this provision unquestionably ''defines the type of information necessary for a permit application.''

Thus, the issue turns on the level of specificity that RCRA § 3005(b) requires, and EPA does not believe that RCRA § 3005(b) requires EPA to publish a list of every possible piece of information that might be required in a permit. Section 3005(b) merely establishes a broad directive that ''each application for a permit under this section shall contain such information as may be required under regulations promulgated by the Administrator,'' and that it shall include the information contained in subsections (1) and (2), leaving to EPA's discretion to determine the level of specificity at which to promulgate regulations. To some extent, this reflects the reason for having a permit process—to allow site specific conditions to be taken into account. The regulatory structure adopted in § 270.10 mirrors the structure Congress established in RCRA § 3004 and § 3005. Despite the petitioner's comparison to the length of part 270, the length of these provisions are not indicative of any determination of the precise level of detail that § 3005(b) requires, but reflects the fact that EPA has adopted requirements specific to individual types of units. Moreover, notwithstanding the petitioner's characterization, the language at § 270.10(l) is comparable to many other provisions in 40 CFR part 270. See, for example: §§ 270.14(b)(8); 270.16(h)(1)–(2); 270.22(a)(6)(i)(C); 270.22(c).

Lastly, CKRC argues that the proposed regulation is particularly problematic, because it extends beyond ''information'' that may already exist. CKRC says that it is one thing to demand that a party go out and gather existing information, but another thing to demand that an applicant conduct ''assessments.'' Moreover, nothing in the regulations prohibits a permit authority from demanding revised assessments, and even more revised assessments. We agree that permit authorities have the authority to require facilities to provide additional information beyond that which already exists. However, based on feedback from EPA Regional permit writers, SSRAs generally represent a one-time cost. We do not expect that facilities that have conducted risk assessments will have to repeat them. As discussed in the 1999 final rule preamble, changes to comply with the MACT standards should not cause an increase in risk for the vast majority of facilities given that the changes, in all

probability, will be the addition of pollution control equipment or a reduction in the hazardous waste being burned (see 64 FR 52842). Instances where a facility may need to repeat a risk assessment would be related to changes in conditions that would likely lead to increased risk.[242] In such situations, we would anticipate that the risk assessment would not have to be entirely redone. It may be as limited as collecting relevant new data for comparison purposes, leading to a decision not to repeat any portion of a risk assessment. Or, it may be more inclusive such that modifications would be made to specific inputs to or aspects of the risk assessment using data from a previous risk assessment, risk burn or comprehensive performance test. As discussed in subsection B., we have added a new regulatory provision to indicate a previously conducted risk assessment would be relevant in evaluating changes in conditions that may lead to increased risk. The factor reads as follows: ''Adequacy of any previously conducted risk assessment, given any subsequent changes in conditions likely to affect risk.''

4. EPA's Cost Estimates for SSRAs

CKRC raised several objections to our cost estimates for conducting an SSRA, and provided higher cost estimates ($200K to $1M, with upper bound of $1.3M). We suggested in the proposal, that the higher cost figures provided by CKRC were likely incurred prior to the 1998 release of the Human Health Risk Assessment Protocol (HHRAP) guidance document. We believe our lower cost estimates can be attributed to the fact that we based them on the conduct of future SSRAs that will benefit from substantially better guidance and commercially available software.

Multiple issues regarding the cost information we provided in the proposal are raised by CKRC. The first of five issues is that CKRC believes that EPA's methods for calculating costs associated with future SSRAs do not include data gathering costs, QA/QC, third party consultants in addition to risk assessors and plant personnel time to coordinate and review SSRA efforts and collect facility data. We disagree with this statement in part; the estimates developed by the Agency do include data gathering costs, QA/QC, and third-party consultants. (Refer to the proposed rule's support document entitled: Preliminary Cost Assessment for Site Specific Risk Assessment, November 2003, Docket # OAR–2004–0022; and the Assessment of the Potential Costs, Benefits, and Other Impacts of the Hazardous Waste Combustion MACT Replacement Standards—Final Rule, October 12, 2005, for a description of how the estimates were arrived at.) However, we agree with CKRC that the method used to develop SSRA costs does not capture facility time associated with data collection and management related to the SSRA. Consequently, we have adjusted our SSRA cost estimates to account for these activities by incorporating costs associated with time needed for facility data collection and management efforts associated with the SSRA, and will assume that engineering staff are required to perform these tasks.

The second issue concerns the extent to which cement kiln SSRAs are consistent with EPA's ''normal'' assumptions. We do not question the accuracy of the costs submitted by CKRC. However, it is not clear that the costs submitted by CKRC represent typical future costs for SSRA implementation at all facilities in the universe. Certain of the CKRC cost estimates (e.g., those submitted by Ash Grove and Holcim) reflect implementation of SSRAs over a number of years in the 1990s, while SSRA implementation was in its early stages. In other cases (e.g., estimates provided by Solite) costs appear to be consistent with EPA estimates. While we do not dispute the accuracy of these costs, earlier costs are likely to reflect the deliberative process common with early SSRAs.

For the third issue, CKRC's points out that EPA's estimate of 20 percent additional cost for adding a risk burn during a trial burn may be low; CKRC asserts that additional test costs can add up to 40 percent depending on the circumstances. We agree with this and have adjusted the range of total SSRA costs as necessary to assure that a range of additional test costs for separate risk burns (20 to 40 percent incremental cost) are included. For revised figures, see background document, Assessment of the Potential Costs, Benefits, and Other Impacts of the Hazardous Waste Combustion MACT Replacement Standards—Final Rule, October 12, 2005.

CKRC's fourth issue is that EPA does not appear to include more than evaluations of stack emissions in its estimates of SSRA costs. We disagree with this comment. The estimates of SSRA costs developed by the Agency reflect total contractor costs for performing an SSRA at a facility under different sets of conditions, and are not limited to stack emissions.

In the fifth cost-related issue, CKRC asserts that EPA's average estimates might be reasonable if the SSRA process were limited to the submission and acceptance of one SSRA effort. CKRC contends, however, that its members' experiences with SSRAs have involved coordination with state and regional offices and multiple revisions and submissions. Again, we do not question the experiences and costs of specific facilities. However, we anticipate that the 2003 Memorandum, Use of the Site-Specific Risk Assessment Policy and Guidance for Hazardous Waste Combustion Facilities, and the Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities guidance, which is finalized and released in conjunction with today's rule, will provide facilities and regulators with a clearer understanding of SSRA policy and guidance and will support a more efficient SSRA process. EPA's future SSRA cost estimates are based on current or recent cost data from multiple practitioners, and likely reflect a more efficient process than that experienced by some CKRC members in the 1990s.

X. Permitting

As discussed in the proposal, we believe that the permitting approach we adopted in the 1999 final rule is still the most appropriate means to avoid duplication to the extent practicable and to streamline requirements. Thus, both Phase 1 and Phase 2 sources will comply with their RCRA emission limits and operating requirements until they demonstrate compliance with the MACT standards by conducting a comprehensive performance test (CPT), submitting a Notification of Compliance (NOC) documenting compliance to the Administrator or delegated state, and then requesting to have their RCRA permits modified to remove the duplicative RCRA requirements (unless a sunset clause had been added previously that inactivates specified requirements upon compliance with MACT).[243] Ultimately, the MACT air emissions and related operating requirements will reside in the CAA Title V permit, while all other aspects

[242] For example, hazardous waste burning cement kilns that previously monitored hydrocarbons in the main stack may elect to install a mid-kiln sampling port for carbon monoxide or hydrocarbon monitoring to avoid restrictions on hydrocarbon levels in the main stack. Thus, their hydrocarbon emissions may increase. (64 FR 52843, footnote 29.) Another example would be if the only change at a facility relates to the exposed population; what was acceptable in a previous risk assessment may not be any longer.

[243] Although we expect that the vast majority of Phase 1 sources will have had their RCRA permits modified by the time this rule is promulgated, we acknowledge that there may be a few permits yet to be modified.

of the combustion unit and the facility (*e.g.*, corrective action, general facility standards, other combustor specific concerns such as material handling, risk-based emission limits and operating requirements, and other hazardous waste management units) will remain in the RCRA permit. A new pictorial timeline has been provided to highlight milestones of the MACT compliance process. See figure 1 at the end of this section.

A. What is the Statutory Authority for the RCRA Requirements Discussed in this Section?

EPA is finalizing amendments to modify RCRA permits in today's rule pursuant to sections 1006(b), 2002, 3004, 3005 and 7004(b) of RCRA. 42 U.S.C. §§ 6905(b), 6912, 6924, 6905, and 6074. Our approach is likewise consistent with section 112(n)(7) of the Clean Air Act which indicates that EPA should strive to harmonize requirements under section 112 and RCRA requirements for hazardous waste combustion sources. With respect to the regulatory framework that is discussed in this section, we are finalizing the process to eliminate the existing RCRA stack emissions national standards for hazardous air pollutant for Phase 2 sources as we had done for Phase 1 sources in the 1999 final rule. That is, after submittal of the NOC established by today's rule and, where applicable, once RCRA permit modifications are completed at individual facilities, RCRA national stack emission standards will no longer apply to these hazardous waste combustors (unless risk-based permit conditions are determined necessary).

We originally issued emission standards under the authority of section 3004(a) and (q) of RCRA, which calls for EPA to promulgate standards ''as may be necessary to protect human health and the environment.'' We believe that the final MACT standards are generally protective of human health and the environment, and that separate RCRA emission standards are not needed to protect human health and the environment. See Part Seven, How Does the Final Rule Meet the RCRA Protectiveness Mandate? for a discussion of this topic. RCRA section 1006(b) directs EPA to integrate the provisions of RCRA for purposes of administration and enforcement and to avoid duplication, to the maximum extent practicable, with the appropriate provisions of the Clean Air Act (and other federal statutes). This integration must be done in a way that is consistent with the goals and policies of these statutes. Therefore, based on its findings regarding the protectiveness of the MACT standards, and pursuant to section 1006(b), EPA is generally eliminating the existing RCRA stack emission standards to avoid duplication with the new MACT standards. The amendments made today to allow new combustion units to comply with the MACT standards upon start-up, versus the RCRA stack emissions national standards, are based on the principle of avoiding duplication between programs.

We are not stating that RCRA permit conditions to control emissions from these sources will never be necessary, only that the national RCRA standards appear to be unnecessary. Under the authority of RCRA's ''omnibus'' clause section 3005(c)(3); (see §§ 270.32(b)(2) and (b)(3)), RCRA permit authorities may impose additional terms and conditions on a site-specific basis as may be necessary to protect human health and the environment. Thus, if MACT standards are not protective in an individual instance, RCRA permit writers will establish permit limits that are protective.

In RCRA, Congress gave EPA broad authority to provide for public participation in the RCRA permitting process. Section 7004(b) of RCRA requires EPA to provide for, encourage and assist public participation in the development, revision, implementation, and enforcement of any regulation, guideline, information, or program under the Act.

B. Did Commenters Express any Concerns Regarding the Current Permitting Requirements?

Generally speaking, commenters favor maintaining the permitting approach and requirements referred to above. This approach was finalized in the 1999 rule and has been implemented, and in a few cases is currently being implemented, for Phase 1 sources complying with the Interim Standards Rule. However, several commenters raised similar concerns regarding certain aspects of the transition process from RCRA to MACT and Title V permitting.

1. Removal of Duplicative RCRA Permit Conditions

One comment is in regard to Phase 1 sources that have been fully transitioned (i.e., have had duplicative RCRA permit conditions and requirements removed or that have been ''sunsetted'') to compliance with the Interim Standards that may need to make upgrades to comply with the revised Phase 1 MACT Standards. The concern is that Phase 1 sources needing to make upgrades for MACT should be able to do so without a RCRA permit modification (unless risk-based conditions are present). We agree with the commenters that as long as the technology upgrades (e.g., equipment changes to upgrade air pollution control equipment) do not affect any remaining conditions in the RCRA permit, the regulations do not require a permit modification. For those Phase 1 sources that need to make upgrades to comply with the revised standards, they should address the specific upgrades in their draft Notification of Intent to Comply (NIC) and during the informal NIC public meeting so that the regulatory authority and public are aware of the source's activities and plans for compliance. We encourage early communication between the source and the RCRA permit writer to ensure a common understanding of whether a RCRA permit modification will be needed.

Additionally, Phase 1 sources must comply with the provisions of § 63.1206(b)(5) for changes in facility design. We do not anticipate that upgrades made to comply with the Replacement Standards will adversely affect a source's compliance with the Interim Standards. Therefore, consistent with § 63.1206(b)(5)(ii), sources must document the change in their operating record, revise their NOC and resubmit it to the permitting authority (per § 63.9(h)), and, as necessary, revise their start-up, shutdown, and malfunction plan.[244]

Several commenters felt that we should re-emphasize the importance of removing duplicative RCRA permit conditions and requirements. We agree with the commenters that this is an important action for regulatory agencies. In addition to comments received, we also have learned through the implementation process for the Interim Standards, that some state agencies are not removing duplicative requirements from the RCRA permit. We have clearly stated in several preambles and guidance documents that we believe it is appropriate to retain only the RCRA risk-based conditions that are more stringent than the applicable MACT limits (i.e., if the RCRA condition has been determined to limit risk to an acceptable level and is necessary to protect human health and the environment) in the RCRA permit after

[244] The requirements in § 63.1206(b)(5)(ii) call for sources to revise (as necessary) the performance test plan, DOC, NOC, and start-up, shutdown, and malfunction plan. For sources complying with the Interim Standards, it is not necessary to revise the performance test plan or the DOC, since they were developed in preparation for compliance with the Interim Standards.

compliance with MACT.[245] However, we also acknowledge that in certain cases it may not be clear which compliance requirement is more stringent. For example, standards under MACT are expressed as concentration based limits (micrograms/dry standard cubic meter) while certain RCRA standards are expressed as mass emission rate limits (grams/second). Also, averaging times between the two programs differ: MACT requires hourly rolling averages whereas RCRA requires instantaneous values. This is an unfortunate consequence of moving compliance from a risk-based program to a technology-based program. Because we cannot definitively say when a RCRA requirement is more stringent than a MACT requirement and consistently apply it to all sources, we are relying on sources and permitting agencies to work together to determine which requirement is more stringent. If the MACT requirement is determined to be more stringent, the permitting agency can remove the requirement from the RCRA permit.

In adopting a permitting approach to place the MACT air emissions and related operating requirements in the CAA Title V permit and to keep all other aspects of the combustion unit and the facility in the RCRA permit, our intent was and still is, to minimize duplication to the extent practicable and to eliminate the potential for dual enforcement. We view it as an unnecessary duplication of effort between programs as well as an unnecessary expenditure of resources and costs for both facilities and regulatory authorities to maintain a RCRA permit and a Title V permit that contain duplicative requirements, when there are viable mechanisms (i.e., Class 1 modification procedure at 270.42 Appendix I, section A.8, or Class 2 or 3 if a state has not adopted the Class 1 procedure) in place to avoid doing so.

Nevertheless, we believe that states should have the flexibility to decide how they will allocate their resources, which is why we did not include a single transition approach for implementing agencies to follow in the 1999 rule or in today's rule. So, in such cases where a state agency chooses not to adopt the transition language (i.e. the Class 1 modification procedure at 270.42 Appendix I, section A.8) into their state requirements (e.g., because the state's procedures are broader in scope or more stringent than the federal requirements) or is unable to reach an agreement between its RCRA and air programs regarding which standards are more stringent, the Title V permitting authority should document these issues, including any continuing RCRA permit requirements, in the title V permit's statement of basis (40 CFR §§ 70.7(a)(5) and 71.7(a)(5)). This will help to ensure that the source is clear regarding its compliance obligations, which is a main goal of the Title V program. Further, for purposes of clarification and as a matter of courtesy, we urge regulatory authorities that choose to impose dual compliance requirements, to also provide a written justification to the source explaining the reasons for their decisions.

2. Transition of Interim Status Phase 2 Units From RCRA to CAA Permits

In response to our discussion in the proposal regarding RCRA permitting for interim status Phase 2 units (69 FR 21324), two commenters suggest that EPA establish policy and/or regulation that discourage further RCRA permitting work for interim status Phase 2 sources. Their comments are directed our statement in the proposal that the RCRA combustion permitting procedures in 40 CFR part 270 also continue to apply until you demonstrate compliance. As noted in this statement, we intended for Phase 2 sources to continue to be subject to RCRA permitting requirements for air emissions standards and related operating parameters, including trial burn planning and testing, until they have demonstrated compliance with the MACT standards by conducting a comprehensive performance test and submitting an NOC to the Agency. However, we also provided several factors that should be taken into consideration when determining whether to proceed with the RCRA permit process such as: the facility's permit status at the time the MACT rule becomes final, the facility's anticipated schedule for MACT compliance, the priorities and schedule of the regulatory agency, and the level of environmental concern at a given site (69 FR 21324).

To support their position, the commenters noted that time and resources would be conserved and duplicative and overlapping activities could be minimized if Phase 2 sources were permitted solely via Title V. Also, they argued that it would avoid expending resources to modify the RCRA permit once the source has demonstrated compliance with MACT. We agree with commenters that every effort should be made to conserve resources and avoid duplication to the extent possible. However, we do not believe it is appropriate to establish policy or regulation that permitting authorities must suspend the RCRA permit process (whether it pertains to interim status or renewals), especially in cases where considerable time and effort has been invested and the permit is close to final issuance. As before, we strongly encourage sources and regulatory authorities to work together to establish an approach that will provide for the most practical transition. For example, we strongly recommend that sunset provisions be included in a permit that will be issued well in advance of compliance with MACT to avoid duplication and a later modification to remove the duplicative RCRA conditions. Also, it would make more sense to transition a source to MACT compliance prior to issuing the RCRA permit if it will comply with MACT early.

3. Transition From Compliance With the Interim Standards to the Replacement Standards

A specific question that has been raised relates to the applicable standards and operating parameters that the source must comply with during the period between the rule's effective date for the Phase 1 Replacement Standards and submission of their new NOC. Upon the publication date of the rule, the Replacement Standards (and Phase 2 Standards) will become effective and sources will have 3 years to come into compliance. During this 3-year period, Phase I sources' existing title V permits will either be reopened to include the Replacement Standards, or the permitting authority will have incorporated the Replacement Standards during permit renewal. In this example, a Phase 1 source's Title V permit has been reopened, revised, or renewed and includes the Replacement Standards, the compliance date has not yet passed, no new documentation of compliance (DOC) for the replacement standards has been included in the operating record, and the source has not yet conducted a comprehensive performance test and submitted a new NOC (therefore it still has an NOC containing the operating parameters for compliance with the Interim Standards).

In the above scenario, the question asked is whether the source should comply with the Interim Standards in the current NOC or the Replacement Standards in the Title V permit. The

[245] As an example, a RCRA permit could specify a higher minimum operating temperature than what is necessary for the facility to achieve compliance with MACT. The lower minimum operating temperature under MACT may be sufficient, unless the RCRA permit authority determines that the higher RCRA temperature is necessary to limit risk to an acceptable level for that facility. There should be a connection between the RCRA limit and protection of human health and the environment when retaining a RCRA limit.

source should comply with the Interim Standards until the compliance date of the Replacement Standards. Although the Title V permit now includes the Replacement Standards, the permit will also include the Replacement Standards' future compliance date. With regard to the transition from the Interim Standards NOC to the Replacement Standards DOC, we are revising the regulations at § 63.1211(c) to render the NOC, which documented compliance with the Interim Standards, inapplicable upon inclusion of the DOC for the Replacement Standards in the operating record by the compliance date. Thus, the source will not be placed in a situation where it must continue to ensure compliance with the operating parameters established in the NOC for the Interim Standards, while seeking to comply with the Replacement Standards and operating parameters in its DOC. Although it can be assumed that the source would still be able to comply with its Interim Standard-based NOC because the Replacement Standards are the same as or more stringent than the Interim Standards, we believe that the revision to render the previous NOC inapplicable provides a clearer and more sensible approach.

4. Changes to Title V Permits

Both the Replacement Standards and the Phase 2 Standards will necessitate permit reopenings or revisions to some existing title V permits; other permits will incorporate the requirements upon renewal. 40 CFR §§ 70.7 and 71.7 include the requirements for Title V permit revisions, reopenings, and renewals. Also, approved Title V permitting authorities may have additional requirements. Please refer to the appropriate permitting authority and its individual Title V permits program to determine the necessary requirements and procedures.

With respect to incorporating minor revisions into the Title V permit, one commenter had asked, for example, whether revisions made to the NOC to reflect minor operating changes could be incorporated into the permit by reference rather than through the reopening procedures. Determining the appropriate Title V permit reopening or revision requirements is based on the nature of the change and the source specific permit terms and conditions, and is therefore difficult to generalize. We recommend that sources work with their Title V permit authorities to determine the appropriate requirements and procedures that are applicable to any specific situation. However, we would like to note that, when incorporating requirements by reference into the Title V permit is appropriate, this does not necessarily obviate the need for permit revisions if the material incorporated by reference is subsequently revised. For more information on incorporation by reference, please refer to the Office of Air Quality Planning and Standards' ''White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program'' (March 5, 1996), Section II.E.2.c. This paper can be found at: *http://www.epa.gov/ttn/oarpg/t5/memoranda/wtppr-2.pdf.*

C. Are There Any Changes to the Proposed Class 1 Permit Modification Procedure?

In the NPRM, we proposed a new Class 1, with prior Agency approval, permit modification procedure to help further minimize potential conflicts between the RCRA permit requirements and MACT requirements. See 69 FR 21384 and proposed § 270.42(k). During implementation of the Interim Standards for Phase 1 sources, it became evident that there are two significant instances where RCRA permit limits may overlap with MACT requirements: during initial (and future) performance testing and during the period between placement of the documentation of compliance (DOC) in the operating record and the final modification of the RCRA permit after receipt of the NOC. We discussed several existing approaches (e.g., a class 2 or 3 modification, request for approval submitted via the RCRA trial burn plan or coordinated MACT/RCRA test plan, or through a temporary authorization) for addressing these instances, noting that none provided an optimal solution.

All commenters agreed that the new Class 1 modification procedure is the appropriate and most efficient method to enable specific RCRA permit conditions to be waived during instances of overlap referred to above. However, a few commenters were concerned with the requirements in proposed § 270.42(k)(2)(ii) and (k)(3), that require sources to submit their permit modification request upon approval of the test plan and the requirement for the Director to approve or deny the request within 30 days, or within 60 days with an extension. This timeframe is feasible only for those sources that have received approval of their test plans at least 60 days prior to their scheduled date for commencing their performance test. We acknowledged the potential impracticality of this requirement in the proposal, but at the time believed that few sources, if any, would conduct their performance tests without an approved test plan. While this still may be true, we have learned that sources who received extensions for testing (so that they would have an approved plan), typically commenced their test shortly after approval. Consequently, this still would not allow enough time to review and approve the permit modification before the test begins. Thus, the new Class 1 modification would be of no benefit to facilities that conduct their tests without an approved test plan, or to facilities that received extensions and need to begin their tests upon or shortly after approval of the test plan. Also, we found one other circumstance where the timeframes could be problematic: If a permitting agency has allowed sources to begin pretesting/testing upon approval of the test plan. Again, a source would not be able to have RCRA permit requirements waived in time to begin its test.

We agree with commenters that the proposed requirements in 270.42(k)(2)(ii) and (iii) do not provide any flexibility to waive RCRA permit limits for sources that (1) do not have an approved test plan but choose to conduct their test; (2) are granted an extension to their test date because they do not yet have an approved test plan; and (3) may begin testing upon approval of their test plans. Our original intent to require prior Agency approval for the new Class 1 permit modification procedure was to ensure that the proposed test conditions would be sufficiently protective when specific RCRA requirements are waived and that a source has met the regulatory requirements for performance test plans. We still believe that review and approval is an important step; however, we also believe it should not be a barrier and therefore, should occur in advance of a source commencing its performance test. As a result, we have revised the proposed regulatory language in 270.42(k)(2)(i) to specify that sources submit their permit modification requests with their test plans, to allow potentially up to one year for approval (*i.e.,* the performance test plan is due one year before the test is to begin). Also, so that approval does not impede the commencement of the performance test, we have revised the proposed language in 270.42(k)(2)(ii) so that the Director can choose whether to issue approval of the permit modification request contingent upon approval of the performance test plan.[246] In that respect,

[246] In all likelihood, we anticipate that the RCRA permit authority will have reviewed the modification request along with the test plans, worked with its Air counterparts and the source to resolve any concerns, and have prepared the permit

Continued

the RCRA permit authority would continue to have an extra measure of assurance in circumstances that may demand it.

D. What Permitting Approach Is EPA Finalizing for New Units?

1. Why Did EPA Propose a Separate Permitting Approach?

As discussed in the proposal, the current RCRA regulations at §§ 264.340, 265.340, 266.100, 270.19, 270.22, 270.62, and 270.66 do not address how or when new combustion units will comply with the MACT standards. Consequently, the part 270 regulations imply that a new unit must obtain a complete RCRA permit before it can demonstrate compliance with the MACT standards. It was never our intent for new units to develop a trial burn plan and provide suggested conditions for the various phases of operation in the RCRA permit application, given that these conditions will become inactive or need to be removed from their permits upon demonstrating compliance with MACT. To rectify our previous omission, we suggested several options that would allow units newly entering the RCRA permit process [247] (and that will comply with the Subpart EEE requirement upon start-up) to forego certain RCRA permit requirements and performance standards. In developing the options that would enable new units to forego certain RCRA requirements, we noted the importance of public participation opportunities under the MACT/CAA framework equivalent to those provided under the RCRA framework. Thus, each option was constructed in such a way that would streamline the RCRA requirements, but continue to provide early and frequent public participation commensurate with the requirements of the RCRA Expanded Public Participation Rule (60 FR 63417, December 11, 1995).

2. What Options Did EPA Propose for Permitting New Units?

In our preferred approach, we proposed that new units not be required to develop a trial burn plan and provide suggested conditions for the various phases of operation in their RCRA permit application. Instead, new units would only be required to address the remaining RCRA activities at the facility in their permit application (or modification request) including corrective action, general facility standards, other combustor specific concerns such as materials handling, risk-based emission limits and operating requirements, and other hazardous waste management units. While this approach appears to be ideal from the standpoint of reducing the regulatory burden to sources and RCRA permit authorities, we noted that even though a new unit will be required to meet the RCRA public participation requirements as part of the permit application process, the operations and emission information specific to the combustor would no longer be provided. Thus, we focused on certain compliance activities under the MACT/CAA framework (i.e., the Notification of Intent to Comply requirements) that would allow for combustor-specific information to be made available to the public as it would have been under the full RCRA permit process.

Regarding the three additional approaches or ''options'', each considered a different point in the RCRA permit process where a new unit could ''transition'' to compliance with the MACT standards (see 69 FR 21319). Under the first option, a new unit could transition to MACT compliance after it had submitted its RCRA Part B application. The Part B however, would not include the trial burn plan information. The new unit would only be required to discuss the compliance activities related to the combustor as part of the RCRA informal public meeting. In the second option, we proposed that a new unit would transition after its RCRA permit has been issued. Here, the new unit would be required to develop a trial burn plan which provided its proposed operations and emissions information and to discuss its compliance activities via the RCRA informal public meeting. Then, a permit would be issued, but it would not contain operating and emissions requirements in order to avoid a future modification to remove them. For the third option, the transition point would have been after the new unit places the DOC in its operating record, which is the compliance point for MACT. This option is more inclusive than the second because it requires the new unit to have a draft permit that covers the construction and shakedown period.

3. Which Option Is EPA Finalizing?

For today's final rule, we are adopting our preferred, proposed approach: new units will not be required to follow the full RCRA permitting process for establishing combustor operations and emissions. Thus, new units are not subject to the combustor-specific RCRA permit requirements and performance standards (i.e., to develop a trial burn plan, provide suggested conditions for the various phases of operation in their permit application, and subsequently operate under those conditions). However, because these units remain hazardous waste treatment units, they are still required to obtain a RCRA permit, or to modify an existing RCRA permit to include a new unit, prior to construction. They need only address the remaining hazardous waste management activities at the facility in their permit application (or modification request) including corrective action, general facility standards, other combustor specific concerns such as materials handling, risk-based emission limits and operating requirements, and other hazardous waste management units. As we noted in the previous section and will discuss again more thoroughly in the next section, we are relying on the NIC process to provide the public with the combustor-specific information that previously would have been provided under the full RCRA permit process.

Almost all commenters supported our preferred approach to not require that new units complete the full RCRA permit process and to rely on the NIC requirements and the MACT/CAA framework to provide a level of public participation that is commensurate with the requirements under RCRA. Commenters generally agreed that our preferred approach achieves this goal while streamlining the RCRA permit process for new units. One commenter felt that the Title V and New Source Review programs (NSR) provide sufficient requirements to regulate new combustion units. We disagree that either or both of those programs fully address the hazardous waste and public participation components commensurate with that provided by the approach we are finalizing today. For instance, a unit may be constructed and operating before a Title V permit is issued, which directly conflicts with RCRA's early public participation requirements. Also, in some instances, public participation may not be a required component of state issued NSR permits (see footnote regarding public participation and SIPs below). However, we do believe that the NSR program will play an important role regarding the exchange of information, as we will discuss in the section below. With respect to the remaining three options presented in the proposal (69 FR 21319–

modification approval prior to issuance of the test plan approval.

[247] Units ''newly'' entering the RCRA permit process refers to a newly constructed facility, thus newly constructed hazardous waste combustion unit; an existing facility that constructs a new unit; or an existing facility that converts a non-hazardous fuel combustion unit to a hazardous waste fuel combustion unit.

21320) that suggested a transitional approach (i.e., each option explored progressive points in the RCRA permit process where facilities could transfer over to MACT without fully completing the RCRA process), nearly all commenters were in agreement that they would require more work to implement than is necessary and consequently oppose them.

4. How Will Permitting for New Units Work?

In the proposed rule, we created an approach that utilizes the NIC requirements and the MACT/CAA framework with the intent of ensuring that the requirements of the RCRA Expanded Public Participation Rule would continue to be fulfilled. The four requirements for public participation as they relate to hazardous waste combustion units are: (1) Permit applicants must hold an informal public meeting before applying for a permit; (2) permit agencies must announce the submission of a permit application which will tell community members where they can view the application while the agency reviews it; (3) permitting agencies may require a facility to set up an information repository at any point during the permitting process if warranted; and (4) permitting agencies must notify the public prior to a trial (or test) burn.

As discussed in the preamble to the proposal (69 FR 21318), we believe that the NIC process addresses the first two RCRA public participation requirements. The NIC process requires a source to make its draft NIC, which discusses the source's plan for coming into compliance with the MACT standards, available for public review and to hold an informal public meeting to discuss the activities contained in the NIC. While the NIC process gives the public an early opportunity to participate in the unit's compliance planning process early on, a few components are still missing before we can consider the first 2 RCRA public participation requirements to be fulfilled under the MACT framework. One component is that there is no permit action associated with the NIC requirements. However, the NSR program can provide a permit mechanism that will determine whether or not a source may be constructed.[248] The steps associated with obtaining an NSR permit, or a ''pre-construction'' permit, are similar, but not necessarily identical to that required under RCRA. They are: (1) Preparation of the permit application (sources must provide the location, design, construction, and operation information) and participation in pre-application meetings; (2) issuance of permit application completeness determination by the State; (3) development and negotiation of draft permit; (4) opportunity for public notice and comment on the draft permit; (5) response of permitting authority to public comments; (6) possible administrative and judicial appeals; and (7) permit issuance/denial.[249]

A second component is that the NIC does not provide the information on the proposed combustor operations or emissions information that would normally be available as part of the RCRA process. To address these gaps between RCRA and MACT, we are requiring an approach similar to that which was proposed. New sources must: (1) Prepare a draft NIC and make it available to the public at the same time as their RCRA pre-application meeting notice; (2) provide a draft of their comprehensive performance test (CPT) plan (to the public) to coincide with the draft NIC and RCRA pre-application meeting notices; and (3) hold their NIC public meeting with their RCRA informal public meeting. The first two requirements ensure that the public is provided with most of the same information that would have been available via the RCRA trial burn plan prior to the source burning hazardous waste. Other information not required by the NIC or CPT plan, such as the combustion unit's design specifications will, in most cases, be available to the public through the NSR permit application. We recommend that sources submit a copy of their NSR permit application to the RCRA permit authority so that this information is readily available for development of the RCRA permit. The third requirement allows the public to inquire and comment on both the new unit's proposed activities and operations. By requiring new sources to develop, notice, and hold a combined public meeting that encompasses the NIC, draft CPT plan, and RCRA pre-application notice information, the public will be provided with all information related to the combustor's compliance plans as well as its operating plans and emissions estimates prior to burning hazardous waste. See new requirements in § 63.1212.

With respect to the requirements we are finalizing today, we received only one comment that expressed concern. The concern is that the requirement to submit the CPT plan is too early in the compliance process. For example, the RCRA application is submitted approximately 2–3 years before start-up whereas the CPT plan is required 1.5 years after the final NIC is due.[250] The commenter feels that the facility would not have enough time to learn about the ''detailed nuances of the system''. However, the commenter does note that it is possible to submit the CPT plan, but it will not be as complete or refined as it would be if it was submitted according to the deadline for existing units. We agree with the commenter that a considerable amount of planning is required of the source to be able to draft the CPT plan at such an early stage, but we are only requiring that a draft of the CPT plan be made available, with the final CPT plan due 6 months prior to the source's compliance date. Moreover, at this early stage, we liken the development of the draft CPT plan to the development of the trial burn plan. Even though it may not be as complete or refined as it will be when the final CPT plan is due, we believe that it will still be of benefit to the public and the regulatory authority, but also to the source in terms of advance planning for the design of the unit through start-up of the unit.

The components thus far, have satisfied the first (2) two RCRA public participation requirements. The third RCRA public participation requirement enables a regulatory authority to evaluate the need for and require a facility to establish and maintain an information repository. The establishment of an information repository is typically required only when there are concerns or unique information needs of a community. The purpose of the information repository is to make information regarding the facility (and combustion unit) available to the public during the permit issuance process and during the life of the permit. In the preamble, we noted that

[248] We believe that the majority of new units will be classified as major sources for NSR permitting (requiring either prevention of significant deterioration or nonattainment permits), however, those that do not, will likely be required to obtain a minor NSR permit. In few cases, new sources (e.g., newly constructed as opposed to modified) may not be required to obtain an NSR permit if its potential to emit does not exceed the NSR threshold level.

[249] With respect to numbers 4 and 5, many States omitted the public participation steps in their federally approved SIPs. This was the reason why Sierra Club had been opposed to our efforts to simply rely on NSR permitting to provide public participation opportunities that would have been otherwise provided under the traditional RCRA permit process for new units. Today, however, many SIPs have been revised to address public participation requirements.

[250] Comprehensive performance test plans are required to be submitted one year in advance of the scheduled test. The submittal date would be as late as 2.5 years after the effective date of the rule assuming no extensions are granted.

although the Title V permit process contains a provision that any materials relevant to the permit decision be made available to interested persons (see § 70.7(h)(2) and § 71.11(d)), the information may not be made available until well after the combustor is constructed and operating. Consequently, we have chosen to adopt additional provisions under the NIC requirements that parallel the requirements of § 124.33.

We had proposed two options that would allow a regulatory authority to require, on a case-by-case basis, a source to establish an information repository specific to the combustor. The first option was to place such a provision in the NIC regulations and the second option was to amend the applicability language in § 124.33 to include combustion sources that will comply with Part 63, subpart EEE upon start-up. Two commenters felt that the second option would create problems as far as organization (i.e., by modifying the RCRA regulations to include a provision solely for new units complying with MACT). We agree that the second option could be confusing and that it would be more appropriate to keep all new requirements for new units in one set of regulations. Therefore, we are finalizing a provision that will allow for an information repository to be established specific to the combustor (recall that a repository established pursuant to the RCRA permit will include documents relevant to the facility only), if deemed appropriate, under the NIC regulations. See new § 63.1212(c). Under the NIC regulations, the repository could include the NIC, test plans, draft Title V permit and application, reports, et cetera.

The fourth and final RCRA public participation requirement to be fulfilled is for the regulatory authority to notify the public of an impending trial burn or test burn. As discussed in the RCRA Expanded Public Participation Rule, the RCRA permit authority will typically provide the notice at least 30 days in advance of the test (60 FR 63426, December 11, 1995). Similarly, the MACT regulations require an existing or new unit to provide notice to the public that the CPT plan (and the continuous monitoring system performance evaluation test plan) is available for review. The regulations in § 63.1207(e)(2) fulfill this requirement. Although the CPT plan may not be approved before the public is notified, the intent is to provide notice to the public of a future test. We believe that the MACT regulations provide public notice of the test plans that are commensurate with the RCRA regulations and thus, no additional regulatory revisions or amendments are needed.

4.a. Process for New Units Seeking an Initial RCRA Permit

We anticipate that the process for new units seeking an initial permit will work as follows. Any new unit would begin the process by developing and compiling the information necessary for the RCRA draft permit (e.g., information required for the part A application at § 270.13, the relevant general information for the part B application according to Part 270) and the applicable NSR permit.[251] The information needed to compile the draft NIC and draft CPT plan would be gathered simultaneously, as if the source were developing the trial burn plan. When the source has compiled its RCRA permit application, draft NIC and draft CPT plan, it would submit a RCRA pre-application meeting notice at least 30 days prior to the date scheduled for the RCRA informal public meeting according to §§ 124.31(b) and (d). At the time of the RCRA pre-application meeting notice, the source would also issue notice of the NIC public meeting (at least 30 days prior to the NIC meeting) according to § 63.1210(c)(3), so that the two meetings can occur at the same time. In order for the public to be able to view all information relevant to the combustor before the combined RCRA pre-application and NIC public meeting, the source would make the draft NIC and draft CPT plan available to the public for review at the same time the notices for the meetings are issued. To aid the RCRA permit authority in its development of the draft RCRA permit (*i.e.*, mainly for purposes of evaluating risk), we strongly recommend that the source also provide copies of the draft NIC, draft CPT plan, and NSR application (if applicable) to the RCRA permit authority. It is our hope that the availability of information will expedite the development of the draft permit. All notices should be presented to the public in sufficient time to allow for a combined RCRA informal public meeting and NIC public meeting.

Following the combined public meeting, the source will submit its RCRA permit application and the RCRA regulatory authority will prepare and issue a draft permit. The public will then have an opportunity to comment on the draft permit and request a public hearing. Upon resolution of any issues surrounding the draft permit, a final RCRA permit will be issued. The RCRA process is the same as before, but should be reasonably shorter. Finally, the new unit may begin burning hazardous waste when it can assure it will operate in compliance with the MACT standards (*i.e.*, by placing a documentation of compliance in its operating record on the day it begins burning hazardous waste). See new regulatory language at § 63.1212(c). To aid readers in understanding the above process, we have included a pictorial timeline. Please see figure 2.

Finally, it may also be feasible to combine an NSR pre-application meeting and public notice of the draft NSR permit with the process described above. Thus, we recommend that sources work closely with their Air and RCRA permit agencies so that the NSR public notices and meetings may be coordinated with the RCRA and NIC notices and meetings so time and resources are efficiently utilized.

4.b. Process for New Units Modifying an Existing RCRA Permit

The process of adding a new unit to an existing permit is accomplished through a Class 3 permit modification (see § 270.42 (c) for requirements). The requirements governing public notices of the draft NIC, draft CPT plan, and holding a combined public meeting are essentially the same as new units seeking an initial permit. The process is as follows. The source prepares and submits its RCRA permit modification request (and if applicable, NSR application). It must then publish a notice of the modification request seven days later, followed by a public meeting no earlier than 15 days after publication of the notice for the modification request, and no later than 15 days before the close of the 60-day comment period. As with new units that are submitting an initial RCRA permit application, it is also important for sources seeking to modify their permit to coordinate their NIC public meeting with their RCRA permit modification public meeting. This is made possible due to the flexibility of the NIC public meeting; it can be held any time prior to the 10 month deadline. After the combined public meeting and the close of the comment period, the permit authority will either grant or deny the modification request. If approved, the source may then begin construction or modification of the unit. To aid readers in understanding the timing of the

[251] Because the information required for NSR permit is less comprehensive than a RCRA permit, it allows for a much shorter time period for issuance. The average time for issuing a PSD permit, for example, after receiving an application is slightly more than 7 months, but varies depending upon public involvement and negotiation of the application content. USEPA. Docket A–2001–19, Document II–A–01. *NSR 90-Day Review Background Paper*, June 22, 2001.

above process, we have included a pictorial timeline. Please see figure 2.

Again, it may be feasible to combine an NSR pre-application meeting and public notice of the draft NSR permit with the process described above. Thus, we recommend that sources work closely with their Air and RCRA permit agencies so that the NSR public notices and meetings may be coordinated with the RCRA and NIC notices and meetings so time and resources are efficiently utilized.

E. What Other Permitting Requirements Were Discussed in the Proposal?

At proposal, we discussed where most Phase 1 sources would be in terms of their transition from their RCRA permit requirements to compliance with the MACT Interim Standards (see 69 FR 21321). The transition process was discussed with respect to both the RCRA permit and the Title V permit. However, when we discussed the Title V permit requirements in the proposal, we did not elaborate on the transition between the Interim Standards and Replacement Standards. Because we believe that such a discussion would be helpful to readers, we have included general information describing how the transition process would work for most sources in Section B. Did Commenters Express any Concerns Regarding the Current Permitting Requirements?, subsections 3 and 4.

For Phase 2 sources, we proposed the same permitting approach as we did for Phase 1 sources. Today, we are finalizing as proposed, the following for Phase 2 sources: (1) the new Phase 2 emissions standards will be placed only in the CAA regulations at 40 CFR part 63, subpart EEE, and be implemented through the air program; (2) with few exceptions, the analogous standards in the RCRA regulations no longer apply once a facility demonstrates compliance with the MACT standards in subpart EEE and any duplicative requirements have been removed from the RCRA permit; and (3) the new standards will be incorporated into operating permits issued under Title V of the CAA rather than be incorporated into RCRA permits. Consequently, we are finalizing the proposed changes to §§ 270.22 and 270.66 to implement the above. Also applicable to Phase 2 sources via today's final rule are the changes and additions we finalized in the 1999 final rule for Phase 1 sources. These include a streamlined RCRA permit modification procedure to allow sources to make upgrades to comply with MACT (§§ 270.42(j) and 270.42 appendix I, section L.9), a second streamlined RCRA permit modification procedure to remove conditions from a permit that are no longer applicable (§ 270.42 appendix I, section A.8), an addition to § 270.235 to specify conditions for start-up, shutdown, and malfunction plan and integrate them with the CAA program, and an amendment to the interim status regulations at § 270.72 to exempt interim status facilities from the reconstruction limitation when making upgrades to comply with MACT.

Also, we are finalizing three new permitting changes that are applicable to both Phase 1 and 2 sources. Two have been discussed previously in this section and are: (1) A new streamlined RCRA permit modification procedure designed to reduce overlap during the transition from RCRA to MACT (§§ 270.42(k) and 270.42, appendix I, L.10); and (2) regulatory provisions stating that new units are no longer subject to the full array of RCRA combustion permitting requirements. The third change is discussed above in Section IX. Site-Specific Risk Assessment Under RCRA and finalizes our response to a petition for rulemaking with respect to site-specific risk assessments (SSRAs). As part of this change we have decided to adopt regulatory language that specifically provides clarification of authority for RCRA permit writers to evaluate the need for and, where appropriate, require SSRAs and to add conditions to RCRA permits that they determine, based on the results of an SSRA, are necessary to protect human health and the environment.

Last, as explained in part four section II.A, we are finalizing our decision to regulate emissions of dioxin/furans, mercury, polycyclic organic matter, and polychlorinated biphenyls from Phase 2 area sources under section 112(d).[252] This means that Phase 2 area sources are subject to MACT standards only for these hazardous air pollutants (HAP) in the final rule. To reiterate, they are: Dioxin/furans, mercury, and polycyclic organic matter (controlled by the surrogates DRE and carbon monoxide/hydrocarbon). For the remaining HAP (hydrogen chloride and chlorine gas and metals other than mercury), Phase 2 area sources may either comply with the MACT standards for Phase 2 major sources or continue complying with the RCRA standards and requirements of their RCRA permit.

In the 2004 proposal, we stated that we were not making a positive area source finding for Phase 2 area sources as we have for Phase 1 area sources (69 FR 21212 and 21325). Regardless of this, however, the Phase 2 area sources are still subject to the requirement to obtain a Title V permit because they are subject to section 112 standards under this subpart. See § 502(a) of the CAA and 40 CFR §§ 70.3(b)(2) and 71.3(b)(2).

It is important to note that the Title V applications for the Phase 2 area sources will need to contain emissions information relative to all regulated air pollutants (to determine applicable requirements, fees, etc.) that are being emitted from the units subject to the MACT standards, not just the specific HAP pollutants regulated by the MACT standards (see §§ 70.5(c)(3)(i) and 71.5(c)(3)(i)). Although, the permit itself would contain standards only for the HAP subject to MACT standards (the § 112(c)(6) HAP). A Phase 2 area source which chooses to control hydrogen chloride, chlorine gas, and metals other than mercury by continuing to comply with the relevant RCRA standards and the requirements of its RCRA permit should note this choice in its Title V application and cite to the relevant requirements of this subpart. This will help ensure that the permitting authority is aware that these requirements apply in lieu of the MACT standards for Phase 2 major sources. The permitting authority should also document this choice in the statement of basis for the source's Title V permit. See §§ 70.7(a)(5) and 71.7(a)(5). Finally, for the units at a source which are subject to the subpart EEE MACT standards, all CAA applicable requirements to which these units are subject, *e.g.*, State Implementation Plan requirements, not just the relevant Subpart EEE requirements, must be included in the Title V permits issued to these sources. See §§ 70.3(c)(2) and 71.3(c)(2). For more information regarding § 112(c)(6) and how it relates to Phase 2 area sources, see Part Four, Section II.A., ''Area Source Boilers and Hydrochloric Acid Production Furnaces''.

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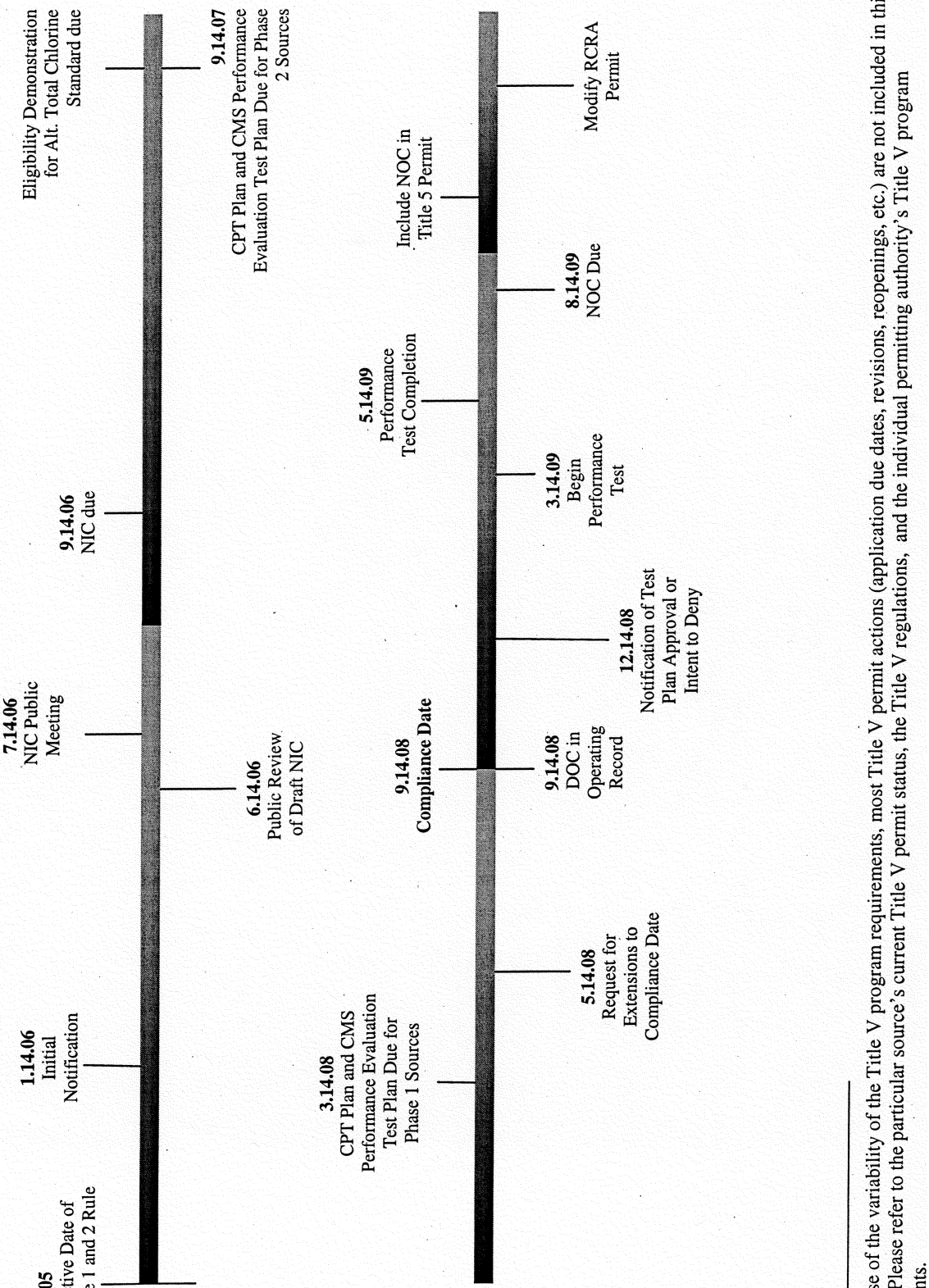
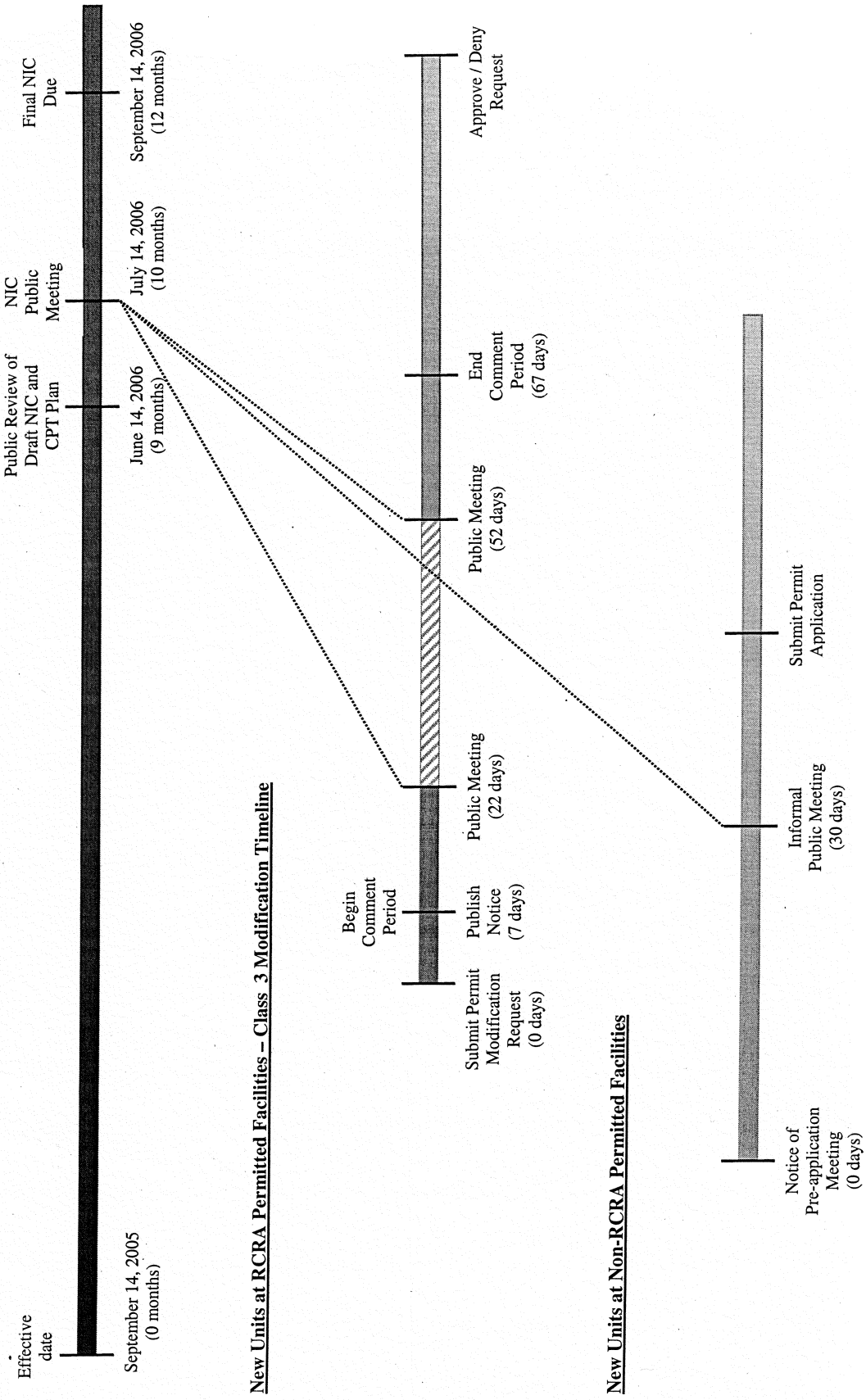
[252] As explained in the Comment Response Document vol. V, although § 502(a) allows EPA to exempt area sources from title V permitting requirements if EPA finds that those requirements would be (among other things) ''unnecessarily burdensome'', we believe that Title V requirements remain appropriate for these sources given the highly toxic nature of the HAP and the importance of affording opportunity for public participation as provided for in the Title V permit issuance process.

Figure 1. Time Line for Phase 1 Replacement Standards and Phase 2 Standards[253]



[253] Because of the variability of the Title V program requirements, most Title V permit actions (application due dates, revisions, reopenings, etc.) are not included in this timeline. Please refer to the particular source's current Title V permit status, the Title V regulations, and the individual permitting authority's Title V program requirements.

Figure 2. NIC and CPT Plan Time Line for New Units



Part Five: What Are the CAA Delegation Clarifications and RCRA State Authorization Requirements?

I. Authority for This Rule

Today's rule amends the promulgated standards located at 40 CFR part 63, subpart EEE. It amends the standards for the Phase 1 source categories—incinerators, cement kilns, and lightweight aggregate kilns that burn hazardous waste, and it also amends subpart EEE to establish MACT standards for the Phase 2 source categories—boilers and hydrochloric acid production furnaces that burn hazardous waste. Additionally, this rule amends several RCRA regulations located in 40 CFR part 270 to reflect changes in applicability, addition of a new permit modification procedure, and additions related to site-specific assessments and permitting.

II. CAA Delegation Authority

Before discussing the clarifications being finalized today, it is important to first highlight a few key aspects of delegation authority. Recall from the proposal that a state, local, or tribal (S/L/T) agency must be delegated authority under CAA section 112(l) before it can exercise the delegable provisions' authorities. The delegable authorities can be found in 40 CFR 63.91(g)(1)(i), also known as Category I Authorities. A S/L/T agency that has applied for and received delegation authority can approve: test plans, requests for minor and in most cases, intermediate changes to monitoring and test methods, performance test waivers, and several other Category I Authorities. Please note that even though a S/L/T agency may have an approved Title V permit program, it cannot exercise delegable authorities or be the primary enforcement authority if it has not received delegation authority under CAA section 112(l). Moreover, when a S/L/T agency has not taken delegation of a section 112 standard, the agency can only incorporate the section 112 standard's requirements into its Title V permits, (and then implement and enforce these requirements through its title V permits) when it has adequate authority under State, local, or tribal law which allows it to conduct the above actions without delegation. See, *e.g.*, the proposed Federal Plan for Commercial and Industrial Solid Waste Incinerators, November 25, 2002 (67 FR 70640, 70652). Please also refer to 69 FR 21335 of the proposal and the fact sheet entitled, Clean Air Act Delegation for the HWC NESHAP at: *http://www.epa.gov/epaoswer/hazwaste/combust/toolkit/factshts.htm* to learn more about the advantages of receiving delegation authority.

Also, we would like to point out that there are several delegation options that S/L/T agencies can receive. Regardless, many S/L/T agencies choose the ''straight delegation'' option when applying for delegation approval. Straight delegation means that these agencies have agreed to implement and enforce federal MACT standards as they have been written in the promulgated requirements. As a result, many EPA Regions and states have established memoranda of agreement that essentially provide automatic delegation of each future MACT, as opposed to the state applying for delegation of each future MACT, which requires a rulemaking to implement. For more information related to the delegation options and procedures, please refer to the fact sheet, Clean Air Act Delegation for the HWC NESHAP at: *http://www.epa.gov/epaoswer/hazwaste/combust/toolkit/factshts.htm* and EPA's delegation website at: *http://www.epa.gov/ttnatw01/112(l)/112-lpg.html.*

III. Clarifications to CAA Delegation Provisions for Subpart EEE

In the proposal, we discussed the need to provide additional clarification for the delegable and non-delegable authorities within Subpart EEE based upon our implementation experience with the Phase 1 Interim Standards and the Clarifications to Existing National Emissions Standards for Hazardous Air Pollutants Delegation' Provisions final rule published on June 23, 2003 (68 FR 37334). Although the June 23, 2003 final rule provided clarification and streamlined the delegable provisions for each existing NESHAP, it overlooked several non-delegable and delegable authorities within Subpart EEE. It provided clarification on the non-delegable authorities of Subpart EEE as they relate to major alternatives to the standards themselves and to test methods, monitoring, or recordkeeping and reporting under the General Provisions.[254] However, it omitted major alternatives specific to Subpart EEE such as: test methods under §§ 63.1208(b) and 63.1209(a)(1); monitoring under § 63.1209(a)(5) and; recordkeeping and reporting under § 63.1211(a) through (d). Therefore, the following paragraphs will explain which authorities in Subpart EEE are delegable and are not delegable to S/L/T agencies that have been delegated authority and will provide some examples of or references to alternative requests associated with each delegable or non-delegable provisions authority.

To review, the regulations at 40 CFR 63.90 define three types of alternative requests. Alternative requests or ''changes'' to a particular delegable or non-delegable provision are classified as major, intermediate, or minor depending upon the degree (*i.e.*, potential to be nationally significance, potential to reduce the stringency of the standard, etc.) of change being requested. An alternative request that qualifies as a major change is not delegable to S/L/T agencies, even when they have delegation authority. These requests must be sent to the EPA Region or, if it concerns a test method under §§ 63.7(e)(2)(ii) and (f), 63.1208(b) and 63.1209(a)(1) or a standard under §§ 63.1200, 63.1206(a), or 63.1216–63.1221, then it must be sent to our Office of Air Quality Planning and Standards (OAPQS).[255] An alternative request that qualifies as an intermediate or minor change is delegable. However, the EPA Region may choose whether or not they will delegate authority to S/L/T agencies to approve intermediate and, even some minor changes during the delegation approval process. In addition to the regulations, the guidance document entitled, How to Review and Issue Clean Air Act Applicability Determinations and Alternative Monitoring (EPA 305–B–99–004, February 1999) provides a listing of delegable and non-delegable authorities in Tables 1 and 2, as well as descriptions and examples of major, intermediate, and minor changes in Attachment 1.

A. Alternatives to Requirements

Any change to a promulgated standard is considered a major change and as noted above, must be sent to OAQPS (see contact information in footnote). The reason why a change to a standard must be sent to EPA Headquarters is because the change must be established through national rulemaking, regardless of the degree of change sought. Thus, only OAQPS can approve alternative requests for changes to standards. Additionally, any change to applicability requirements and compliance dates (*e.g.*, requirements that ensure that the standards are achieved as EPA intended) are also

[254] For example, the final rule included approval of alternatives to requirements in §§ 63.1200, 63.1203, through 63.1205, and 63.1206(a); approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f); approval of major alternatives to monitoring under § 63.8(f) and; approval of major alternatives to recordkeeping and reporting under § 63.10(f).

[255] For contact information, please visit *www.epa.gov/ttn/emc/staffdir.html.*

considered major and also must be sent to OAQPS for approval. Specific to Subpart EEE, alternative requirement requests including those pursuant to §§ 63.1200, 63.1206(a), or 63.1216–63.1221 are considered major changes and consequently are non-delegable. The regulations at § 63.1214(c) correctly identified the requirements in Subpart EEE, however we have revised them today (as we proposed) to reflect the new sections that house the Phase 1 Replacement Standards and Phase 2 Standards.

There are a few exceptions to the above, however. Subpart EEE incorporates specific provisions for sources to request alternative standards which are delegable because they have been established through rulemaking. In fact, several alternative standards are self-implementing meaning that the source only need specify in their DOC which standard it will comply with. The alternative to the particulate matter standard in § 63.1206(b)(14) and the emissions averaging standards for cement kilns with in line kiln raw mills and preheater or preheater/precalciner kilns with dual stacks in § 63.1204(d) and (e) are three examples. There are also alternative standards that sources may petition to comply with. They include: Alternatives to the standards for existing and new LWAKs at § 63.1206(9) and cement kilns at § 63.1206(b)(10) and the alternative risk-based standard for total chlorine at § 63.1215. Sources choosing to comply with these alternative standards must receive approval from their delegated S/L/T agency prior to implementing them.[256] With respect to changes to compliance dates, requests under § 63.1213 specifically allow sources to request an extension to the compliance date for the installation of pollution prevention or waste minimization controls. Again, because this provision has been specified in subpart EEE, it is not considered a major change and is delegable.

B. Alternatives to Test Methods

With respect to test methods, we noted above that the final delegations rule stated that major alternatives to the test methods at §§ 63.7(e)(2)(ii) and (f) were not delegable. Therefore, as we proposed, it is necessary to add major alternatives to 63.1208(b), which specifies the test methods sources must use to determine compliance with subpart EEE. Also, we are adding the CEMS monitoring requirement under § 63.1209(a)(1). It is regarded as a test method because it serves as a benchmark method for demonstrating compliance with the emission standards. Both sections are delegable to S/L/T agencies as long as they have been delegated authority and as long as the alternative requests comprise minor or intermediate changes. However, a major change to either of these test method sections must be sent to OAQPS for approval.[257] Only OAQPS can approve major changes to test methods because they are designated in the standard as the means for determining compliance with an emission standard. The proposed revisions to § 63.1214 are finalized today to include major alternatives to test methods under §§ 63.1208(b) and 63.1209(a)(1) as non-delegable authorities.

C. Alternatives to Monitoring

For monitoring, the final delegations rule stated that major alternatives to monitoring at § 63.8(f) were not delegable, but did not reference monitoring specific to subpart EEE. In subpart EEE, the monitoring requirements are located in § 63.1209. This section also includes two provisions specific to alternative monitoring, thus removing some of the ''guesswork'' when trying to discern whether a request for change is minor, intermediate, or major. One is located at § 63.1209(a)(5), Petitions to use CEMS for other standards and the other is located at § 63.1209(g)(1), Alternative monitoring requirements other than continuous emissions monitoring systems. Each is discussed in the following paragraphs.

In the proposal, we explained that a request to use other monitoring in lieu of a CEMS is always considered a major change due to CEMS generally being considered a more accurate measure of compliance. However, if a source requests to use a CEMS in lieu of a required operating parameter, it may be considered an intermediate change. Since publication of the proposal, performance specifications have been promulgated for PM CEMS (and mercury CEMS).[258] Consequently, today we view requests per § 63.1209(a)(5) to use PM CEMS as intermediate changes to monitoring. Although the implementation of PM CEMS according to PS–11 (69 FR 1786 and 40 CFR part 60, Appendix B; January 12, 2004) and Procedure 2 (see also 40 CFR part 60, Appendix F) is largely ''self-implementing,'' sources wishing to apply to use of PM CEMS should develop and submit QA/QC plans specifying audit frequencies to account for site-specific stack conditions. We believe that other site-specific issues that may need to be addressed prior to use of the CEMS, such as a source's request to deviate from PS–11 or a source's selection of the correct correlation curve(s), are properly addressed under EPA's established policies and procedures for alternative method requests. We believe that a petition to use PM CEMS under § 63.8(f) is still the appropriate mechanism, but that sources can submit their petitions to their delegated S/L/T agency for review and approval, and we recommend that EPA Regional offices work with these agencies to monitor implementation. Thus, with the exception of petitions to use PM CEMS in lieu of an operating parameter which is considered an intermediate change, we are finalizing our proposed revision to § 63.1214(c) to include major alternatives to monitoring under § 63.1209(a)(5) as a non-delegable authority.

Section 63.1209(g)(1), Alternative monitoring requirements other than continuous emissions monitoring systems, contains the other alternative monitoring provision. This provision allows sources to request alternative monitoring methods to monitor compliance, except for those standards that must be monitored with a CEMS (e.g., those in § 63.1209(a)(1)), and to request a waiver of an operating parameter limit. We provided several examples of alternative parameter monitoring for which a request may be submitted under this section in the proposal at 69 FR 21337. They include use of: a different detector, different monitoring location, a different method as recommended by the manufacturer, or a different averaging period that is more stringent than the applicable standard. In the proposal, we stated that we believe the majority of requests submitted pursuant to § 63.1209(g)(1) are not major and discussed in the preamble amending the language in § 63.1209(g)(1) so that these types of changes could be reviewed and approved by the delegated S/L/T agency. However, when we added

[256] The alternative risk-based standard for total chlorine at § 63.1215 requires sources to submit their eligibility demonstration to both the delegated S/L/T agency and to the Risk and Exposure Assessment Group in Research Triangle Park, NC for review, even though the delegated S/L/T agency can grant or deny approval.

[257] For contact information, please visit *www.epa.gov/ttn/emc/staffdir.html.*

[258] Although performance specifications have been promulgated for mercury CEMS, there has not been as much experience in implementing these devices for hazardous waste combustion sources (or similar sources) as there has been for PM CEMS at this time. Therefore, we believe it appropriate to continue sending requests to use mercury CEMS in lieu of an operating parameter to the appropriate EPA Region for review and approval.

language to § 63.1209(g)(1) to allow for the above, we inadvertently referred to an approved Title V program instead of a S/L/T agency which has taken delegation of subpart EEE. We have corrected and finalized the proposed language. Therefore, whether minor or intermediate, requests under § 63.1209(g)(1) may be sent to your delegated S/L/T agency for review and approval.

Please note that 63.1209(g)(1) cannot be used when requesting major changes to the monitoring required by the standard. Such changes typically involve new unproven monitoring methods. Unproven monitoring methods refer to those where the technology or procedures are not generally accepted by the scientific community (§ 63.90(a)). If you are uncertain whether your request constitutes a new unproven monitoring method, which is considered a major change, you should submit your request to your EPA Region. The regulatory language in 63.1209(g)(1) has been revised to reflect this clarification.

D. Alternatives to Recordkeeping and Reporting.

As with the others, the final delegation provisions' rule only cited the waiver of recordkeeping and reporting requirements of § 63.10(f) as a non-delegable provision. Thus, it is necessary to add the relevant subpart EEE recordkeeping and reporting requirements of § 63.1211. Section 63.1211 is delegable in its entirety to S/L/T agencies unless an alternative request is determined to be a major change. An alternative request that is a major change, such as decreases in record retention for all records, must be sent to your EPA Region for review and approval. Similar to the monitoring section, § 63.1211 contains a specific alternative provision. Section 63.1211(d) Data Compression, allows sources to request to use data compression techniques to record data from CMS and CEMS on a frequency less than that required by § 63.1209. We view the alternative request to be a minor change because available guidance provides criteria for defining fluctuation and data compression limits. See 64 FR 52961 and 52962, September 30, 1999. Therefore, requests submitted under 63.1211(d) can be consistently evaluated by delegated S/L/T agencies. Section 63.1214(c) has been revised to specify that major alternatives to 63.1211(a)—(c) are non-delegable authorities.

E. Other Delegation Provisions

Although not discussed in the proposal, it is important to note that issuing applicability determinations is another delegable authority. The EPA document How to Review and Issue Clean Air Act Applicability Determinations and Alternative Monitoring (EPA 305–B–99–004, February 1999) provides guidance regarding who has the lead for issuing applicability determinations. In general, Regions may delegate the authority to issue applicability determinations to S/L/T agencies when the determinations are routine in nature. However, delegation of authority for certain applicability determinations should be retained by the Regions. These include applicability determinations that: (1) Are unusually controversial or complex; (2) have bearing on more than one state or district (are multi-Regional); (3) appear to create conflict with previous policy or determinations; (4) are a legal issue which has not previously been considered (a matter of first impression); or (5) raise new policy questions. It is recommended that Regional offices require notification when S/L/T agencies issue applicability determinations.

IV. RCRA State Authorization and Amendments to the RCRA Regulations

Under section 3006 of RCRA, EPA may authorize qualified states to administer their own hazardous waste programs in lieu of the federal program within the state. Following authorization, EPA retains enforcement authority under sections 3008, 3013, and 7003 of RCRA, although authorized states have primary enforcement responsibility. The standards and requirements for state authorization are found at 40 CFR Part 271.

Prior to enactment of the Hazardous and Solid Waste Amendments of 1984 (HSWA), a State with final RCRA authorization administered its hazardous waste program entirely in lieu of EPA administering the federal program in that state. The federal requirements no longer applied in the authorized state, and EPA could not issue permits for any facilities in that state, since only the state was authorized to issue RCRA permits. When new, more stringent federal requirements were promulgated, the state was obligated to enact equivalent authorities within specified time frames. However, the new federal requirements did not take effect in an authorized state until the state adopted the federal requirements as state law.

In contrast, under RCRA section 3006(g) (42 U.S.C. 6926(g)), which was added by HSWA, new requirements and prohibitions imposed under HSWA authority take effect in authorized states at the same time that they take effect in unauthorized states. EPA is directed by the statute to implement these requirements and prohibitions in authorized states, including the issuance of permits, until the state is granted authorization to do so. While states must still adopt HSWA related provisions as state law to retain final authorization, EPA implements the HSWA provisions in authorized states until the states do so.

Authorized states are required to modify their programs only when EPA enacts federal requirements that are more stringent or broader in scope than existing federal requirements. RCRA section 3009 allows the states to impose standards more stringent than those in the federal program (see also 40 CFR 271.1). Therefore, authorized states may, but are not required to, adopt federal regulations, both HSWA and non-HSWA, that are considered less stringent than previous federal regulations.

We discussed in the proposal which RCRA regulations we intended to amend and their impact on state authorization procedures. Today, we are finalizing those amendments in §§ 270.10, 270.22, 270.32, 270.42, 27062, 270.66, and 270.235. In addition, we are amending the regulations in §§ 264.340 and 266.100 to reflect changes that have been made based upon comments. Today's amendments fall under both HSWA and non-HSWA authorities. That is, changes made to regulations applicable to boilers and industrial furnaces are promulgated under HSWA authority, whereas changes made to regulations applicable to incinerators are promulgated under non-HSWA authority. [259] All of the amendments made today are considered to be either less stringent or equivalent to the existing Federal program, which means that states are not required to adopt and seek authorization for these provisions regardless of whether they are finalized under non-HSWA or HSWA authorities. Nevertheless, we strongly encourage states to become authorized for today's amendments.

[259] When new requirements and prohibitions (that are more stringent than the previous federal regulations) are imposed under non-HSWA authority, the new federal requirements do not take effect in an authorized state until the state adopts the federal requirements as law. Conversely, when imposed under HSWA authority, the new federal requirements are federally enforceable in an authorized state until the necessary changes to a state's authorization are approved by EPA.

Experience has shown that when states have been authorized for previous amendments (i.e., those finalized in the 1999 rule) that were intended to facilitate the transition from the RCRA program to MACT and the CAA Title V program, the process has proven to be less cumbersome. For a more detailed discussion of non-HSWA and HSWA authorities with respect to how and when they take effect, please refer to the proposal's preamble discussion at 69 FR 21338.

Several RCRA sections that have been enacted as part of HSWA apply to today's rule: 3004(o), 3004(q), and 3005(c)(3). Thus, if a state is not authorized for the boiler and industrial furnace regulations, these provisions are federally enforceable in an authorized state until the necessary changes to a state's authorization are approved by us. See RCRA section 3006, 42 U.S.C. 6926. We are adding today's requirements to Table 1 in 271.1(j) where rulemakings promulgated pursuant to HSWA authority are identified.

Part Six: Impacts of the Final Rule

I. What Are the Air Impacts?

Table 1 below shows the emissions reductions achieved by the final rule for all existing hazardous waste combustors. For Phase I sources—incinerators, cement kilns, and lightweight aggregate kilns—the emission reductions represent the difference in emissions between sources controlled to today's standards and estimated emissions when complying with the interim MACT standards promulgated on February 13, 2002. Thus, the significant emissions reductions already achieved by the interim standards are not reflected in the estimates shown in Table 1.[260] For Phase II sources—solid fuel boilers, liquid fuel boilers, and hydrochloric acid production furnaces—the reductions represent the difference in emissions between today's standards and the current baseline of control provided by 40 CFR part 266, subpart H.

Nationwide baseline HAP and particulate matter emissions from hazardous waste combustors are estimated to be approximately 12,650 tons per year at the current baseline level of control. Depending on the number of facilities demonstrating compliance with health-based compliance alternatives for total chlorine, the total reduction of HAP and particulate matter for existing sources could be between approximately 2,260 and 3,380 tons per year. A discussion of the emission estimates methodology and results are presented in ''Technical Support Document for HWC MACT Replacement Standards, Volume V: Emission Estimates and Engineering Costs'' that is available in the docket.

TABLE 1.—NATIONWIDE ANNUAL EMISSIONS REDUCTIONS OF HAP AND OTHER POLLUTANTS

Pollutant	Estimated emission reductions (tons per year)
Dioxin/furans[1]	0.20
All HAP metals	19.5
Mercury	0.21
Semivolatile metals (Cd, Pb)	2.9
Low volatile metals (As, Be, Cr)	6.5
Other metals (Co, Mn, Ni, Sb, Se)	9.9
HCl and chlorine gas[2]	1220
Particulate matter	2,140

[1] Dioxin/furan emission reductions are expressed as grams TEQ per year.

[2] We are promulgating health-based compliance alternatives for total chlorine for hazardous waste combustors other than hydrochloric acid production furnaces in lieu of the MACT technology-based emission standards (see Part Four, Section VII of the preamble for details). Given that a number of sources may elect to comply with the health-based compliance alternatives, the estimated reductions of total chlorine represent an upper bound estimate.

II. What Are the Water and Solid Waste Impacts?

We estimate that water usage for existing sources will increase between 400 million and 1.6 billion gallons per year as a result of today's rule. The upper range estimate represents the water usage assuming no sources elect to comply with the health-based compliance alternatives for total chlorine, while the lower range estimate represents water usage assuming all sources elect the alternative. Water usage increases are estimated for reducing combustion gas temperatures with evaporated spray coolers for dioxin/furan control as well as for new particulate matter and acid gas air pollution control equipment. The increased water usage will also result in an increase in wastewater generation. Depending on the number of sources that elect to comply with the health-based compliance alternatives for total chlorine, we also estimate that up to 775 million gallons of wastewater may be generated.

We estimate that the generation of solid waste will increase between approximately 8,700 tons and 12,200 tons per year depending on the number of sources that elect to comply with the health-based compliance alternatives for total chlorine. Of these totals, approximately 250 tons per year will be classified as hazardous waste subject to RCRA Subtitle C regulations. We estimate the remainder—between 8,450 and 11,950 tons per year—will be classified and managed as a non-hazardous industrial waste subject to Subtitle D of RCRA. The costs associated with these disposal and water requirements are accounted for in the annualized compliance cost estimates. A discussion of the methodology used to estimate impacts is presented in ''Technical Support Document for HWC MACT Replacement Standards, Volume V: Emission Estimates and Engineering Costs'' that is available in the docket. We note that the nonair quality health and environmental impacts effects for both floor and beyond-the-floor options are discussed in the technical support document and are part of our consideration of such factors under section 112(d)(2).

III. What Are the Energy Impacts?

We estimate that the national annual energy usage as a result of this rule will increase between approximately 73 million and 85 million kilowatt hours (kWh) depending on the number of sources that elect to comply with the health-based compliance alternatives for total chlorine. The increase results from the electricity required to operate air pollution control equipment installed to meet the standards. The increase energy usage costs are accounted for in the annualized compliance cost estimates. A discussion of the methodology used to estimate impacts is presented in ''Technical Support Document for HWC MACT Replacement Standards, Volume V: Emission Estimates and Engineering Costs.'' We note that the energy effects for both floor and beyond-the-floor options are discussed in the technical support document and are part of our consideration of such factors under section 112(d)(2).

IV. What Are the Control Costs?

Control costs, as presented in this section, refer only to engineering, operation, and maintenance costs associated with unit/system upgrades necessary to meet the final standards. These costs do not incorporate any market-based adjustments. All costs presented in this section are annualized estimates in 2002 dollars.

[260] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume V: Emission Estimates and Engineering Costs,'' Section 3, July 1999.

We estimate there are a total of 267 sources [261] that may be subject to requirements of this final rule. Of this total, there are 116 boilers (104 liquid fuel boilers plus 12 solid fuel boilers), 92 on-site incinerators, 25 cement kilns, 15 commercial incinerators, nine (or seven) lightweight aggregate kilns, and ten hydrochloric acid (HCl) production furnaces.

Total national private sector engineering costs for the final standards are estimated at $40.2 million per year.[262] This estimate reflects total non market adjusted upgrade costs (engineering, plus administrative and permitting), excluding chlorine control costs.[263] All Phase II sources combined (liquid fuel boilers, coal fired boilers, and HCl production furnaces) represent 86 percent of this total. The average private sector engineering cost, *excluding* permitting and administrative, is projected to be highest for liquid fuel boilers, at $256,300 per source. Coal fired boilers are second at approximately $170,246 per source. Total engineering costs to cement kilns and HCl production furnaces are estimated to average $113,600, and $16,645 per source, respectively. Commercial incinerators are projected to experience engineering costs averaging $12,300 per source. On-site incinerators and LWAKs will face the lowest engineering costs at $10,200 and $3,330, respectively.

For all Phase I sources (141 sources; commercial incinerators, on-site incinerators, cement kilns, and lightweight aggregate kilns), total average annualized non market-adjusted compliance costs (*including* permitting and administrative [264]) are estimated at $39,700 per source. The combined Phase II sources (126 sources; solid and liquid fuel-fired boilers and hydrochloric acid production furnaces) have total average annualized non market-adjusted compliance costs of approximately $274,500 per source. Across all sectors covered by today's rule (Phase I and Phase II sources), total annualized compliance costs were found to average $150,500 per source.

Private sector engineering costs (control) costs have also been assessed on a per ton (U.S.) basis. Captive energy recovery sources (solid and liquid fuel-fired boilers, and hydrochloric acid production furnaces) burned a total of 944,667 tons of hazardous waste in 2003. These facilities are projected to experience the highest average incremental control costs, at approximately $37 per ton of waste burned. Commercial energy recovery sources (cement kilns and LWAKs), burning an estimated 999,076 tons in 2003, are projected to experience average incremental control costs of approximately of $3.00 per ton. Captive (on-site) and commercial incinerators burn an estimated 925,828 tons and 447,524 tons per year, respectively. These sources are estimated to experience average incremental engineering costs of $2.15 per ton and $0.80 per ton, respectively.

The aggregate control costs presented in this section do not reflect the anticipated real world cost burden on the economy. Any market disruption, such as the requirements in this final rule, will cause a short-term disequilibrium in the hazardous waste burning market, resulting in a natural economic process designed to reach the new market equilibrium. Actual cost impacts to society are more accurately measured by taking into account market adjustments in the targeted industry, plus secondary (societal) costs. Total market-adjusted costs plus secondary costs are commonly termed Social Costs, and are generally less than total engineering costs due to efficiencies implemented during the market adjustment process. Social Costs theoretically represent the total real world costs of all goods and services society must give up in order to gain the added protection to human health and the environment. Social Costs are presented in Part VI of this Section.[265]

V. What Are the Economic Impacts?

Economic impacts may be measured through several factors. This section presents estimated economic impacts relative to market exits, waste reallocations, and employment impacts. Economic impacts presented in this section are distinct from social costs, which correspond only to the estimated monetary value of market disturbances.

A. Market Exit Estimates

The hazardous waste combustion industry operates in a dynamic market, with systems entering and exiting the market on a routine basis. Our analysis defines ''market exit'' as ceasing to burn hazardous waste. We have projected post-rule hazardous waste combustion system market exits based on economic feasibility only. Social, liability, and informational issues are not incorporated into our market exit analysis.

Market exit estimates are derived from a breakeven analysis designed to determine system viability. This analysis is subject to several assumptions, including: Cost assumptions concerning the per sector baseline cost of hazardous waste burning, cost estimates for necessary pollution control devices (including operation and maintenance), prices for combustion services, and estimated waste quantities burned at these facilities. It is important to note that, for most sectors, exiting the hazardous waste combustion market is not equivalent to closing a plant. (Actual plant closure may occur only in the case of a commercial incinerator closing all systems.)

We estimate that 39 systems, representing about 15 percent of the total affected universe, may stop burning hazardous waste in response to the final standards. Approximately 59,000 tons of hazardous waste may be diverted from these closed systems.

These estimates assume no chlorine controls are put in place as a direct result of the rule.[266] Of the estimated 39 market exits, 26 are projected to be on-site incinerators and 8 are liquid fuel boilers. Three commercial incinerator systems may exit the market in response to the final rule. However, these systems are considered economically marginal in the baseline. Two coal-fired boiler systems are also projected to exit the market. No cement kilns, lightweight aggregate kilns, or HCl production furnaces are projected to exit the market as a result of the final rule. Market exit estimates were found to be identical

[261] For purposes of this discussion, a source is defined as the air pollution control system associated with one or more hazardous waste combustion unit(s). A facility may operate one or more sources. Note that this total includes two LWAK units limited by system burn constraints. Exclusion of these two units results in a total of 265 independent sources.

[262] Not included here are total annual government costs. These costs, with or without chlorine control, are approximately $0.5 million/year.

[263] We are finalizing the incorporation of section 112(d)(4) of the Clean Air Act to establish risk-based standards for total chlorine for hazardous waste combustors (except for hydrochloric acid production furnaces). The low-end of this cost range assumes all facilities emit total chlorine levels below risk-based levels of concern. Under this scenario, no total chlorine controls are assumed to be necessary. The total engineering cost with chlorine control is estimated at $46.7 million/year.]

[264] See Exhibit 4–3 in the economic assessment background document.

[265] Beyond-the-Floor standards were assessed for all floors. These findings are available in Appendix F and G of the engineering background document: See: Final Technical Support Document for HWC MACT Standards, Volume V—Emissions Estimates and Engineering Costs.

[266] Even though we are allowing sources (except hydrochloric acid production furnaces) to invoke § 112(d)(4) in lieu of MACT chlorine control requirements, we have not attempted to estimate the following: (1) The total number of sources that may elect to implement this provision, and, (2) what level of control may be necessary following a § 112(d)(4) risk-based determination, since this would vary on a site-by-site basis.

when the cost of chlorine control is included in the model.

B. Waste Reallocations

Some on-site combustion systems (sources) may no longer be able to cover their hazardous waste burning costs as a result of final rule requirements. These sources are projected to divert or reroute their wastes to different hazardous waste combustion sources (usually some type of commercial unit).[267] For multiple system facilities, this diversion may include on-site (non-commercial) waste consolidation among fewer systems at the same facility. Under current market conditions, non-combustion alternatives are generally not economically feasible, and in any case, would normally be unable to achieve the RCRA Land Disposal Restriction Treatment standards, which are based on the performance of combustion technology (which optimizes destruction of organic HAP).

As mentioned above, our economic model indicates that approximately 59,000 tons (U.S.) of hazardous waste may be reallocated. This figure represents approximately 1.8 percent of the total 2003 quantity of hazardous waste burned at all sources. On-site consolidations account for nearly 24 percent (13,915 tons) of all diverted waste. Commercial incinerators are projected to receive the vast majority (42,722 tons, or 73 percent) of all off-site waste reallocations. Cement kilns and LWAKs are projected to receive the remaining reallocation (2,289 tons). Currently, there is more than adequate capacity to accommodate all off-site hazardous waste diversions.

C. Employment Impacts

Today's rule is projected to induce employment shifts across all affected sectors. These shifts may occur as specific combustion facilities find it no longer economically feasible to keep all of their systems running, or to stay in the hazardous waste market at all. When this occurs, workers at these locations may lose their jobs or experience forced relocations. At the same time, the rule is projected to result in positive employment impacts, as new purchases of pollution control equipment stimulate additional hiring in the pollution control manufacturing sector, and as additional staff are required at selected combustion facilities to accommodate reallocated waste and/or various compliance activities.

1. Employment Impacts—Dislocations (Losses)

Employment dislocations in the combustion industry are projected to occur when facilities consolidate waste into fewer systems, or when a facility exits the hazardous waste combustion market altogether. Operation and maintenance labor hours are expected to be reduced for each system that stops burning hazardous waste. For each facility that completely exits the market, employment dislocations may also include supervisory and/or administrative personnel.

Total employment dislocations resulting from implementation of the final standards are estimated at 310 full-time-equivalent (FTE) jobs. On-site incinerators account for about 62 percent of this total, followed by commercial incinerators (about 24 percent), and liquid-fuel boilers (about 12 percent). The large number of on-site incinerators drives the impacts within this sector.

2. Employment Impacts—Positive

In addition to employment dislocations, our analysis indicates that today's rule may also result in positive employment impacts. These positive impacts are projected to occur to both the air pollution control industry and to combustion firms as they hire personnel to accommodate reallocated waste and/or comply with the various requirements of the rule. Hazardous waste combustion sources are projected to need additional operation and maintenance personnel for the new pollution control equipment and other compliance activities, such as new reporting and record keeping requirements.

The total annual positive employment impact associated with the final standards is estimated at 323 FTEs. Positive employment impacts to the air pollution control industry [268] are projected at 93 FTEs, or about 29 percent of this total. At 183 jobs, liquid-fuel boilers are projected to experience the greatest positive employment impact among all combustors.

While it may appear that our analysis suggests overall net positive employment impacts, such a conclusion would be inappropriate. Because the positive employment impacts and employment dislocations occur in different sectors of the economy, they should not be added together. Doing so would mask important distributional effects of the rule. In addition, these employment estimates reflect within sector impacts only and therefore do not account for potential displacements across sectors. This may occur if investment funds are diverted from other areas of the larger economy.

VI. What Are the Social Costs and Benefits of the Final Rule?

The value of any regulatory action is traditionally measured by the net change in social welfare that it generates. Our economic assessment conducted in support of today's final rule evaluated compliance (control) costs, and economic impacts, as discussed above. The Assessment also analyzed social costs, benefits, small entity impacts, and other impacts (e.g., children's health, unfunded mandates). To conduct this analysis, we examined the current combustion market and practices, developed and implemented a methodology for examining compliance and social costs, applied an economic model to analyze industry economic impacts (discussed above), examined benefits, and followed appropriate guidelines and procedures for examining equity considerations, children's health, and other impacts. The data applied in this analysis were the most recently available at the time of the analysis. Because our data were limited, the findings from these analyses should be more accurately viewed as national estimates.

A. Combustion Market Overview

The hazardous waste industry consists of three key segments: hazardous waste generators, fuel blenders/intermediaries, and hazardous waste burners. Hazardous waste is combusted at four main types of facilities: commercial incinerators, on-site incinerators, waste burning kilns (cement kilns and lightweight aggregate kilns), and industrial boilers. Commercial incinerators are generally larger in size and designed to manage virtually all types of solids, as well as liquid wastes. On-site incinerators are more often designed as liquid-injection systems that handle liquids and pumpable solids. Waste burning kilns and boilers generally burn hazardous wastes to generate heat and power for their manufacturing processes.

As discussed above, we have identified a total of 267 hazardous waste burning sources (systems) currently in operation in the United States. Liquid fuel-boilers account for 104 sources, followed by on-site incinerators at 92 sources. Cement kilns, hydrochloric acid production furnaces, and commercial incinerators account for 25, 10, and 15 sources, respectively. Solid

[267] This analysis includes the cost of waste transport to alternative combustion sources, burning fees, and purchase of alternative fuels (if appropriate).

[268] Manufacturers and distributors of air pollution control devices are projected to increase sales as a result of this action.

fuel boilers and lightweight aggregate kilns make up the remainder, at 12 and nine systems, respectively. These 267 sources are operated at a total of 145 different facilities. A single facility may have one or more combustion systems. Facilities with multiple systems may have different types of hazardous waste burning units. Combustion systems operating at chemical manufacturing facilities (NAICS 325) were found to account for about 70 percent of the total number of facilities and manage about 58 percent of all hazardous waste burned in 2003.

The EPA Biennial Reporting System (BRS) reports a total demand for all combusted hazardous waste, across all facilities, at 3.32 million tons (U.S. ton) in 2003. Commercial energy recovery (cement kilns and lightweight aggregate kilns) burned about 30 percent of this total. Hazardous waste destruction at on-site incinerators and commercial incinerators accounted for 28 percent and 13 percent, respectively. Captive energy recovery accounted for the remainder, at 29 percent of the total.

About 65 percent of all hazardous waste burned in 2003 was organic liquids. This is followed by solids (14 percent), inorganic liquids (11 percent), and sludges (10 percent). Hazardous gases were found to represent a negligible portion, at about 0.08 percent of the total quantity burned in 2003. In terms of hazardous waste generating sources, the Basic Organic Chemical Manufacturing e sector (NAICS 325) generated approximately 32 percent of all hazardous waste burned in 2001, followed by pesticides and agricultural chemicals, business services, organic fibers, medicinal chemicals, pharmaceuticals, plastics materials and resins, petroleum, and miscellaneous.

Companies that generate large quantities of uniform hazardous wastes generally find it more economical and efficient to combust these wastes on-site using their own noncommercial systems. Commercial incineration facilities manage a wide range of hazardous waste streams generated in small to medium quantities by diverse industries. Cement kilns, lightweight aggregate kilns, and boilers derive heat and energy by burning high-Btu (solvents and organics) liquid hazardous wastes.[269] Sometimes these wastes are blended with fossil fuels where system operators choose to not derive all of their energy input from hazardous waste.

Regulatory requirements, liability concerns, and economics influence the demand for hazardous waste combustion services. Regulatory forces influence the demand for combustion by mandating certain hazardous waste treatment standards (land disposal restriction requirements, etc.). Liability concerns of waste generators affect combustion demand because combustion, by destroying organic wastes, greatly reduces the risk of future environmental problems. Finally, if alternative waste management options are more expensive, hazardous waste generators will likely choose to send their wastes to combustion facilities in order to increase overall profitability.

Throughout much of the 1980s, hazardous waste combustors enjoyed a strong competitive position and generally maintained a high level of profitability. During this period, EPA regulations helped stimulate a greatly expanded market. In addition, federal permitting requirements, as well as powerful local opposition to siting of new incinerators, constrained the entry of new combustion systems. As a result, combustion prices rose steadily, ultimately reaching record levels in 1987. The high profits of the late 1980s induced many firms to enter the market, in spite of the difficulties and delays anticipated in the permitting and siting process.

Hazardous waste markets have changed significantly since the late 1980s. In the early 1990s, substantial overcapacity resulted in fierce competition, declining prices, poor financial performance, numerous project cancellations, system consolidations, and facility closures. Since the mid 1990s, several additional combustion facilities have closed, while many of those that have remained open have consolidated their operations. Available (prior to this final rule) excess commercial capacity is currently estimated at about 21 percent of the total 2003 quantity combusted.

B. Baseline Specification

Proper and consistent baseline specification is vital to the accurate assessment of incremental costs, benefits, and other economic impacts associated with today's rule. The baseline essentially describes the world absent the rule. The incremental impacts of today's rule are evaluated by predicting post MACT compliance responses with respect to the baseline. The baseline, as applied in this analysis, is the point at which today's rule is promulgated. Thus, incremental cost and economic impacts are projected beyond the standards established in the February 13, 2002 Interim Standards Final Rule.

C. Analytical Methodology and Findings—Social Cost Analysis

Total social costs include the value of resources used to comply with the standards by the private sector, the value of resources used to administer the regulation by the government, and the value of output lost due to shifts of resources away from the current market equilibrium. To evaluate these shifts in resources and changes in output requires predicting changes in behavior by all affected parties in response to the regulation, including responses of directly-affected entities, as well as indirectly-affected private parties.

For this analysis, social costs are grouped into two categories: Economic welfare (changes in consumer and producer surplus), and government administrative costs. The economic welfare analysis conducted for today's rule uses a simplified partial equilibrium approach. In this analysis, changes in economic welfare are measured by summing the changes in consumer and producer surplus. This simplified approach bounds potential economic welfare losses associated with the rule by considering two scenarios: Compliance costs assuming no market adjustments, and market adjusted compliance costs.

The annualized private sector compliance (engineering) costs of $40.2 million, as presented in Section IV, assume no market adjustments. Our best estimate of total social costs incorporates rational market adjustments and all government costs. Under this scenario, increased compliance (engineering) costs are examined in the context of likely incentives hazardous waste combustion facilities have to continue burning, and the competitive balance in the market.

Total annualized market-adjusted net private-sector costs are estimated at $22.1 million.[270] In addition to the net private sector costs, total annual government costs are approximately $0.50 million. Thus, our best estimate of total social costs of this final rule is $22.6 million per year.

The $22.1 million figure incorporates a net gain to selected Phase I sources and an estimated $3.6 million cost

[269] Many cement kilns are also able to burn a certain level of non liquid waste.

[270] We are finalizing alternative risk-based total chlorine standards for hazardous waste combustors (except for hydrochloric acid production furnaces). The net private sector costs of $22.1 million/year may be considered a lower-bound estimate that assumes facilities emit total chlorine (TCI) below risk-based levels of concern (i.e., no TCI controls are assumed to be necessary). Total net private sector market-adjusted costs would increase to approximately $28.1 million per year if we were to assume all sources were to comply with technology-based TCI standards (as opposed to the risk-based standards).

(price) increase to pre-existing customers of commercial hazardous waste combustion facilities. On-site incinerators are projected to experience total market-adjusted cost increases of approximately $1.5 million/year. All phase II sources account for approximately $31.9 million in increased costs. Our economic model indicates that, of the Phase I source categories, commercial incinerators, cement kilns, and LWAKs would experience net gains following all market adjustments. The total net gain for these three source categories is estimated at $14.8 million per year. Commercial incinerators would receive about 98 percent of the total gain ($14.5 million/year). Gains to commercial facilities occur due to marginally higher prices, increased waste receipts, and relatively low upgrade costs, when compared to the other sources.

D. Analytical Methodology and Findings—Benefits Assessment

This section discusses the monetized and non monetized benefits to human health and the environment potentially associated with today's final rule. Monetized human health benefits are derived from reductions in particulate matter (PM) and dioxin/furan exposure, and are based on a Value of Statistical Life (VSL) estimate of $6.2 million. [271] Non monetized benefits are associated with human health, ecological, and waste minimization factors.

1. Monetized Benefits

Total monetized human health benefits for the final standards are estimated to range from $5.61 million/year to $6.31 million/year. This estimate includes human health benefits associated with avoided PM and dioxin/furans exposure. The range is driven by alternative discount rate assumptions (no discount rate, 3 percent, or 7 percent) for mortality valuation. PM benefits represent 99 percent of the total monetized human health benefits.

Particulate Matter

Results from our risk assessment extrapolation procedure [272] are used to evaluate incremental human health benefits potentially associated with particulate matter emission reductions from hazardous waste combustion facilities. This analysis applied avoided human health benefits factors from the March 2004 Assessment document,[273] combined with more recent emissions estimates for particulate matter.

Reduced PM emissions are estimated to result in monetized human health benefits of approximately $6.29 million per year. This is an undiscounted figure. Avoided PM morbidity cases account for $3.42 million of this total, and include: respiratory illness, cardiovascular disease, chronic bronchitis, work loss days, and minor restricted activity. Chronic bronchitis accounts for approximately 89 percent of the total value of avoided PM morbidity cases. All morbidity cases are assumed to be avoided within the first year following reduced PM emissions and are not discounted under any scenario.

Avoided premature deaths (mortality) are valued at $2.87 million per year, undiscounted. Assuming a discount rate of three and seven percent, PM mortality benefits would be $2.52 million and $2.19 million, respectively. Our discounted analysis of PM mortality benefits assumes that 30 percent of premature mortalities occur during the first year, 50 percent occur evenly from the second through the fifth years, and the remaining 20 percent occur evenly from the sixth through the twentieth years.[274] Due to limitations in the risk analysis, this assessment of PM benefits does not consider corresponding health benefits associated with the reduction of HAP metals carried by the PM.

Dioxin/furan—Dioxin/furan emissions are projected to be reduced by a total of 0.2 grams per year under the final standards. In the July 23, 1999 Addendum to the Assessment, cancer risk reductions linked to consumption of dioxin-contaminated agricultural products accounted for the vast majority of the 0.36 cancer cases per year that were expected to be avoided due to the 1999 standards. Cancer risk reductions associated with the final standards are expected to be less than 0.36 cases per year, but greater than zero.

At this time, the Agency is still using a cancer risk slope factor of 1.56×10^5 $[mg/kg/day]^{-1}$ for dioxin. This cancer slope factor is derived from the Agency's 1985 health assessment document for polychlorinated dibenzo-p-dioxins [275] and represents an upper bound 95th percentile confidence limit of the excess cancer risk from a lifetime exposure. For the past several years the Agency has been conducting a reassessment of the human health risks associated with dioxin and dioxin-like compounds. In October of 2004 this reassessment [276] was delivered to the National Academy of Sciences (NAS) for review.

Evidence compiled from this draft reassessment indicates that the carcinogenic effects of dioxin/furans may be six times as great as believed in 1985, reflecting an upper bound cancer risk slope factor of 1×10^6 $[mg/kg/day]^{-1}$ for some individuals. Agency scientists' more likely (central tendency) estimates (derived from the ED_{01} rather than the LED_{01}) result in slope factors and risk estimates that are within 2–3 times of the upper bound estimates (i.e., between 3×10^5 $[mg/kg/day]^{-1}$ and 5×10^5 $[mg/kg/day]^{-1}$) based on the available epidemiological and animal cancer data. However, risks could be as low as zero for some individuals. Use of the alternative upper bound cancer risk slope factor could result in a higher human health monetized health benefit associated with premature cancer deaths avoided in response to the final standard for dioxin/furans. The assessment of upper bound cancer risk using this alternative slope factor should not be considered current Agency policy. The standards for dioxin in today's final rule were not based on this draft reassessment.

Total non-discounted human health benefits associated with projected dioxin reductions are estimated at $0.02 million/year. These benefits may range from $0.01 million/year to nearly zero, applying a discount rate of 3 percent and 7 percent, respectively. Our discounted estimates incorporate an assumed latency period of 21 and 34 years from exposure to death.

2. Non-Monetized Benefits

We examined, but did not monetize human health benefits potentially associated with reduced exposure to lead, mercury, and total chlorine. Non monetized ecological benefits

[271] Monetized benefits associated with avoided premature mortality reflect a VSL range of $1.1 million to $11.4 million, with a central VSL estimate of $6.2 million. These values are derived from willingness-to-pay based VSL estimates presented in U.S. EPA, Regulatory Impact Analysis for the Final Clean Air Interstate Rule, March 2005.

[272] Inferential Risk Analysis in Support of Standards for Emissions of Hazardous Air Pollutants from Hazardous Waste Combustors.

[273] Assessment of the Potential Costs, Benefits, and Other Impacts of the Hazardous Waste Combustion MACT Replacement Standards: Proposed Rule, March 2004 (Chapter 6), and Addendum to the Assessment.

[274] See: U.S. EPA. March 2005. Regulatory Impact Analysis for the Final Interstate Air Quality Rule.

[275] USEPA, 1985. Health Assessment Document for Polychlorinated Dibenzo-p-Dioxins. EPA/600/8-84/014F. Final Report. Office of Health and Environmental Assessment. Washington, DC. September, 1985.

[276] U.S.EPA. Exposure and Human Health Reassessment of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) and Related Compounds National Academy Sciences (NAS) Review Draft, December 2003. [**Note:** Toxicity risk factors presented in this document should not be considered EPA's official estimate of dioxin toxicity, but rather reflect EPA's ongoing effort to reevaluate dioxin toxicity].

potentially associated with reductions in dioxin/furan; selected metals, total chlorine, and particulate matter were also examined. Finally, waste minimization is examined as a non-monetized benefit.

Lead—The final standards are expected to reduce lead emissions by approximately 2.5 tons per year. In comparison, the 1999 standards were expected to reduce lead emissions by 89 tons per year, and were expected to reduce cumulative lead exposures for two children, ages zero to five, to less than 10 μg/dL. The lead benefits associated with these final standards are therefore expected to be modest. The final standards will also result in reduced lead levels for children of sub-populations with especially high levels of exposure. Children of subsistence fishermen, commercial beef farmers, and commercial dairy farmers who face the greatest levels of cumulative lead exposure may also experience comparable reductions in overall exposure as a result of the MACT standards.

Mercury—The HWC MACT final standards are expected to reduce mercury emissions by approximately 0.21 tons per year, approximately 93 percent less than the four-ton reduction expected under the 1999 Standards. We do not attempt to quantify the mercury-related benefits associated with today's final standards. However, because the reduction in mercury emissions represents a fraction of the reduction expected under the 1999 Standards, the mercury-related benefits of the final standards are likely to be less than the corresponding benefits under the 1999 Standards.

To characterize the benefits associated with reduced mercury emissions, the 1999 Assessment measured changes in hazard quotients for populations living near hazardous waste combustion facilities. For any given population, the hazard quotient is the ratio of the actual level of exposure to a safe level of exposure. A hazard quotient greater than one implies that a population is potentially at risk. The exposure quotient analysis in the 1999 Assessment found that the measurable benefits of reduced mercury emissions under the 1999 Standards were likely to be small because baseline exposures were relatively low. In addition, many of the studies examining the adverse health effects of mercury are inconclusive. Over the past several years, however, scientists have conducted three large-scale studies of individuals in the Faroe Islands, New Zealand, and the Seychelles Islands examining the relationship between mercury exposure in women and the neuro-development of their unborn children.[277] The New Zealand and Faroe Islands studies both found a statistically significant relationship between maternal methylmercury exposure and IQ decrements in the unborn children of these women. In its 2000 report on the toxicological effects of methylmercury, the National Research Council suggested that integrating the results of all three studies could be useful for risk assessment purposes.[278] Such an integrative risk assessment, later published by Ryan et al. in 2005, served as the basis of the Agency's health effects analysis for the Clean Air Mercury Rule (CAMR).[279] The regulatory impact analysis for CAMR summarizes several of the adverse health effects that may be linked to mercury and reviews the epidemiological literature examining the link between these effects and exposure to mercury.[280]

Total Chlorine—We were not able to quantify the benefits associated with reductions in total chlorine emissions. Total chlorine is a combination of hydrogen chloride and chlorine gas. The final standards are projected to reduce total annual chlorine emissions by about 107 tons per year[281] (HCl production furnaces only). Hydrogen chloride is corrosive to the eyes, skin, and mucous membranes. Acute inhalation can cause eye, nose, and respiratory tract irritation and inflammation, and pulmonary edema. Chronic occupational inhalation has been reported to cause gastritis, bronchitis, and dermatitis in workers. Long term exposure can also cause dental discoloration and erosion. Chlorine gas inhalation can cause bronchitis, asthma and swelling of the lungs, headaches, heart disease, and meningitis. Acute exposure causes more severe respiratory and lung effects, and can result in fatalities in extreme cases. The exposure levels established under 112(d)(4) are expected to reduce chlorine exposure for people in close proximity to hazardous waste combustion facilities, and are therefore likely to reduce the risk of all associated health effects.

Ecological Benefits—We examined ecological benefits through a comparison of the 1999 Assessment and today's final standards. Ecological benefits in the 1999 Assessment were based on reductions of approximately 100 tons per year in dioxin/furans and selected metals. Lead was the only pollutant of concern for aquatic ecosystems, while mercury appeared to be of greatest concern for terrestrial ecosystems. Dioxin/furan and lead emission reductions also provided some potential benefits for terrestrial ecosystems. The final standards are expected to reduce dioxin/furan and selected metal emissions by about 12 percent to 13 percent of the 1999 estimate, resulting in fewer incremental benefits than those estimated for the 1999 Assessment (and later, for the 2002 Interim Standards). However, the 1999 Assessment did not estimate the ecological benefits of MACT standards for hazardous waste burning industrial boilers and HCl production furnaces. These systems were excluded from the universe in 1999 but are part of the universe addressed by today's final standards. As a result, while the total ecological benefits of the final rule are likely to be modest, areas near facilities with boilers may enjoy more significant ecological benefits under the final standards than areas near facilities that have already complied with the 2002 Interim standards.

Mercury, lead, and chlorides are among the HAPs that can cause damage to the health and visual appearance of

[277] Grandjean, P., K. Murata, E. Budtz-Jorgensen, and P. Weihe. 2004. ''Autonomic Activity in Methylmercury Neurotoxicity: 14–Year Follow-Up of a Faroese Birth Cohort.'' Journal of Pediatrics.144:169–76; Kjellstrom, T., P. Kennedy, S. Wallis, A. Stewart, L. Friberg, B. Lind, P. Witherspoon, and C. Mantell. 1989. Physical and mental development of children with prenatal exposure to mercury from fish. Stage 2: Interviews and psychological tests at age 6. National Swedish Environmental Protection Board Report No. 3642; Crump, K.S., T. Kjellstrom, A.M. Shipp, A. Silvers, and A. Stewart. 1998. ''Influence of prenatal mercury exposure upon scholastic and psychological test performance: benchmark analysis of a New Zealand cohort.'' Risk Analysis. 18(6):701–713; Davidson, P.W., G.J. Myers, C. Cox, C. Axtell, C. Shamlaye, J. Sloane-Reeves, E. Cernichiari, L. Needham, A. Choi, Y. Wang, M. Berlin, and T.W. Clarkson. 1998. ''Effects of prenatal and postnatal methylmercury exposure from fish consumption on neurodevelopment: outcomes at 66 months of age in the Seychelles Child Development Study.'' Journal of the American Medical Association. 280(8):701–707; and Myers, G.J., P.W. Davidson, C. Cox, C.F. Shamlaye, D. Palumbo, E. Cernichiari, J. Sloane-Reeves, G.E. Wilding, J. Kost, L.S. Huang, and T.W. Clarkson. 2003. ''Prenatal methylmercury exposure from ocean fish consumption in the Seychelles child development study.'' Lancet. 361(9370):1686–92.

[278] National Research Council of the National Academy of Sciences, Toxicological Effects of Methylmercury. 2000, p. 299.

[279] Ryan, L.M. Effects of Prenatal Methylmercury on Childhood IQ: A Synthesis of Three Studies. Report to the U.S. Environmental Protection Agency, 2005; U.S. EPA. Regulatory Impact Analysis of the Clean Air Mercury Rule: Final Report. March 2005.

[280] U.S. EPA. Regulatory Impact Analysis of the Clean Air Mercury Rule: Final Report. March 2005.

[281] This is a lower bound estimate that assumes all other sources will implement 112(d)(4) and will not move to reduce TCl emissions from current baseline levels.

plants.[282] While the total value of forest health is difficult to estimate, visible deterioration in the health of forests and plants can cause a measurable change in recreation behavior. Several studies that measure the change in outdoor recreation behavior according to forest health have attempted to place a value on aesthetic degradation of forests.[283] Although these studies are available, additional research is needed to fully understand the effects of these Haps on the forest ecosystem. Thus, these benefits are not quantified in this analysis.

Emissions that are sufficient to cause structural and aesthetic damage to vegetation are likely to affect growth as well. Little research has been done on the effects of compounds such as chlorine, heavy metals (as air pollutants), and PM on agricultural productivity.[284] Even though the potential for visible damage and production decline from metals and other pollutants suggests the final standards could increase agricultural productivity, we have not monetized the benefits of these changes.

3. Waste Minimization Benefits

Facilities that burn hazardous waste and remain in operation following implementation of the final standards are expected to experience marginally increased costs as a result of these standards. This will result in an incentive to pass these increased costs on to their customers in the form of higher combustion prices. In the 1999 Assessment we conducted a waste minimization analysis to inform the expected price change. The analysis concluded that the demand for hazardous waste combustion is relatively inelastic. While a variety of waste minimization alternatives are available for managing hazardous waste streams that are currently combusted, the costs of these alternatives generally exceed the cost of combustion. When the additional costs of compliance with the MACT standards are taken into account, waste minimization alternatives still tend to exceed the higher combustion costs. This relative inelasticity suggests that, in the short term, large reductions in the amount of hazardous waste requiring combustion are not likely to occur. However, over the longer term (*i.e.* as production systems are updated), companies may continue to seek alternatives to expensive hazardous waste-management. This may include process adjustments that result, to some degree in source reduction of hazardous waste and the increased generation of non hazardous waste. To the extent that increases in combustion prices provide additional incentive to adopt more efficient processes, the final standards may contribute to longer term process-based hazardous waste minimization efforts.

No hazardous waste minimization impacts are captured in our quantitative analysis of costs and benefits.[285] A quantitative assessment of the benefits associated with waste minimization may result in double-counting of some of the benefits described earlier. For example, waste minimization may reduce emissions of hazardous air pollutants and therefore have a positive effect on public health. Furthermore, emission reductions beyond those necessary for compliance with the final standards are not addressed in the benefits assessment. In addition, waste minimization is likely to result in specific types of benefits not captured in this Assessment. For example, waste generators that engage in waste minimization may experience a reduction in their waste handling costs and could also reduce the risk related to waste spills and waste management. Finally, waste minimization procedures potentially stimulated by today's action may result in additional costs to facilities that implement these technologies. These factors have not been assessed in our analysis but are likely to at least partially offset corresponding benefits.

4. Conclusion

Total non-discounted monetized human health benefits associated with the final standards are estimated at $6.31 million/year. Annualized discounted benefits were found to range from $5.61 million to $5.95 million/year. The range reflects an alternative discount rate of 3 percent and 7 percent for mortality benefits.

It is important to emphasize that monetized benefits represent only a portion of the total benefits associated with this rule. A significant portion of the benefits are not monetized, as discussed above, due to data and analytical limitations. Specifically, ecological benefits, and human health benefits associated with reductions in chlorine, mercury, and lead are not quantified or monetized. In some regions these benefits may be significant. In addition, specific sub-populations near combustion facilities, including children and minority populations, may be disproportionately affected by environmental risks and may therefore enjoy more significant benefits. Visibility benefits associated with reduced PM are also expected from this final rule. For a complete discussion of the methodology, data, findings, and limitations associated with our benefits analysis the reader is encouraged to review the Assessment document,[286] and the Addendum to the Assessment.

Part Seven: How Does the Final Rule Meet the RCRA Protectiveness Mandate?

As discussed in more detail below, we believe today's final standards are generally protective of human health and the environment. We therefore finalize and apply these standards, in most instances, in lieu of the RCRA air emission standards applicable to these sources.

I. Background

Section 3004(a) of RCRA requires the Agency to promulgate standards for hazardous waste treatment, storage, and disposal facilities as necessary to protect human health and the environment. The standards for hazardous waste incinerators generally rest on this authority. In addition, § 3004(q) requires the Agency to promulgate standards for emissions from facilities that burn

[282] Although the primary pollutants which are detrimental to vegetation aesthetics and growth are tropospheric ozone, sulfur dioxide, and hydrogen fluoride (three pollutants which are not regulated in the MACT standards), some literature exists on the relationship between metal deposition and vegetation health. (Mercury Study Report to Congress Volume VI, 1997) (Several studies are cited in this report.)

[283] See, for example, Brown, T.C. et al. 1989, Scenic Beauty and Recreation Value: Assessing the Relationship, In J. Vining, ed., *Social Science and Natural Resources Recreation Management,* Westview Press, Boulder, Colorado; this work studies the relationship between forest characteristics and the value of recreational participation. Also see Peterson, D.G. et al. 1987, Improving Accuracy and Reducing Cost of Environmental Benefit Assessments. Draft Report to the U.S. EPA, by Energy and Resource Consultants, Boulder, Colorado; Walsh et al. 1990, Estimating the public benefits of protecting forest quality, Journal of Forest Management, 30:175–189., and Homes et al. 1992, Economic Valuation of Spruce-Fir Decline in the Southern Appalachian Mountains: A comparison of Value Elicitation Methods. Presented at the Forestry and the Environment: Economic Perspectives Conference, March 1, 1992 Jasper, Alberta, Canada for estimates of the WTP of visitors and residents to avoid forest damage.

[284] MacKenzie, James J., and Mohamed T. El-Ashry, *Air Pollution's Toll on Forests and Crops* (New Haven, Yale University Press, 1989).

[285] Note that this rule does, in fact, consider hazardous waste feed control. Feed control can be implemented by each source through waste minimization procedures. See: Final Technical Support Document for HWC MACT Standards, Volume V–Emissions Estimates and Engineering Costs.

[286] Assessment of the Potential Costs, Benefits, and Other Impacts of the Hazardous Waste Combustion MACT Final Rule Standards. September 2005.

hazardous waste fuels (e.g., cement and lightweight aggregate kilns, boilers, and hydrochloric acid production furnaces) as necessary to protect human health and the environment. Using RCRA authority, the Agency has established emission (and other) standards for hazardous waste combustors that are either entirely risk-based (e.g., site-specific standards for metals under the Boiler and Industrial Furnace rule), or are technology-based but determined by a generic risk assessment to be protective (e.g., the DRE standard for incinerators and BIFs).

The MACT standards finalized today implement the technology-based regime of CAA § 112(d). There is, however, a residual risk component to air toxics standards. Section 112(f) of the Clean Air Act requires the Agency to impose, within eight years after promulgation of the technology-based standards promulgated under § 112(d) (i.e., the authority for today's final standards), additional controls if needed to protect public health with an ample margin of safety or to prevent adverse environmental effect.

RCRA § 1006(b) directs that EPA ''integrate all provisions of [RCRA] for purposes of administration and enforcement and * * * avoid duplication, to the maximum extent possible, with the appropriate provisions of the Clean Air Act * * * '' Thus, although considerations of risk are not ordinarily part of the MACT process, in order to avoid duplicative standards where possible, we have evaluated the protectiveness of the standards finalized today.

As noted above, under RCRA, EPA must promulgate standards ''as may be necessary to protect human health and the environment.'' RCRA § 3004(a) and (q). Technology-based standards developed under CAA § 112 do not automatically satisfy this requirement, but may do so in fact. See 59 FR at 29776 (June 6, 1994) and 60 FR at 32593 (June 23, 1995) (RCRA regulation of secondary lead smelter emissions unnecessary at this time given stringency of technology-based standard and pendency of § 112(f) determination). If the MACT standards, as a factual matter, are sufficiently protective to also satisfy the RCRA mandate, then no independent RCRA standards are required. Conversely, if MACT standards are inadequate, the RCRA authorities would have to be used to fill the gap.

II. Evaluation of Protectiveness

For the purpose of satisfying the RCRA statutory mandates, the Agency has conducted an evaluation of the degree of protection afforded by the MACT standards being finalized today. We have not conducted a comprehensive risk assessment for this rulemaking as was done for incinerators, cement kilns, and lightweight aggregate kilns in the 1999 MACT rule where we concluded that the promulgated standards were generally protective and therefore, the RCRA standards need not be retained. However, we noted that in certain instances, permit authorities may invoke the omnibus authority (RCRA § 3005(c)(3) and its implementing regulations at § 270.10(k)) if there is some reason to believe that additional controls beyond those required pursuant to 40 CFR parts 63, 264, 265, and 266 may be needed to ensure protection of human health and the environment under RCRA.

For this final rule, we instead compared the risk-related characteristics of the sources covered by the 1999 rule to the sources covered by today's rule (e.g., estimated emissions, stack characteristics, meteorology, and population). For a description of the methodology and technical discussion of its application, see ''Inferential Risk Analysis in Support of Standards for Emissions of Hazardous Air Pollutants from Hazardous Waste Combustors,'' in the docket for today's rule. We performed a large array of statistical comparisons and from these we attempted to make inferences about whether risks would be expected to be about the same, less than, or greater than the risks estimated for 1999 rule. We think the comparative analysis lends additional support to our view that today's final standards are generally protective. We received no comments either in support of or in opposition to our use of the comparative analysis to evaluate the protectiveness of the standards being finalized today or our view that the standards are generally protective.

While we regard the final standards as generally protective, the comparative analysis suggests some concern for solid fuel-fired boilers (SFBs) with regard to the particulate matter standard (and certain metals such as antimony and thallium), mercury, and total chlorine standards (other than the alternative risk-based chlorine standards). The analysis also suggests some concern for hydrochloric acid (HCl) production furnaces with regard to the dioxin/furan standard, where carbon monoxide and total hydrocarbon serve as surrogate control. However, because both SFBs and HCl production furnaces comprise such small source categories (4 SFB facilities and 8 HCl production facilities), it is difficult to reach firm conclusions. For example, for SFBs it was not possible to conduct hypothesis tests that could be considered valid involving correlations among variables for a number of variables in the analysis because of the small number of data points and the power of the tests to detect differences for those that were conducted was very low, which greatly diminishes the value of the results. (Indeed, no differences in correlations were found for SFBs at the 0.1 significance level—the level of significance that was used in the analysis.) Similarly, for HCl production furnaces the power of the tests to detect differences in correlations was quite low. It must be noted that the comparative analysis methodology was not intended for comparisons that involve relatively few facilities because it is grounded in tests of hypotheses and levels of statistical significance which generally require substantial amounts of data to produce firm conclusions. Nevertheless, in consideration of the indications of possible risks for the aforementioned standards, permit authorities may want to consider site-specific factors in determining whether or not the MACT standards are sufficiently protective for facilities that fall into these categories.

The comparative analysis may also raise possible concerns for lightweight aggregate kilns (LWAKs) and liquid fuel-fired boilers (LFBs) with dry APCDs with regard to the dioxin/furan standards, in view of the ongoing uncertainty in cancer and other health effects levels for chlorinated dioxins and furans. In particular, some recent estimates of the carcinogenicity of these compounds that consider both human and animal data, are higher than earlier estimates derived from animal data alone. However, like SFBs and HCl production furnaces, LWAKs and LFBs with dry APCDs both comprise small source categories (3 LWAK facilities and 7 dry APCD LFB facilities). This makes it very difficult to reach firm conclusions and suggests the need to consider site-specific factors in determining whether the MACT standards are sufficiently protective in these instances.

Except as noted, we believe today's final standards provide a substantial degree of protection to human health and the environment. We therefore do not believe that we need to retain the existing RCRA standards for boilers and hydrochloric acid production furnaces (just as we found that existing RCRA standards for incinerators, cement kilns, and lightweight aggregate kilns were no longer needed after the 1999 rule). However, as previously discussed in

more detail in Part Four, Section IX, site-specific risk assessments may be warranted on an individual source basis to ensure that the MACT standards provide adequate protection in accordance with RCRA.

Part Eight: Statutory and Executive Order Reviews

I. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 [58 FR 51735 (October 4, 1993)] the Agency, in conjunction with OMB's Office of Information and Regulatory Affairs (OIRA), must determine whether a regulatory action is ''significant'' and therefore subject to OMB review and the full requirements of the Executive Order. The Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely 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;

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

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

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

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is a ''significant regulatory action'' because this action may raise novel legal or policy issues due to the methodology applied in development of the final standards. As such, this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendations are documented in the public record.

The total social costs for this rule are estimated at $22.6 million per year [287]. This figure is significantly below the $100 million threshold established under point number one above. Thus, this rule is not considered to be an economically significant action. However, in an effort to comply with the spirit of the Order, we have prepared an economic assessment in support of today's final rule. This document is entitled: Assessment of the Potential Costs, Benefits, and Other Impacts of the Hazardous Waste Combustion MACT Final Rule Standards, September 2005. We have also prepared an Addendum to this Assessment entitled: Addendum to the Assessment of the Potential Costs, Benefits, and Other Impacts of the Hazardous Waste Combustion MACT Final Rule Standards, September 2005. This Addendum captures changes made to the rulemaking following completion of the full Assessment document. The Assessment and Addendum were designed to adhere to analytical requirements established under Executive Order 12866, and corresponding Agency and OMB guidance; subject to data, analytical, and resource limitations. Findings presented under Part Six of this Preamble were developed in accordance with this guidance. The RCRA docket established for today's rulemaking maintains a copy of the Assessment and Addendum for public review. Interested persons are encouraged to read both documents to gain a full understanding of the analytical methodology, findings, and limitations associated with this report.

[287] This figure includes approximately $0.5 million/year in total government costs. Total social costs would increase to approximately $28.6 million per year if we were to assume all sources were to comply with technology-based TC1 standards.

II. Paperwork Reduction Act

We have prepared an Information Collection Request (ICR) document (ICR No. 1773.08) listing the information collection requirements of this final rule, and have submitted it for approval to the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act, U.S.C. 3501 *et seq.* OMB has assigned a control number 2050–0171 for this ICR. This ICR is available for public viewing in the EPA Docket Center, Room B102, 1301 Constitution Avenue NW., Washington, DC. Copy may also be obtained from the EDOCKET on the EPA Web site, or by calling (202) 566–1744. The information collection requirements are not enforceable until OMB approves them.

The public burden associated with this final rule is projected to affect 238 HWC units and is estimated to average 211 hours per respondent annually. The reporting and recordkeeping cost burden is estimated to average $5,640 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.

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. When this ICR is approved by OMB, the Agency will publish a technical amendment to 40 CFR part 9 in the **Federal Register** to display the OMB control number for the approved information collection requirements contained in this final rule.

The EPA requested comments (see 70 FR 20748, Apr. 21, 2005) on the need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques.

III. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq., 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. This analysis must be completed unless the agency is able to certify that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions.

The RFA provides default definitions for each type of small entity. Small entities are defined as: (1) A small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (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 final 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 hazardous waste combustion facilities are not owned by small governmental jurisdiction or nonprofit organizations. Therefore, only small businesses were analyzed for small entity impacts. For the purposes of the impact analyses, small entity is defined either by the number of employees or by the dollar amount of sales. The level at which a business is considered small is determined for each North American Industrial Classification System (NAICS) code by the Small Business Administration.

Affected individual waste combustors (incinerators, cement kilns, lightweight aggregate kilns, solid and liquid fuel-boilers, and hydrochloric acid production furnaces) will bear the impacts of today's rule. These units will incur direct economic impacts (positive or negative) as a result of today's rule. Few of the hazardous waste combustion facilities affected by this rule were found to be owned by small businesses, as defined by the Small Business Administration (SBA). From our universe of 145 facilities, we identified eight facilities that are currently owned by small businesses. Four of these facilities are liquid boilers, two are on-site incinerators, one is a cement kiln, and one is a lightweight aggregate kiln (LWAK). Our analysis indicates that none of these facilities are likely to incur annualized compliance costs greater than one percent of gross annual corporate revenues. Cost impacts of the final standards were found to range from less than 0.01 percent to 0.46 percent of annual gross corporate revenues.

The reader is encouraged to review our regulatory flexibility screening analysis prepared in support of this determination. This analysis is incorporated as Appendix H of the *Assessment* document, and updated in the *Addendum*.

IV. Unfunded Mandates Reform Act of 1995

Signed into law on March 22, 1995, the Unfunded Mandates Reform Act (UMRA) calls on all federal agencies to provide a statement supporting the need to issue any regulation containing an unfunded federal mandate and describing prior consultation with representatives of affected state, local, and tribal governments.

Today's final rule is not subject to the requirements of sections 202, 204 and 205 of UMRA. In general, a rule is subject to the requirements of these sections if it contains ''Federal mandates'' that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more in any one year. Today's final rule does not result in $100 million or more in expenditures for any of these categories. The aggregate annualized social cost for today's rule is estimated at $22.6 million.

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

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

This final 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 the Order. The rule focuses on requirements for facilities burning hazardous waste, without affecting the relationships between Federal and State governments. Thus, Executive Order 13132 does not apply to this rule. Although section 6 of Executive Order 13132 does not apply to this rule, EPA did include various State representatives on our Agency workgroup. These representatives participated in the development of this rule.

VI. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Executive Order 13175: Consultation and Coordination with Indian Tribal Governments (65 FR 67249, November 9, 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.'' Our Agency workgroup for this rule included Tribal representation. We have determined that this final rule does not have tribal implications, as specified in the Order. No Tribal governments are known to own or operate hazardous waste combustors subject to the requirements of this final rule. Furthermore, this rule focuses on requirements for all regulated sources without affecting the relationships between tribal governments in its implementation, and applies to all regulated sources, without distinction of the surrounding populations affected. Thus, Executive Order 13175 does not apply to this rule.

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

Executive Order 13045: ''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 E.O. 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. Today's final rule is not subject to the Executive Order because it is not economically significant as defined under point one of the Order, and because the Agency does not have reason to believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

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

This rule is not subject to Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 Fed. Reg. 28355 (May 22, 2001)). This rule, as finalized, will not seriously disrupt energy supply, distribution patterns, prices, imports or exports. Furthermore, this rule is not an economically significant action under Executive Order 12866.

IX. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (''NTTAA''), Public Law 104–113, 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 rulemaking involves environmental monitoring or measurement. Both Performance Based Measurement System (PBMS) and specific measurement methods are finalized under this rule. The PBMS approach is intended to be more flexible and cost-effective for the regulated community; it is also intended to encourage innovation in analytical technology and improved data quality. Where allowed, EPA is not precluding the use of any method, whether it constitutes a voluntary consensus standard or not, as long as it meets the performance criteria specified.

X. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898, ''Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations' (February 11, 1994) requires us to complete an analysis of today's rule with regard to equity considerations. The Order is designed to address the environmental and human health conditions of minority and low-income populations. This section briefly discusses potential impacts (direct or disproportional) today's rule may have in the area of environmental justice.

We have recently analyzed demographic data from the U.S. Census, and have previously examined data from two other reports: ''Race, Ethnicity, and Poverty Status of the Populations Living Near Cement Plants in the United States'' (EPA, August 1994) and ''Race, Ethnicity, and Poverty Status of the Populations Living Near Hazardous Waste Incinerators in the United States'' (EPA, October 1994). These reports examine the number of low-income and minority individuals living near a relatively large sample of cement kilns and hazardous waste incinerators and provide county, state, and national population percentages for various sub-populations. The demographic data in these reports provide several important findings when examined in conjunction with the risk reductions projected from today's rule.

We find that combustion facilities, in general, are not located in areas with disproportionately high minority and low-income populations. However, there is evidence that hazardous waste burning cement kilns are somewhat more likely to be located in areas that have relatively higher low-income populations. Furthermore, there are a small number of commercial hazardous waste incinerators located in highly urbanized areas where there is a disproportionately high concentration of minorities and low-income populations within one and five mile radii. The reduced emissions at these facilities due to today's rule could represent meaningful environmental and health improvements for these populations. Overall, today's rule should not result in any adverse or disproportional health or safety effects on minority or low-income populations. Any impacts on these populations are likely to be positive due to the reduction in emissions from combustion facilities near minority and low-income population groups. The Assessment document available in the RCRA docket established for today's rule discusses our Environmental Justice analysis.

XI. Congressional Review

The Congressional Review Act (CRA), 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. Prior to publication of the final rule in the **Federal Register**, we will submit all necessary information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States. Under the CRA, a major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

List of Subjects

40 CFR Part 9

Environmental protection, Reporting and recordkeeping requirements.

40 CFR Part 63

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

40 CFR Part 260

Environmental protection, Administrative practice and procedure, Confidential business information, Hazardous waste, 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.

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.

40 CFR Part 271

Administrative practice and procedure, Hazardous materials transportation, Hazardous waste, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: September 14, 2005.

Stephen L. Johnson,

Administrator.

■ For the reasons set out in the preamble, title 40, chapter I, of the Code of Federal Regulations is amended as follows:

PART 9—OMB APPROVALS UNDER THE PAPERWORK REDUCTION ACT

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

Authority: 7 U.S.C. 135 *et seq.*, 136–136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601–2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 *et seq.*, 1311, 1313d, 1314, 1318, 1321, 1326, 1330, 1342, 1344, 1345 (d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp. p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g–1, 300g–2,

300g–3, 300g–4, 300g–5, 300g–6, 300j–1, 300j–2, 300j–3, 300j–4, 300j–9, 1857 *et seq.*, 6901–6992k, 7401–7671q, 7542, 9601–9657, 11023, 11048.

■ 2. Section 9.1 is amended in the table under center heading ''National Emission Standards for Hazardous Air Pollutants for Source Categories'' by adding entry ''63.1200–63.1221'' in numerical order to read as follows:

§ 9.1 OMB approvals under the Paperwork Reduction Act.

* * * * *

40 CFR citation	OMB control No.
* * * * * * *	
National Emission Standards for Hazardous Air Pollutants for Source Categories [3]	
* * * * * * *	
63.1200–63.1221	2050–0171

[3] The ICRs referenced in this section of the table encompass the applicable general provisions contained in 40 CFR part 63, subpart A, which are not independent information collection requirements.

* * * * *

PART 63—NATIONAL EMISSION 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:

■ a. Removing paragraphs (i)(1) and (i)(2).

■ b. Redesignating paragraph (i)(3) as (i)(1).

■ c. Adding and reserving new paragraph (i)(2).

■ d. Revising paragraph (k).

The revisions and additions read as follows:

§ 63.14 Incorporations by reference.

* * * * *

(i) * * *

(2) [Reserved]

* * * * *

(k) The following materials are available for purchase from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161, (703) 605–6000 or (800) 553–6847; or for purchase from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 512–1800:

(1) The following methods as published in the test methods compendium known as ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,'' EPA Publication SW–846, Third Edition. A suffix of ''A'' in the method number indicates revision one (the method has been revised once). A suffix of ''B'' in the method number indicates revision two (the method has been revised twice).

(i) Method 0023A, ''Sampling Method for Polychlorinated Dibenzo-*p*-Dioxins and Polychlorinated Dibenzofuran Emissions from Stationary Sources,'' dated December 1996 and in Update III, IBR approved for § 63.1208(b)(1) of Subpart EEE of this part.

(ii) Method 9071B, ''n-Hexane Extractable Material (HEM) for Sludge, Sediment, and Solid Samples,'' dated April 1998 and in Update IIIA, IBR approved for § 63.7824(e) of Subpart FFFFF of this part.

(iii) Method 9095A, ''Paint Filter Liquids Test,'' dated December 1996 and in Update III, IBR approved for §§ 63.7700(b) and 63.7765 of Subpart EEEEE of this part.

(2) [Reserved]

■ 3. Section 63.1200 is amended by:

■ a. Revising the introductory text.

■ b. Revising paragraph (a)(2).

■ c. Adding entry (4) in Table 1 in paragraph (b).

The revisions and additions read as follows:

§ 63.1200 Who is subject to these regulations?

The provisions of this subpart apply to all hazardous waste combustors: hazardous waste incinerators, hazardous waste cement kilns, hazardous waste lightweight aggregate kilns, hazardous waste solid fuel boilers, hazardous waste liquid fuel boilers, and hazardous waste hydrochloric acid production furnaces. Hazardous waste combustors are also subject to applicable requirements under parts 260 through 270 of this chapter.

(a) * * *

(2) Both area sources and major sources subject to this subpart, but not previously subject to title V, are immediately subject to the requirement to apply for and obtain a title V permit in all States, and in areas covered by part 71 of this chapter.

(b) * * *

TABLE 1 TO § 63.1200.—HAZARDOUS WASTE COMBUSTORS EXEMPT FROM SUBPART EEE

If	And If	Then
* * * * * * *		
(4) You meet the definition of a small quantity burner under § 266.108 of this chapter		You are not subject to the requirements of this subpart (Subpart EEE).

* * * * *

■ 4. Section 63.1201 is amended in paragraph (a) by revising the definitions of ''Hazardous waste combustor'', ''New source'', and ''TEQ'', and adding definitions for ''Btu'', ''Hazardous waste hydrochloric acid production furnace'', ''Hazardous waste liquid fuel boiler'', ''Hazardous waste solid fuel boiler'', and ''System removal efficiency'' in alphabetical order to read as follows:

§ 63.1201 Definitions and acronyms used in this subpart.

(a) * * *

Btu means British Thermal Units.

* * * * *

Hazardous waste combustor means a hazardous waste incinerator, hazardous waste burning cement kiln, hazardous waste burning lightweight aggregate kiln, hazardous waste liquid fuel boiler, hazardous waste solid fuel boiler, or hazardous waste hydrochloric acid production furnace.

* * * * *

Hazardous waste hydrochloric acid production furnace and *Hazardous Waste HCl production furnace* mean a halogen acid furnace defined under § 260.10 of this chapter that produces aqueous hydrochloric acid (HCl) product and that burns hazardous waste at any time.

* * * * *

Hazardous waste liquid fuel boiler means a boiler defined under § 260.10 of this chapter that does not burn solid fuels and that burns hazardous waste at any time. Liquid fuel boiler includes boilers that only burn gaseous fuel.

* * * * *

Hazardous waste solid fuel boiler means a boiler defined under § 260.10 of this chapter that burns a solid fuel and that burns hazardous waste at any time.

* * * * *

New source means any affected source the construction or reconstruction of which is commenced after the dates specified under §§ 63.1206(a)(1)(i)(B), (a)(1)(ii)(B), and (a)(2)(ii).

* * * * *

System removal efficiency means [1 − Emission Rate (mass/time) / Feedrate (mass/time)] X 100.

* * * * *

TEQ means the international method of expressing toxicity equivalents for dioxins and furans as defined in U.S. EPA, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989.

* * * * *

■ 5. Section 63.1203 is amended by:

■ a. Revising an undesignated center heading above the section heading.

■ b. Revising the section heading.

■ c. Revising paragraph (c)(3)(2).

The revisions and additions read as follows:

Interim Emissions Standards and Operating Limits For Incinerators, Cement Kilns, and Lightweight Aggregate Kilns

§ 63.1203 What are the standards for hazardous waste incinerators that are effective until compliance with the standards under § 63.1219?

* * * * *

(c) * * *

(3) * * *

(ii) You must specify one or more POHCs that are representative of the most difficult to destroy organic compounds in your hazardous waste feedstream. You must base this specification on the degree of difficulty of incineration of the organic constituents in the hazardous waste and on their concentration or mass in the hazardous waste feed, considering the results of hazardous waste analyses or other data and information.

* * * * *

■ 6. The section heading to § 63.1204 and paragraph (c)(3)(ii) are revised to read as follows:

§ 63.1204 What are the standards for hazardous waste burning cement kilns that are effective until compliance with the standards under § 63.1220?

* * * * *

(c) * * *

(3) * * *

(ii) You must specify one or more POHCs that are representative of the most difficult to destroy organic compounds in your hazardous waste feedstream. You must base this specification on the degree of difficulty of incineration of the organic constituents in the hazardous waste and on their concentration or mass in the hazardous waste feed, considering the results of hazardous waste analyses or other data and information.

* * * * *

■ 7. The section heading to § 63.1205 and paragraph (c)(3)(ii) are revised to read as follows:

§ 63.1205 What are the standards for hazardous waste burning lightweight aggregate kilns that are effective until compliance with the standards under § 63.1221?

* * * * *

(c) * * *

(3) * * *

(ii) You must specify one or more POHCs that are representative of the most difficult to destroy organic compounds in your hazardous waste feedstream. You must base this specification on the degree of difficulty of incineration of the organic constituents in the hazardous waste and on their concentration or mass in the hazardous waste feed, considering the results of hazardous waste analyses or other data and information.

* * * * *

■ 8. Section 63.1206 is amended by:

■ a. Revising paragraph (a).

■ b. Revising paragraphs (b)(1)(ii), (b)(6) introductory text, (b)(7)(i)(A), (b)(7)(ii), (b)(9)(i) introductory text, (b)(9)(i)(A), (b)(9)(iv)(A), (b)(9)(vi), (b)(9)(vii) introductory text, (b)(9)(viii)(D), (b)(9)(ix)(D), (b)(10)(i) introductory text, (b)(10)(i)(A), (b)(10)(vi), (b)(10)(vii) introductory text, (b)(10)(viii)(D), (b)(10)(ix)(D), (b)(11), (b)(13)(i) introductory text, (b)(13)(ii), and (b)(14).

■ c. Adding paragraph (b)(16).

■ d. Revising paragraphs (c)(1)(i) introductory text, (c)(3)(iv), (c)(6)(iii)(B) introductory text, (c)(6)(iv) introductory text, and (c)(7).

■ e. Adding paragraphs (c)(8) and (c)(9).

The revisions and additions read as follows:

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

(a) *Compliance dates.* (1) *Compliance dates for incinerators, cement kilns, and lightweight aggregate kilns that burn hazardous waste.* (i) *Compliance date for standards under §§ 63.1203, 63.1204, and 63.1205.* (A) *Compliance dates for existing sources.* You must comply with the emission standards under §§ 63.1203, 63.1204, and 63.1205 and the other requirements of this subpart no later than the compliance date, September 30, 2003, unless the Administrator grants you an extension of time under § 63.6(i) or § 63.1213.

(B) *New or reconstructed sources.* (*1*) If you commenced construction or reconstruction of your hazardous waste combustor after April 19, 1996, you must comply with the emission standards under §§ 63.1203, 63.1204, and 63.1205 and the other requirements of this subpart by the later of September 30, 1999 or the date the source starts operations, except as provided by paragraph (a)(1)(i)(B)(*2*) of this section. The costs of retrofitting and replacement of equipment that is installed specifically to comply with this subpart, between April 19, 1996 and a source's compliance date, are not considered to be reconstruction costs.

(*2*) For a standard under §§ 63.1203, 63.1204, and 63.1205 that is more stringent than the standard proposed on April 19, 1996, you may achieve compliance no later than September 30, 2003 if you comply with the standard proposed on April 19, 1996 after September 30, 1999. This exception does not apply, however, to new or

reconstructed area source hazardous waste combustors that become major sources after September 30, 1999. As provided by § 63.6(b)(7), such sources must comply with the standards under §§ 63.1203, 63.1204, and 63.1205 at startup.

(ii) *Compliance date for standards under §§ 63.1219, 63.1220, and 63.1221.* (A) *Compliance dates for existing sources.* You must comply with the emission standards under §§ 63.1219, 63.1220, and 63.1221 and the other requirements of this subpart no later than the compliance date, October 14, 2008, unless the Administrator grants you an extension of time under § 63.6(i) or § 63.1213.

(B) *New or reconstructed sources.* (*1*) If you commenced construction or reconstruction of your hazardous waste combustor after April 20, 2004, you must comply with the new source emission standards under §§ 63.1219, 63.1220, and 63.1221 and the other requirements of this subpart by the later of October 12, 2005 or the date the source starts operations, except as provided by paragraph (a)(1)(ii)(B)(*2*) of this section. The costs of retrofitting and replacement of equipment that is installed specifically to comply with this subpart, between April 20, 2004, and a source's compliance date, are not considered to be reconstruction costs.

(*2*) For a standard under §§ 63.1219, 63.1220, and 63.1221 that is more stringent than the standard proposed on April 20, 2004, you may achieve compliance no later than October 14, 2008, if you comply with the standard proposed on April 20, 2004, after October 12, 2005. This exception does not apply, however, to new or reconstructed area source hazardous waste combustors that become major sources after October 14, 2008. As provided by § 63.6(b)(7), such sources must comply with the standards under §§ 63.1219, 63.1220, and 63.1221 at startup.

(2) *Compliance dates for solid fuel boilers, liquid fuel boilers, and hydrogen chloride production furnaces that burn hazardous waste for standards under §§ 63.1216, 63.1217, and 63.1218.* (i) *Compliance date for existing sources.* You must comply with the standards of this subpart no later than the compliance date, October 14, 2008, unless the Administrator grants you an extension of time under § 63.6(i) or § 63.1213.

(ii) *New or reconstructed sources.* (A) If you commenced construction or reconstruction of your hazardous waste combustor after October 12, 2005, you must comply with the new source emission standards of this subpart by the later of October 12, 2005, or the date the source starts operations, except as provided by paragraph (a)(2)(ii)(B) of this section. The costs of retrofitting and replacement of equipment that is installed specifically to comply with this subpart, between April 20, 2004, and a source's compliance date, are not considered to be reconstruction costs.

(B) For a standard in the subpart that is more stringent than the standard proposed on April 20, 2004, you may achieve compliance no later than October 14, 2008, if you comply with the standard proposed on April 20, 2004, after October 12, 2005. This exception does not apply, however, to new or reconstructed area source hazardous waste combustors that become major sources after October 14, 2008. As provided by § 63.6(b)(7), such sources must comply with this subpart at startup.

(3) *Early compliance.* If you choose to comply with the emission standards of this subpart prior to the dates specified in paragraphs (a)(1) and (a)(2) of this section, your compliance date is the earlier of the date you postmark the Notification of Compliance under § 63.1207(j)(1) or the dates specified in paragraphs (a)(1) and (a)(2) of this section.

(b) * * *

(1) * * *

(ii) When hazardous waste is not in the combustion chamber (i.e., the hazardous waste feed to the combustor has been cut off for a period of time not less than the hazardous waste residence time) and you have documented in the operating record that you are complying with all otherwise applicable requirements and standards promulgated under authority of sections 112 (e.g., 40 CFR part 63, subparts LLL, DDDDD, and NNNNN) or 129 of the Clean Air Act in lieu of the emission standards under §§ 63.1203, 63.1204, 63.1205, 63.1215, 63.1216, 63.1217, 63.1218, 63.1219, 63.1220, and 63.1221; the monitoring and compliance standards of this section and §§ 63.1207 through 63.1209, except the modes of operation requirements of § 63.1209(q); and the notification, reporting, and recordkeeping requirements of §§ 63.1210 through 63.1212.

* * * * *

(6) *Compliance with the carbon monoxide and hydrocarbon emission standards.* This paragraph applies to sources that elect to comply with the carbon monoxide and hydrocarbon emissions standards of this subpart by documenting continuous compliance with the carbon monoxide standard using a continuous emissions monitoring system and documenting compliance with the hydrocarbon standard during the destruction and removal efficiency (DRE) performance test or its equivalent.

* * * * *

(7) * * * (i) * * *

(A) You must document compliance with the Destruction and Removal Efficiency (DRE) standard under this subpart only once provided that you do not modify the source after the DRE test in a manner that could affect the ability of the source to achieve the DRE standard.

* * * * *

(ii) *Sources that feed hazardous waste at locations other than the normal flame zone.* (A) Except as provided by paragraph (b)(7)(ii)(B) of this section, if you feed hazardous waste at a location in the combustion system other than the normal flame zone, then you must demonstrate compliance with the DRE standard during each comprehensive performance test;

(B)(*1*) A cement kiln that feeds hazardous waste at a location other than the normal flame zone need only demonstrate compliance with the DRE standard during three consecutive comprehensive performance tests provided that:

(*i*) All three tests achieve the DRE standard in this subpart; and

(*ii*) The design, operation, and maintenance features of each of the three tests are similar;

(*iii*) The data in lieu restriction of § 63.1207(c)(2)(iv) does not apply when complying with the provisions of paragraph (b)(7)(ii)(B) of this section;

(*2*) If at any time you change your design, operation, and maintenance features in a manner that could reasonably be expected to affect your ability to meet the DRE standard, then you must comply with the requirements of paragraph (b)(7)(ii)(A) of this section.

* * * * *

(9) * * * (i) You may petition the Administrator to request alternative standards to the mercury or hydrogen chloride/chlorine gas emission standards of this subpart, to the semivolatile metals emission standards under §§ 63.1205, 63.1221(a)(3)(ii), or 63.1221(b)(3)(ii), or to the low volatile metals emissions standards under §§ 63.1205, 63.1221(a)(4)(ii), or 63.1221(b)(4)(ii) if:

(A) You cannot achieve one or more of these standards while using maximum achievable control technology (MACT) because of raw material contributions to emissions of mercury, semivolatile metals, low

volatile metals, or hydrogen chloride/chlorine gas; or

* * * * *

(iv) * * * (A) The alternative standard petition you submit under paragraph (b)(9)(i)(A) of this section must include data or information documenting that raw material contributions to emissions prevent you from complying with the emission standard even though the source is using MACT, as defined under paragraphs (b)(9)(viii) and (ix) of this section, for the standard for which you are seeking relief.

* * * * *

(vi) You must include data or information with semivolatile metals, low volatile metals, and hydrogen chloride/chlorine gas alternative standard petitions that you submit under paragraph (b)(9)(i)(A) of this section documenting that semivolatile metals, low volatile metals, and hydrogen chloride/chlorine gas emissions attributable to the hazardous waste only will not exceed the emission standards of this subpart.

(vii) You must not operate pursuant to your recommended alternative standards in lieu of emission standards specified in this subpart:

* * * * *

(viii) * * *

(D) For hydrogen chloride/chlorine gas, a hazardous waste chlorine feedrate corresponding to an MTEC of 2,000,000 µg/dscm or less, and use of an air pollution control device with a hydrogen chloride/chlorine gas removal efficiency of 85 percent or greater.

(ix) * * *

(D) For hydrogen chloride/chlorine gas, a hazardous waste chlorine feedrate corresponding to an MTEC of 14,000,000 µg/dscm or less, and use of an air pollution control device with a hydrogen chloride/chlorine gas removal efficiency of 99.6 percent or greater.

(10) * * * (i) You may petition the Administrator to request alternative standards to the mercury or hydrogen chloride/chlorine gas emission standards of this subpart, to the semivolatile metals emission standards under §§ 63.1204, 63.1220(a)(3)(ii), or 63.1220(b)(3)(ii), or to the low volatile metals emissions standards under §§ 63.1204, 63.1220(a)(4)(ii), or 63.1220(b)(4)(ii) if:

(A) You cannot achieve one or more of these standards while using maximum achievable control technology (MACT) because of raw material contributions to emissions of mercury, semivolatile metals, low volatile metals, or hydrogen chloride/chlorine gas; or

* * * * *

(vi) You must include data or information with semivolatile metals, low volatile metals, and hydrogen chloride/chlorine gas alternative standard petitions that you submit under paragraph (b)(10)(i)(A) of this section documenting that emissions of the regulated metals and hydrogen chloride/chlorine gas attributable to the hazardous waste only will not exceed the emission standards in this subpart.

(vii) You must not operate pursuant to your recommended alternative standards in lieu of emission standards specified in this subpart:

* * * * *

(viii) * * *

(D) For hydrogen chloride/chlorine gas, a hazardous waste chlorine feedrate corresponding to an MTEC of 720,000 µg/dscm or less.

(ix) * * *

(D) For hydrogen chloride/chlorine gas, a hazardous waste chlorine feedrate corresponding to an MTEC of 420,000 µg/dscm or less.

(11) *Calculation of hazardous waste residence time.* You must calculate the hazardous waste residence time and include the calculation in the performance test plan under § 63.1207(f) and the operating record. You must also provide the hazardous waste residence time in the Documentation of Compliance under § 63.1211(c) and the Notification of Compliance under §§ 63.1207(j) and 63.1210(d).

* * * * *

(13) * * *

(i) Cement kilns that feed hazardous waste at a location other than the end where products are normally discharged and where fuels are normally fired must comply with the carbon monoxide and hydrocarbon standards of this subpart as follows:

* * * * *

(ii) Lightweight aggregate kilns that feed hazardous waste at a location other than the end where products are normally discharged and where fuels are normally fired must comply with the hydrocarbon standards of this subpart as follows:

(A) Existing sources must comply with the 20 parts per million by volume hydrocarbon standard of this subpart;

(B) New sources must comply with the 20 parts per million by volume hydrocarbon standard of this subpart.

(14) *Alternative to the particulate matter standard for incinerators.* (i). *General.* In lieu of complying with the particulate matter standards under § 63.1203, you may elect to comply with the following alternative metal emission control requirements:

(ii) *Alternative metal emission control requirements for existing incinerators.* (A) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium in excess of 240 µg/dscm, combined emissions, corrected to 7 percent oxygen; and,

(B) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel in excess of 97 µg/dscm, combined emissions, corrected to 7 percent oxygen.

(iii) *Alternative metal emission control requirements for new incinerators.* (A) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium in excess of 24 µg/dscm, combined emissions, corrected to 7 percent oxygen; and,

(B) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel in excess of 97 µg/dscm, combined emissions, corrected to 7 percent oxygen.

(iv) *Operating limits.* Semivolatile and low volatile metal operating parameter limits must be established to ensure compliance with the alternative emission limitations described in paragraphs (e)(2) and (e)(3) of this section pursuant to § 63.1209(n), except that semivolatile metal feedrate limits apply to lead, cadmium, and selenium, combined, and low volatile metal feedrate limits apply to arsenic, beryllium, chromium, antimony, cobalt, manganese, and nickel, combined.

* * * * *

(16) *Compliance with subcategory standards for liquid fuel boilers.* You must comply with the mercury, semivolatile, low volatile metal, and total chlorine standards for liquid fuel boilers under § 63.1217 as follows:

(i) You must determine the as-fired heating value of each batch of hazardous waste fired by each firing system of the boiler so that you know the mass-weighted heating value of the hazardous waste fired at all times.

(ii) If the as-fired heating value of the hazardous waste is 10,000 Btu per pound or greater, you are subject to the thermal emission concentration standards (lb/million Btu) under § 63.1217.

(iii) If the as-fired heating value of the hazardous waste is less than 10,000 Btu/lb, you are subject to the mass or volume emission concentration

standards (μg/dscm or ppmv) under § 63.1217.

(iv) If the as-fired heating value of hazardous wastes varies above and below 10,000 Btu/lb over time, you are subject to the thermal concentration standards when the heating value is 10,000 Btu/lb or greater and the mass concentration standards when the heating value is less than 10,000 Btu/lb. You may elect to comply at all times with the more stringent operating requirements that ensure compliance with both the thermal emission concentration standards and the mass or volume emission concentration standards.

* * * * *

(c) * * * (1) * * * (i) You must operate only under the operating requirements specified in the Documentation of Compliance under § 63.1211(c) or the Notification of Compliance under §§ 63.1207(j) and 63.1210(d), except:

* * * * *

(3) * * *

(iv) *Failure of the AWFCO system.* If the AWFCO system fails to automatically and immediately cutoff the flow of hazardous waste upon exceedance of a parameter required to be interlocked with the AWFCO system under paragraph (c)(3)(i) of this section, you have failed to comply with the AWFCO requirements of paragraph (c)(3) of this section. If an equipment or other failure prevents immediate and automatic cutoff of the hazardous waste feed, however, you must cease feeding hazardous waste as quickly as possible.

* * * * *

(6) * * *

(iii) * * *

(B) Be trained under the requirements of, and certified under, one of the following American Society of Mechanical Engineers (ASME) standards: QHO–1–1994, QHO–1a–1996, or QHO–1–2004 (Standard for the Qualification and Certification of Hazardous Waste Incinerator Operators). If you elect to use the ASME program:

* * * * *

(iv) Control room operators of cement kilns, lightweight aggregate kilns, solid fuel boilers, liquid fuel boilers, and hydrochloric acid production furnaces must be trained and certified under:

* * * * *

(7) *Operation and maintenance plan*—(i) You must prepare and at all times operate according to an operation and maintenance plan that describes in detail procedures for operation, inspection, maintenance, and corrective measures for all components of the combustor, including associated pollution control equipment, that could affect emissions of regulated hazardous air pollutants.

(ii) The plan must prescribe how you will operate and maintain the combustor in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels achieved during the comprehensive performance test.

(iii) This plan ensures compliance with the operation and maintenance requirements of § 63.6(e) and minimizes emissions of pollutants, automatic waste feed cutoffs, and malfunctions.

(iv) You must record the plan in the operating record.

(8) *Bag leak detection system requirements.* (i) If your combustor is equipped with a baghouse (fabric filter), you must continuously operate either:

(A) A bag leak detection system that meets the specifications and requirements of paragraph (c)(8)(ii) of this section and you must comply with the corrective measures and notification requirements of paragraphs (c)(8)(iii) and (iv) of this section; or

(B) A particulate matter detection system under paragraph (c)(9) of this section.

(ii) *Bag leak detection system specification and requirements.* (A) The bag leak detection system must be certified by the manufacturer to be capable of continuously detecting and recording particulate matter emissions at concentrations of 1.0 milligrams per actual cubic meter unless you demonstrate, under § 63.1209(g)(1), that a higher detection limit would routinely detect particulate matter loadings during normal operations;

(B) The bag leak detection system shall provide output of relative or absolute particulate matter loadings;

(C) The bag leak detection system shall be equipped with an alarm system that will sound an audible alarm when an increase in relative particulate loadings is detected over a preset level;

(D) The bag leak detection system shall be installed and operated in a manner consistent with available written guidance from the U.S. Environmental Protection Agency or, in the absence of such written guidance, the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system;

(E) The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time;

(F) Following initial adjustment, you must not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in the operation and maintenance plan required under paragraph (c)(7) of this section. You must not increase the sensitivity by more than 100 percent or decrease the sensitivity by more than 50 percent over a 365 day period unless such adjustment follows a complete baghouse inspection which demonstrates the baghouse is in good operating condition;

(G) For negative pressure or induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detector shall be installed downstream of the baghouse and upstream of any wet acid gas scrubber; and

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

(iii) *Bag leak detection system corrective measures requirements.* The operating and maintenance plan required by paragraph (c)(7) of this section must include a corrective measures plan that specifies the procedures you will follow in the case of a bag leak detection system alarm. The corrective measures plan must include, at a minimum, the procedures used to determine and record the time and cause of the alarm as well as the corrective measures taken to correct the control device malfunction or minimize emissions as specified below. Failure to initiate the corrective measures required by this paragraph is failure to ensure compliance with the emission standards in this subpart.

(A) You must initiate the procedures used to determine the cause of the alarm within 30 minutes of the time the alarm first sounds; and

(B) You must alleviate the cause of the alarm by taking the necessary corrective measure(s) which may include, but are not to be limited to, the following:

(*1*) Inspecting the baghouse for air leaks, torn or broken filter elements, or any other malfunction that may cause an increase in emissions;

(*2*) Sealing off defective bags or filter media;

(*3*) Replacing defective bags or filter media, or otherwise repairing the control device;

(*4*) Sealing off a defective baghouse compartment;

(*5*) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system; or

(*6*) Shutting down the combustor.

(iv) *Excessive exceedances notification.* If you operate the

combustor when the detector response exceeds the alarm set-point more than 5 percent of the time during any 6-month block time period, you must submit a notification to the Administrator within 30 days of the end of the 6-month block time period that describes the causes of the exceedances and the revisions to the design, operation, or maintenance of the combustor or baghouse you are taking to minimize exceedances. To document compliance with this requirement:

(A) You must keep records of the date, time, and duration of each alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken;

(B) You must record the percent of the operating time during each 6-month period that the alarm sounds;

(C) In calculating the operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted; and

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

(9) *Particulate matter detection system requirements for electrostatic precipitators and ionizing wet scrubbers.* If your combustor is equipped with an electrostatic precipitator or ionizing wet scrubber, and you elect not to establish under § 63.1209(m)(1)(iv) site-specific control device operating parameter limits that are linked to the automatic waste feed cutoff system under paragraph (c)(3) of this section, you must continuously operate a particulate matter detection system that meets the specifications and requirements of paragraph (c)(9)(i) through (iii) of this section and you must comply with the corrective measures and notification requirements of paragraphs (c)(9)(iv) through (v) of this section.

(i) *Particulate matter detection system requirements.*—(A) The particulate matter detection system must be certified by the manufacturer to be capable of continuously detecting and recording particulate matter emissions at concentrations of 1.0 milligrams per actual cubic meter unless you demonstrate, under § 63.1209(g)(1), that a higher detection limit would routinely detect particulate matter loadings during normal operations;

(B) The particulate matter detector shall provide output of relative or absolute particulate matter loadings;

(C) The particulate matter detection system shall be equipped with an alarm system that will sound an audible alarm when an increase in relative or absolute particulate loadings is detected over the set-point

(D) You must install, operate, and maintain the particulate matter detection system in a manner consistent with the provisions of paragraph (c)(9) of this section and available written guidance from the U.S. Environmental Protection Agency or, in the absence of such written guidance, the manufacturer's written specifications and recommendations for installation, operation, maintenance and quality assurance of the system;

(E) You must include procedures for installation, operation, maintenance, and quality assurance of the particulate matter detection system in the site-specific continuous monitoring system test plan required under § 63.8(e)(3) of this chapter.

(F) Where multiple detectors are required to monitor multiple control devices, the system's instrumentation and alarm system may be shared among the detectors.

(G) You must establish the alarm set-point as provided by either paragraph (c)(9)(ii) or paragraph (c)(9)(iii) of this section.

(ii) *Establishing the alarm set-point without extrapolation.* (A) The alarm set-point is the average of the test run averages of the detector response achieved during the comprehensive performance test demonstrating compliance with the particulate matter emission standard.

(B) During the comprehensive performance test, you may simulate emission concentrations at the upper end of the range of normal operations by means including feeding high levels of ash and detuning the emission control equipment.

(C) You must comply with the alarm set-point on a 6-hour rolling average, updated each hour with a one-hour block average that is the average of the detector responses over each 15-minute block;

(iii) *Establishing the alarm set-point with extrapolation.* You may extrapolate the average of the test run averages of the detector response achieved during the comprehensive performance test as provided by paragraph (c)(9)(iii)(A) of this section to establish an alarm level after you approximate the correlation of the detector response to particulate matter concentration as prescribed by paragraph (c)(9)(iii)(B) of this section. You must comply with the extrapolated alarm set-point on a 6-hour rolling average, updated each hour with a one-hour block average that is the average of the detector responses over each 15-minute block.

(A) You may extrapolate the detector response up to a particulate matter concentration that is 50% of the particulate matter emission standard or 125% of the highest particulate matter concentration used to develop the correlation under paragraph (c)(9)(iii)(B) of this section, whichever is greater. The extrapolated emission concentration must not exceed the particulate matter emission standard.

(B) To establish an approximate correlation of the detector response to particulate matter emission concentrations, you should use as guidance Performance Specification-11 for PM CEMS (40 CFR Part 60, Appendix B), except that you need only conduct 5 runs to establish the initial correlation under Section 8.6 of Performance Specification 11.

(C) For quality assurance, you should use as guidance Procedure 2 of Appendix F to Part 60 of this chapter and the detector manufacturer's recommended procedures for periodic quality assurance checks and tests, except that:

(*1*) You must conduct annual Relative Response Audits as prescribed by Procedure 2 of Appendix F to Part 60 of this chapter (Section 10.3(6));

(*2*) You need only conduct Relative Response Audits on a 3-year interval after passing two sequential annual Relative Response Audits.

(D) An exceedance of the particulate matter emission standard by a particulate matter detection system for which particulate emission concentrations have been approximately correlated with the detector response under paragraph (c)(9)(iii) of this section is not evidence that the standard has been exceeded. The approximate correlation is used for compliance assurance to determine when corrective measures must be taken rather than for compliance monitoring.

(iv) *Particulate matter detection system corrective measures requirements.* The operating and maintenance plan required by paragraph (c)(7) of this section must include a corrective measures plan that specifies the procedures you will follow in the case of a particulate matter detection system alarm. The corrective measures plan must include, at a minimum, the procedures used to determine and record the time and cause of the alarm as well as the corrective measures taken to correct the control device malfunction or minimize emissions as specified below. Failure to initiate the corrective measures required by this paragraph is failure to ensure compliance with the emission standards in this subpart.

(A) You must initiate the procedures used to determine the cause of the alarm within 30 minutes of the time the alarm first sounds; and

(B) You must alleviate the cause of the alarm by taking the necessary corrective measure(s) which may include shutting down the combustor.

(v) *Excessive exceedances notification.* If you operate the combustor when the detector response exceeds the alarm set-point more than 5 percent of the time during any 6-month block time period, you must submit a notification to the Administrator within 30 days of the end of the 6-month block time period that describes the causes of the exceedances and the revisions to the design, operation, or maintenance of the combustor or emission control device you are taking to minimize exceedances. To document compliance with this requirement:

(A) You must keep records of the date, time, and duration of each alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken;

(B) You must record the percent of the operating time during each 6-month period that the alarm sounds;

(C) In calculating the operating time percentage, if inspection of the emission control device demonstrates that no corrective action is required, no alarm time is counted; and

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

■ 9. Section 63.1207 is amended by:
■ a. Revising paragraph (b)(1).
■ b. Adding paragraph (b)(3).
■ c. Revising paragraphs (c)(1) and (c)(2)(iii).
■ d. Adding paragraph (c)(3).
■ e. Revising paragraph (d)(4)(i).
■ f. Revising paragraphs (e)(2) and (e)(3)(iv).
■ g. Revising paragraphs (f)(1)(ii)(D), (f)(1)(x) introductory text, (f)(1)(xiii), (f)(1)(xiv), (f)(1)(xvi), and (f)(1)(xxv).
■ h. Adding paragraph (f)(1)(xv).
■ i. Revising paragraph (h)(2)(i).
■ j. Revising paragraph (j)(3).
■ k. Revising paragraph (l)(1) introductory text.
■ l. Revising paragraph (m)(2) introductory text.

The revisions and additions read as follows:

§ 63.1207 What are the performance testing requirements?

* * * * *

(b) * * *

(1) *Comprehensive performance test.* You must conduct comprehensive performance tests to demonstrate compliance with the emission standards provided by this subpart, establish limits for the operating parameters provided by § 63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems.

* * * * *

(3) *One-Time Dioxin/Furan Test for Sources Not Subject to a Numerical Dioxin/Furan Standard.* For solid fuel boilers and hydrochloric acid production furnaces, for lightweight aggregate kilns that are not subject to a numerical dioxin/furan emission standard under § 63.1221, and liquid fuel boilers that are not subject to a numerical dioxin/furan emission standard under § 63.1217, you must conduct a one-time emission test for dioxin/furan under feed and operating conditions that are most likely to reflect daily maximum operating variability, similar to a dioxin/furan comprehensive performance test.

(i) You must conduct the dioxin/furan emissions test no later than the deadline for conducting the initial comprehensive performance test.

(ii) You may use dioxin/furan emissions data from previous testing to meet this requirement, provided that:

(A) The testing was conducted under feed and operating conditions that are most likely to reflect daily maximum operating variability, similar to a dioxin/furan compliance test;

(B) You have not changed the design or operation of the source in a manner that could significantly affect stack gas dioxin/furan emission concentrations; and

(C) The data meet quality assurance objectives that may be determined on a site-specific basis.

(iii) You may use dioxin/furan emissions data from a source to represent emissions from another on-site source in lieu of testing (i.e., data in lieu of testing) if the design and operation, including hazardous waste feed and other feedstreams, of the sources are identical.

(iv) You must include the results of the one-time dioxin/furan emissions test with the results of the initial comprehensive performance test in the Notification of Compliance.

(v) You must repeat the dioxin/furan emissions test if you change the design or operation of the source in a manner that may increase dioxin/furan emissions.

(c) * * * (1) *Test date.* Except as provided by paragraphs (c)(2) and (c)(3) of this section, you must commence the initial comprehensive performance test not later than six months after the compliance date.

(2) * * * (iii) The data in lieu test age restriction provided in paragraph (c)(2)(i)(A) of this section does not apply for the duration of the interim standards (i.e., the standards published in the **Federal Register** on February 13, 2002, 67 FR 6792). See 40 CFR parts 63, 264, 265, 266, 270, and 271 revised as of July 1, 2002. Paragraph (c)(2)(i)(A) of this section does not apply until EPA promulgates permanent replacement standards pursuant to the Settlement Agreement noticed in the **Federal Register** on November 16, 2001 (66 FR 57715).

* * * * *

(3) For incinerators, cement kilns, and lightweight aggregate kilns, you must commence the initial comprehensive performance test to demonstrate compliance with the standards under §§ 63.1219, 63.1220, and 63.1221 not later than 12 months after the compliance date.

(d) * * *

(4) * * * (i) *Waiver of periodic comprehensive performance tests.* Except as provided in paragraph (c)(2) of this section, you must conduct only an initial comprehensive performance test under the interim standards (i.e., the standards published in the **Federal Register** on February 13, 2002); all subsequent comprehensive performance testing requirements are waived under the interim standards. The provisions in the introductory text to paragraph (d) and in paragraph (d)(1) of this section do not apply until EPA promulgates permanent replacement standards pursuant to the Settlement Agreement noticed in the **Federal Register** on November 16, 2001.

* * * * *

(e) * * *

(2) You must make your site-specific test plan and CMS performance evaluation test plan available to the public for review no later than 60 calendar days before initiation of the test. You must issue a public notice to all persons on your facility/public mailing list (developed pursuant to 40 CFR 70.7(h), 71.11(d)(3)(i)(E) and 124.10(c)(1)(ix)) announcing the availability of the test plans and the location where the test plans are available for review. The test plans must be accessible to the public for 60 calendar days, beginning on the date that you issue your public notice. The location must be unrestricted and provide access to the public during reasonable hours and provide a means for the public to obtain copies. The notification must include the following information at a minimum:

(i) The name and telephone number of the source's contact person;

(ii) The name and telephone number of the regulatory agency's contact person;

(iii) The location where the test plans and any necessary supporting documentation can be reviewed and copied;

(iv) The time period for which the test plans will be available for public review; and

(v) An expected time period for commencement and completion of the performance test and CMS performance evaluation test.

(3) * * *

(iv) *Public notice.* At the same time that you submit your petition to the Administrator, you must notify the public (e.g., distribute a notice to the facility/public mailing list developed pursuant to 40 CFR 70.7(h), 71.11(d)(3)(i)(E) and 124.10(c)(1)(ix)) of your petition to waive a performance test. The notification must include all of the following information at a minimum:

(A) The name and telephone number of the source's contact person;

(B) The name and telephone number of the regulatory agency's contact person;

(C) The date the source submitted its site-specific performance test plan and CMS performance evaluation test plans; and

(D) The length of time requested for the waiver.

(f) * * *

(1) * * *

(ii) * * *

(D) The Administrator may approve on a case-by-case basis a hazardous waste feedstream analysis for organic hazardous air pollutants in lieu of the analysis required under paragraph (f)(1)(ii)(A) of this section if the reduced analysis is sufficient to ensure that the POHCs used to demonstrate compliance with the applicable DRE standards of this subpart continue to be representative of the most difficult to destroy organic compounds in your hazardous waste feedstreams;

* * * * *

(x) If you are requesting to extrapolate metal feedrate limits from comprehensive performance test levels under §§ 63.1209(l)(1)(v) or 63.1209(n)(2)(vii):

* * * * *

(xiii) For cement kilns with in-line raw mills, if you elect to use the emissions averaging provision of this subpart, you must notify the Administrator of your intent in the initial (and subsequent) comprehensive performance test plan, and provide the information required by the emission averaging provision;

(xiv) For preheater or preheater/precalciner cement kilns with dual stacks, if you elect to use the emissions averaging provision of this subpart, you must notify the Administrator of your intent in the initial (and subsequent) comprehensive performance test plan, and provide the information required by the emission averaging provision;

(xv) If you request to use Method 23 for dioxin/furan you must provide the information required under § 63.1208(b)(1)(i)(B);

(xvi) If you are not required to conduct performance testing to document compliance with the mercury, semivolatile metals, low volatile metals, or hydrogen chloride/chlorine gas emission standards under paragraph (m) of this section, you must include with the comprehensive performance test plan documentation of compliance with the provisions of that section.

* * * * *

(xxv) If your source is equipped with a dry scrubber to control hydrogen chloride and chlorine gas, you must document in the comprehensive performance test plan key parameters that affect adsorption, and the limits you establish for those parameters based on the sorbent used during the performance test, if you elect not to specify and use the brand and type of sorbent used during the comprehensive performance test, as required by § 63.1209(o)(4)(iii)(A); and

* * * * *

(h) * * *

(2) * * *

(i) Operations when stack emissions testing for dioxin/furan, mercury, semivolatile metals, low volatile metals, particulate matter, or hydrogen chloride/chlorine gas is being performed; and

* * * * *

(j) * * *

(3) See §§ 63.7(g), 63.9(h), and 63.1210(d) for additional requirements pertaining to the Notification of Compliance (*e.g.*, you must include results of performance tests in the Notification of Compliance).

* * * * *

(l) *Failure of performance test*—(1) *Comprehensive performance test.* The provisions of this paragraph do not apply to the initial comprehensive performance test if you conduct the test prior to your compliance date.

* * * * *

(m) * * *

(2) You are not required to conduct performance tests to document compliance with the mercury, semivolatile metals, low volatile metals, or hydrogen chloride/chlorine gas emission standards under the conditions specified in this paragraph (m)(2). You are deemed to be in compliance with an emission standard if the twelve-hour rolling average maximum theoretical emission concentration (MTEC) does not exceed the emission standard:

* * * * *

■ 10. Section 63.1208 is amended by removing and reserving paragraph (a) and revising paragraphs (b)(1)(i) and (b)(5) to read as follows:

§ 63.1208 What are the test methods?

(a) [Reserved]

(b) * * *

(1) * * * (i) To determine compliance with the emission standard for dioxins and furans, you must use:

(A) Method 0023A, Sampling Method for Polychlorinated Dibenzo-*p*-Dioxins and Polychlorinated Dibenzofurans emissions from Stationary Sources, EPA Publication SW–846 (incorporated by reference— see § 63.14); or

(B) Method 23, provided in appendix A, part 60 of this chapter, after approval by the Administrator.

(*1*) You may request approval to use Method 23 in the performance test plan required under § 63.1207(e)(i) and (ii).

(*2*) In determining whether to grant approval to use Method 23, the Administrator may consider factors including whether dioxin/furan were detected at levels substantially below the emission standard in previous testing, and whether previous Method 0023 analyses detected low levels of dioxin/furan in the front half of the sampling train.

(*3*) Sources that emit carbonaceous particulate matter, such as coal-fired boilers, and sources equipped with activated carbon injection, will be deemed not suitable for use of Method 23 unless you document that there would not be a significant improvement in quality assurance with Method 0023A.

* * * * *

(5) *Hydrogen chloride and chlorine gas*—(i) *Compliance with MACT standards.* To determine compliance with the emission standard for hydrogen chloride and chlorine gas (combined), you must use:

(A) Method 26/26A as provided in appendix A, part 60 of this chapter; or

(B) Methods 320 or 321 as provided in appendix A, part 63 of this chapter, or

(C) ASTM D 6735–01, Standard Test Method for Measurement of Gaseous Chlorides and Fluorides from Mineral Calcining Exhaust Sources—Impinger Method to measure emissions of hydrogen chloride, and Method 26/26A to measure emissions of chlorine gas, provided that you follow the provisions in paragraphs (b)(5)(C)(*1*) through (*6*) of this section. ASTM D 6735–01 is available for purchase from at least one of the following addresses: American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, Post Office Box C700, West Conshohocken, PA 19428–2959; or ProQuest, 300 North Zeeb Road, Ann Arbor, MI 48106.

(*1*) A test must include three or more runs in which a pair of samples is obtained simultaneously for each run according to section 11.2.6 of ASTM Method D6735–01.

(*2*) You must calculate the test run standard deviation of each set of paired samples to quantify data precision, according to Equation 1 of this section:

$$RSD_a = (100)\,AbsoluteValue\left[\frac{Cl_a - C2_a}{Cl_a + C2_a}\right] \qquad \text{(Eq. 1)}$$

Where:

RSD_a = The test run relative standard deviation of sample pair a, percent.

$C1_a$ and $C2_a$ = The HCl concentrations, milligram/dry standard cubic meter (mg/dscm), from the paired samples.

(*3*) You must calculate the test average relative standard deviation according to Equation 2 of this section:

$$RSD_{TA} = \frac{\sum_{a=1}^{p} RSD_a}{p} \qquad \text{(Eq. 2)}$$

Where:

RSD_{TA} = The test average relative standard deviation, percent.

RSD_a = The test run relative standard deviation for sample pair a.

p = The number of test runs, ≥3.

(*4*) If RSDTA is greater than 20 percent, the data are invalid and the test must be repeated.

(*5*) The post-test analyte spike procedure of section 11.2.7 of ASTM Method D6735–01 is conducted, and the percent recovery is calculated according to section 12.6 of ASTM Method D6735–01.

(*6*) If the percent recovery is between 70 percent and 130 percent, inclusive, the test is valid. If the percent recovery is outside of this range, the data are considered invalid, and the test must be repeated.

(ii) *Compliance with risk-based limits under § 63.1215.* To demonstrate compliance with emission limits established under § 63.1215, you must use Method 26/26A as provided in appendix A, part 60 of this chapter, Method 320 as provided in appendix A, part 63 of this chapter, Method 321 as provided in appendix A, part 63 of this chapter, or ASTM D 6735–01, Standard Test Method for Measurement of Gaseous Chlorides and Fluorides from Mineral Calcining Exhaust Sources—Impinger Method (following the provisions of paragraphs (b)(5)(C)(*1*) through (*6*) of this section), except:

(A) For cement kilns and sources equipped with a dry acid gas scrubber, you must use Methods 320 or 321 as provided in appendix A, part 63 of this chapter, or ASTM D 6735–01 to measure hydrogen chloride, and the back-half, caustic impingers of Method 26/26A as provided in appendix A, part 60 of this chapter to measure chlorine gas; and

(B) For incinerators, boilers, and lightweight aggregate kilns, you must use Methods 320 or 321 as provided in appendix A, part 63 of this chapter, or ASTM D 6735–01 to measure hydrogen chloride, and Method 26/26A as provided in appendix A, part 60 of this chapter to measure total chlorine, and calculate chlorine gas by difference if:

(*1*) The bromine/chlorine ratio in feedstreams is greater than 5 percent; or

(*2*) The sulfur/chlorine ratio in feedstreams is greater than 50 percent.

* * * * *

■ 11. Section 63.1209 is amended by:
■ a. Revising paragraphs (a)(1)(ii), (a)(1)(iv)(D), (a)(1)(v)(D), and (a)(5).
■ b. Revising paragraph (b)(2)(ii).
■ c. Revising the heading of paragraph (g)(1) introductory text and paragraph (g)(1)(i).
■ d. Adding paragraph (g)(1)(iv).
■ e. Revising paragraphs (k)(1)(i) and (k)(2)(i).
■ f. Revising paragraph (l)(1).
■ g. Revising paragraphs (m)(1)(iv) introductory text and (m)(3).
■ h. Revising paragraph (n)(2).
■ i. Revising the heading of paragraph (o) introductory text and paragraph (o)(1).
■ j. Adding paragraph (r).

The revisions read as follows:

§ 63.1209 What are the monitoring requirements?

(a) * * *

(1) * * *

(ii) (A) *Cement kilns under § 63.1204*—Except as provided by paragraphs (a)(1)(iv) and (a)(1)(v) of the section, you must use a COMS to demonstrate and monitor compliance with the opacity standard under §§ 63.1204(a)(7) and (b)(7) at each point where emissions are vented from these affected sources including the bypass stack of a preheater or preheater/precalciner kiln with dual stacks.

(B) *Cement kilns under § 63.1220*—Except as provided by paragraphs (a)(1)(iv) and (a)(1)(v) of the section and unless your source is equipped with a bag leak detection system under § 63.1206(c)(8) or a particulate matter detection system under § 63.1206(c)(9), you must use a COMS to demonstrate and monitor compliance with the opacity standard under §§ 63.1220(a)(7) and (b)(7) at each point where emissions are vented from these affected sources including the bypass stack of a preheater or preheater/precalciner kiln with dual stacks.

(C) You must maintain and operate each COMS in accordance with the requirements of § 63.8(c) except for the requirements under § 63.8(c)(3). The requirements of § 63.1211(c) shall be complied with instead of § 63.8(c)(3); and

(D) Compliance is based on a six-minute block average.

* * * * *

(iv) * * *

(D) To remain in compliance, all six-minute block averages must not exceed the opacity standard.

(v) * * *

(D) To remain in compliance, all six-minute block averages must not exceed the opacity standard.

* * * * *

(5) *Petitions to use CEMS for other standards.* You may petition the Administrator to use CEMS for compliance monitoring for particulate matter, mercury, semivolatile metals, low volatile metals, and hydrogen chloride and chlorine gas under § 63.8(f) in lieu of compliance with the corresponding operating parameter limits under this section.

* * * * *

(b) * * *

(2) * * *

(ii) *Accuracy and calibration of weight measurement devices for activated carbon injection systems.* If you operate a carbon injection system, the accuracy of the weight measurement device must be ± 1 percent of the weight being measured. The calibration of the device must be verified at least once each calendar quarter at a frequency of approximately 120 days.

* * * * *

(g) * * *

(1) *Requests to use alternatives to operating parameter monitoring requirements.* (i) You may submit an application to the Administrator under this paragraph for approval of alternative operating parameter monitoring requirements to document compliance with the emission standards of this subpart. For requests to use additional CEMS, however, you must use paragraph (a)(5) of this section and § 63.8(f). Alternative requests to operating parameter monitoring requirements that include unproven monitoring methods may not be made under this paragraph and must be made under § 63.8(f).

* * * * *

(iv) *Dual Standards that incorporate the Interim Standards for HAP metals.* (A) *Semivolatile and Low Volatile Metals.* You may petition the Administrator to waive a feedrate operating parameter limit under paragraph (n)(2) of this section for either the emission standards expressed in a thermal emissions format or the interim standards based on documentation that the feedrate operating parameter limit is not needed to ensure compliance with the relevant standard on a continuous basis.

(B) *Mercury.* You may petition the Administrator to waive a feedrate operating parameter limit under paragraph (l)(1) of this section for either the feed concentration standard under §§ 63.1220(a)(2)(i) and (b)(2)(i) or the interim standards based on documentation that the feedrate operating parameter limit is not needed to ensure compliance with the relevant standard on a continuous basis.

* * * * *

(k) * * *

(1) * * * (i) For sources other than a lightweight aggregate kiln, if the combustor is equipped with an electrostatic precipitator, baghouse (fabric filter), or other dry emissions control device where particulate matter is suspended in contact with combustion gas, you must establish a limit on the maximum temperature of the gas at the inlet to the device on an hourly rolling average. You must establish the hourly rolling average limit as the average of the test run averages.

* * * * *

(2) * * * (i) For sources other than cement kilns, you must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. You must document the temperature measurement location in the test plan you submit under §§ 63.1207(e) and (f);

* * * * *

(l) *Mercury.* * * *

(1) *Feedrate of mercury.* (i) For incinerators and solid fuel boilers, when complying with the mercury emission standards under §§ 63.1203, 63.1216 and 63.1219, you must establish a 12-hour rolling average limit for the total feedrate of mercury in all feedstreams as the average of the test run averages.

(ii) For liquid fuel boilers, when complying with the mercury emission standards of § 63.1217, you must establish a rolling average limit for the mercury feedrate as follows on an averaging period not to exceed an annual rolling average:

(A) You must calculate a mercury system removal efficiency for each test run and calculate the average system removal efficiency of the test run averages. If emissions exceed the mercury emission standard during the comprehensive performance test, it is not a violation because the averaging period for the mercury emission standard is (not-to-exceed) one year and compliance is based on compliance with the mercury feedrate limit with an averaging period not-to-exceed one year.

(B) If you burn hazardous waste with a heating value of 10,000 Btu/lb or greater, you must calculate the mercury feedrate limit as follows:

(*1*) The mercury feedrate limit is the emission standard divided by [1 − system removal efficiency].

(*2*) The mercury feedrate limit is a hazardous waste thermal concentration limit expressed as pounds of mercury in hazardous waste feedstreams per million Btu of hazardous waste fired.

(*3*) You must comply with the hazardous waste mercury thermal concentration limit by determining the feedrate of mercury in all hazardous waste feedstreams (lb/hr) at least once a minute and the hazardous waste thermal feedrate (MM Btu/hr) at least once a minute to calculate a 60-minute average thermal emission concentration as [hazardous waste mercury feedrate (lb/hr) / hazardous waste thermal feedrate (MM Btu/hr)].

(*4*) You must calculate a rolling average hazardous waste mercury thermal concentration that is updated each hour.

(*5*) If you select an averaging period for the feedrate limit that is greater than a 12-hour rolling average, you must calculate the initial rolling average as though you had selected a 12-hour rolling average, as provided by paragraph (b)(5)(i) of this section. You must calculate rolling averages thereafter as the average of the available one-minute values until enough one-minute values are available to calculate the rolling average period you select. At that time and thereafter, you update the rolling average feedrate each hour with a 60-minute average feedrate.

(C) If you burn hazardous waste with a heating value of less than 10,000 Btu/lb, you must calculate the mercury feedrate limit as follows:

(*1*) You must calculate the mercury feedrate limit as the mercury emission standard divided by [1 − System Removal Efficiency].

(*2*) The feedrate limit is expressed as a mass concentration per unit volume of stack gas (μg/dscm) and is converted to a mass feedrate (lb/hr) by multiplying it by the average stack gas flowrate of the test run averages.

(*3*) You must comply with the feedrate limit by determining the mercury feedrate (lb/hr) at least once a minute to calculate a 60-minute average feedrate.

(*4*) You must update the rolling average feedrate each hour with this 60-minute feedrate measurement.

(*5*) If you select an averaging period for the feedrate limit that is greater than a 12-hour rolling average, you must calculate the initial rolling average as though you had selected a 12-hour rolling average, as provided by paragraph (b)(5)(i) of this section. You must calculate rolling averages thereafter as the average of the available one-minute values until enough one-minute values are available to calculate the rolling average period you select. At that time and thereafter, you update the rolling average feedrate each hour with a 60-minute average feedrate.

(D) If your boiler is equipped with a wet scrubber, you must comply with the following unless you document in the performance test plan that you do not feed chlorine at rates that may substantially affect the system removal efficiency of mercury for purposes of establishing a mercury feedrate limit based on the system removal efficiency during the test:

(*1*) Scrubber blowdown must be minimized during a pretest conditioning period and during the performance test:

(*2*) Scrubber water must be preconditioned so that mercury in the

water is at equilibrium with stack gas at the mercury feedrate level of the performance test; and

(*3*) You must establish an operating limit on minimum pH of scrubber water as the average of the test run averages and comply with the limit on an hourly rolling average.

(iii) For cement kilns:

(A) When complying with the emission standards under §§ 63.1220(a)(2)(i) and (b)(2)(i), you must:

(*1*) Comply with the mercury hazardous waste feed concentration operating requirement on a twelve-hour rolling average;

(*2*) Monitor and record in the operating record the as-fired mercury concentration in the hazardous waste (or the weighted-average mercury concentration for multiple hazardous waste feedstreams);

(*3*) Initiate an automatic waste feed cutoff that immediately and automatically cuts off the hazardous waste feed when the as-fired mercury concentration operating requirement is exceeded;

(B) When complying with the emission standards under §§ 63.1204, 63.1220(a)(2)(ii) and (b)(2)(ii), you must establish a 12-hour rolling average limit for the total feedrate of mercury in all feedstreams as the average of the test run averages;

(C) Except as provided by paragraph (l)(1)(iii)(D) of this section, when complying with the hazardous waste feedrate corresponding to a maximum theoretical emission concentration (MTEC) under §§ 63.1220(a)(2)(iii) and (b)(2)(iii), you must:

(*1*) Comply with the MTEC operating requirement on a twelve-hour rolling average;

(*2*) Monitor and record the feedrate of mercury for each hazardous waste feedstream according to § 63.1209(c);

(*3*) Monitor with a CMS and record in the operating record the gas flowrate (either directly or by monitoring a surrogate parameter that you have correlated to gas flowrate);

(*4*) Continuously calculate and record in the operating record a MTEC assuming mercury from all hazardous waste feedstreams is emitted;

(*5*) Initiate an automatic waste feed cutoff that immediately and automatically cuts off the hazardous waste feed when the MTEC operating requirement is exceeded;

(D) In lieu of complying with paragraph (l)(1)(iii)(C) of this section, you may:

(*1*) Identify in the Notification of Compliance a minimum gas flowrate limit and a maximum feedrate limit of mercury from all hazardous waste feedstreams that ensures the MTEC calculated in paragraph (l)(1)(iii)(B)(*4*) of this section is below the operating requirement under paragraphs §§ 63.1220(a)(2)(iii) and (b)(2)(iii); and

(*2*) Initiate an automatic waste feed cutoff that immediately and automatically cuts off the hazardous waste feed when either the gas flowrate or mercury feedrate exceeds the limits identified in paragraph (l)(1)(iv)(D)(*1*) of this section.

(iv) For lightweight aggregate kilns:

(A) When complying with the emission standards under §§ 63.1205, 63.1221(a)(2)(i) and (b)(2)(i), you must establish a 12-hour rolling average limit for the total feedrate of mercury in all feedstreams as the average of the test run averages;

(B) Except as provided by paragraph (l)(1)(iv)(C) of this section, when complying with the hazardous waste feedrate corresponding to a maximum theoretical emission concentration (MTEC) under §§ 63.1221(a)(2)(ii) and (b)(2)(ii), you must:

(*1*) Comply with the MTEC operating requirement on a twelve-hour rolling average;

(*2*) Monitor and record the feedrate of mercury for each hazardous waste feedstream according to § 63.1209(c);

(*3*) Monitor with a CMS and record in the operating record the gas flowrate (either directly or by monitoring a surrogate parameter that you have correlated to gas flowrate);

(*4*) Continuously calculate and record in the operating record a MTEC assuming mercury from all hazardous waste feedstreams is emitted;

(*5*) Initiate an automatic waste feed cutoff that immediately and automatically cuts off the hazardous waste feed when the MTEC operating requirement is exceeded;

(C) In lieu of complying with paragraph (l)(1)(iv)(B) of this section, you may:

(*1*) Identify in the Notification of Compliance a minimum gas flowrate limit and a maximum feedrate limit of mercury from all hazardous waste feedstreams that ensures the MTEC calculated in paragraph (l)(1)(iv)(B)(*4*) of this section is below the operating requirement under paragraphs §§ 63.1221(a)(2)(ii) and (b)(2)(ii); and

(*2*) Initiate an automatic waste feed cutoff that immediately and automatically cuts off the hazardous waste feed when either the gas flowrate or mercury feedrate exceeds the limits identified in paragraph (l)(1)(iv)(C)(*1*) of this section.

(v) *Extrapolation of feedrate levels.* In lieu of establishing mercury feedrate limits as specified in paragraphs (l)(1)(i) through (iv) of this section, you may request as part of the performance test plan under §§ 63.7(b) and (c) and §§ 63.1207 (e) and (f) to use the mercury feedrates and associated emission rates during the comprehensive performance test to extrapolate to higher allowable feedrate limits and emission rates. The extrapolation methodology will be reviewed and approved, as warranted, by the Administrator. The review will consider in particular whether:

(A) Performance test metal feedrates are appropriate (*i.e.*, whether feedrates are at least at normal levels; depending on the heterogeneity of the waste, whether some level of spiking would be appropriate; and whether the physical form and species of spiked material is appropriate); and

(B) Whether the extrapolated feedrates you request are warranted considering historical metal feedrate data.

* * * * *

(m) * * *

(1) * * *

(iv) *Other particulate matter control devices.* For each particulate matter control device that is not a fabric filter or high energy wet scrubber, or is not an electrostatic precipitator or ionizing wet scrubber for which you elect to monitor particulate matter loadings under § 63.1206(c)(9) of this chapter for process control, you must ensure that the control device is properly operated and maintained as required by § 63.1206(c)(7) and by monitoring the operation of the control device as follows:

* * * * *

(3) *Maximum ash feedrate.* Owners and operators of hazardous waste incinerators, solid fuel boilers, and liquid fuel boilers must establish a maximum ash feedrate limit as a 12-hour rolling average based on the average of the test run averages. This requirement is waived, however, if you comply with the particulate matter detection system requirements under § 63.1206(c)(9).

(n) * * *

(2) *Maximum feedrate of semivolatile and low volatile metals.* (i) *General.* You must establish feedrate limits for semivolatile metals (cadmium and lead) and low volatile metals (arsenic, beryllium, and chromium) as follows, except as provided by paragraph (n)(2)(vii) of this section.

(ii) For incinerators, cement kilns, and lightweight aggregate kilns, when complying with the emission standards under §§ 63.1203, 63.1204, 63.1205, and 63.1219, and for solid fuel boilers when complying with the emission standards