ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2004-0022; FRL -]

RIN 2050-AG35

NESHAP: National Emission Standards for Hazardous Air Pollutants: Standards for Hazardous Waste Combustors: Reconsideration

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; reconsideration.

SUMMARY: On October 12, 2005, EPA promulgated national emission standards for hazardous air pollutants (NESHAP) for new and existing sources at hazardous waste combustion facilities (the final rule). Subsequently, the Administrator received four petitions for reconsideration of the final rule. On March 23, 2006 and September 6, 2006, EPA granted reconsideration with respect to eight issues raised by the petitions. After evaluating public comments submitted in response to these reconsideration notices, we are taking final action regarding the eight issues raised in the petitions for reconsideration. EPA also re-opened the rule to consider comments relating to a post-promulgation decision of the United States Court of Appeals for the District of Columbia Circuit, and is responding in this proceeding to the comments received on that notice, published on September 27, 2007. As a result of this reconsideration process, we are revising the new source standard for particulate matter for cement kilns and for incinerators that burn hazardous waste. We are also making amendments to the particulate matter detection system provisions and revisions to the health-based

compliance alternative for total chlorine of the final rule. Finally, we are also issuing several corrections and clarifications to the final rule.

DATES: The final rule is effective on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2004-0022. All documents in the docket are listed on the *www.regulations.gov* web site. Although listed in the index, some information is not publicly available, e.g., CBI or other information the disclosure of which is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *www.regulations.gov* or in hard copy at the HQ EPA Docket Center, Docket ID No. EPA-HQ-OAR-2004-0022, EPA West Building, Room 3334, 1301 Constitution Ave., NW., Washington, DC 20004. This Docket Facility is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The HQ EPA Docket Center telephone number is (202) 566-1742. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744. A reasonable fee may be charged for copying docket materials.

FOR FURTHER INFORMATION CONTACT: For more information on this final rule, contact Frank Behan at (703) 308-8476, or *behan.frank@epa.gov*, Office of Solid Waste (MC: 5302P), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, D.C. 20460.

SUPPLEMENTARY INFORMATION:

Outline. The SUPPLEMENTARY INFORMATION in this preamble is organized as follows:

I. General Information

A. Does this action apply to me?

The regulated categories and entities affected by this final action include:

Category	NAICS code [a]	Potentially affected entities
Petroleum and coal products manufacturing	324	Any entity that combusts hazardous waste as defined in the final rule
Chemical manufacturing	325	
Cement and concrete product manufacturing	3273	
Other nonmetallic mineral product manufacturing	3279	
Waste treatment and disposal	5622	
Remediation and other waste management services	5629	

[a] North American Industry Classification System.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be impacted by this action. To determine whether your facility is affected by this action, you should examine the applicability criteria in 40 CFR 63.1200, "Who is subject to these regulations?". If you have any questions regarding the applicability of this action to a particular entity, consult either the air permit authority for the entity or your EPA regional representative as listed in §63.13 of the General Provisions to part 63 (40 CFR part 63, subpart A).

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

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

C. Judicial Review

Under section 307(b)(1) of the Clean Air Act (CAA), judicial review of this final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by **[INSERT DATE 60 DAYS FROM THE DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Under section 307(d)(7)(B) of the CAA, only an objection to these final rules that was raised with reasonable specificity during the period for public comment can be raised during judicial review. This section

also provides a mechanism for EPA to convene a proceeding for reconsideration, "[i]f the person raising an objection can demonstrate to EPA that it was impracticable to raise such objection within [the period for public comment] or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of this rule." Any person seeking to make such a demonstration to us should submit a Petition for Reconsideration to the Office of the Administrator, Environmental Protection Agency, Room 3000, Ariel Rios Building, 1200 Pennsylvania Ave., NW., Washington, DC 20004, with a copy to the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20004. Moreover, under section 307(b)(2) of the CAA, the requirements established by these final rules may not be challenged separately in any civil or criminal proceedings brought by EPA to enforce these requirements.

II. Background

A. What is the Source of Authority for the Reconsideration Action?

EPA is reconsidering several aspects of its final rule for hazardous waste combustors under sections 112(d) and 307(d)(7)(B) of the Clean Air Act (CAA) as amended (42 U.S.C. 7412(d) and 7607(d)(7)(B)). This action is also subject to section 307(d) of the CAA (42 U.S.C. 7607(d)).

B. What is the Background on the NESHAP for Hazardous Waste Combustors?

Section 112 of the CAA requires that we establish NESHAP for the control of hazardous air pollutants (HAP) from both new and existing major sources. Major sources of HAP are those stationary sources or groups of stationary sources that are located within a contiguous area under common control that emit or have the potential to emit considering controls, in the aggregate, 10 tons per year (tpy) or more of any one HAP or 25 tpy or more of any combination of HAP. For major sources, the CAA requires the NESHAP to reflect the maximum degree of reduction in emissions of HAP that is achievable.[1] This level of control is commonly referred to as MACT (for Maximum Achievable Control Technology). See CAA section 112(d)(2).

The minimum control level for major sources is defined under section 112(d)(3) of the CAA, and is referred to, informally, as "the MACT floor." The MACT floor ensures that the standards are set at a level that assures that all major sources perform at the level of control at least as stringent as that already achieved by the best-performing sources in each source category or subcategory. Specifically, for new major sources, the MACT floor cannot be less stringent than the emission control that is achieved in practice by the best-controlled similar source. The MACT standards for existing major sources can be less stringent than standards for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory for which the Administrator has emissions

[1] Section 112(d)(4) gives the Administrator the authority to establish health-based emission standards in lieu of the MACT standards for HAP for which a health threshold has been established. In the final rule promulgated on October 12, 2005, EPA established health-based compliance alternatives for total chlorine as an alternative to the MACT technology-based emission standards, which alternative standards are applicable to all hazardous waste combustors, with the exception of hydrochloric acid production furnaces. 70 FR at 59478-486.

information (where there are 30 or more sources in a category or subcategory; floors for existing sources in categories or subcategories with fewer than 30 sources are to be based on the average emission limitation achieved by the best performing five sources).

EPA also must consider more stringent "beyond-the-floor" control options. When considering beyond-the-floor options, EPA must consider not only the maximum degree of reduction in emissions of HAP, but must take into account costs, energy, and non-air quality health environmental impacts. See CAA section 112(d)(2).

We proposed NESHAP for hazardous waste combustors on April 20, 2004 (69 FR 21198), and we published the final rule on October 12, 2005 (70 FR 59402). The hazardous waste combustor NESHAP is codified in subpart EEE of 40 CFR part 63. Following promulgation of the hazardous waste combustor final rule, the Administrator received four petitions for reconsideration, pursuant to section 307(d)(7)(B) of the CAA, from Ash Grove Cement Company, the Cement Kiln Recycling Coalition (CKRC), the Coalition for Responsible Waste Incineration (CRWI), and the Sierra Club.[2] Under this section of the CAA, the Administrator must initiate reconsideration proceedings with respect to provisions that are of central relevance to the rule at issue if the petitioner shows that it was impracticable to raise an objection to a rule within the public comment period or that the grounds for the objection arose after the public comment period but within the period for filing petitions for judicial review.

Of the twenty or so issues raised in the four petitions for reconsideration, we decided to grant immediate reconsideration of one of the issues included in the petitions

[2] These petitions are included in the docket for this rule. See items EPA-HQ-OAR-2004-0022-0516 thru 0519. EPA also received petitions from Ash Grove Cement Company and the CKRC, Continental Cement Company, and Giant Cement Holding, Inc. requesting that we stay the effective date of the particulate matter standard for new cement kilns. See items EPA-HQ-OAR-2004-0022-0521 and 0523.

of Ash Grove Cement Company and CKRC. On March 23, 2006, EPA published a proposed rule granting reconsideration of the particulate matter standard for new cement kilns. 71 FR 14665. Also on March 23, 2006, EPA granted a three-month administrative stay while the particulate matter standard was under reconsideration. 71 FR 14655. The administrative stay was issued pursuant to section 307(d)(7)(B) of the CAA and was in effect from March 23, 2006 to June 23, 2006. Approximately a dozen public comment letters were submitted in response to the March 2006 proposed rule, including a request to extend the comment period by two weeks that EPA granted in a subsequent notice on April 13, 2006. 71 FR 19155. On October 25, 2006, EPA issued a final rule amending the effective date of the particulate matter standard for new cement kilns. 71 FR 62388. That amendment suspended the obligation of new cement kilns to comply with the particulate matter standard set forth in §63.1220(b)(7)(i) until we take final action on the March 2006 proposal to revise the standard. Today's rule announces our final action regarding Ash Grove Cement Company and CKRC's petitions for reconsideration of the particulate matter standard for new cement kilns that was first proposed on March 23, 2006.

On August 22, 2006, EPA issued letters to the Ash Grove Cement Company, the CKRC, and the Sierra Club explaining our rationale to deny reconsideration on several issues.[3] On September 6, 2006, we announced our reconsideration of and requested public comment on seven issues raised in the petitions of the Ash Grove Cement Company, the CKRC, and the Sierra Club. 71 FR 52624. In addition to requesting comment on the reconsideration issues, we also sought comment on several other

[3] A copy of each letter is included in the docket to this rulemaking. See docket items EPA-HQ-OAR-2004-0022-0558 through 0560. A summary of the issues for which we denied reconsideration can also be found in the September 6, 2006 proposed rule. 71 FR at 52627.

proposed amendments to various compliance and monitoring provisions in the hazardous waste combustor NESHAP. Eleven commenters submitted responses to this reconsideration notice. In addition to addressing the PM standard for new cement kilns, today's rule announces our final decision regarding the seven petition for reconsideration issues and the other compliance and monitoring amendments included in the September 2006 proposed rule.

On September 27, 2007, EPA issued a **Federal Register** notice discussing each of the standards in the rule in light of the D.C. Circuit's decision in *Sierra Club v. EPA*, 479 F. 3d 875 (2007) ("*Brick MACT*"). The specific focus of this analysis was whether the MACT floors for each standard were consistent with the requirements of section 112(d)(2) and (d)(3) of the Act. EPA also sought comment on amending the record to make clear that it was no longer relying on certain rationales which appeared inconsistent with the *Brick MACT* opinion. EPA solicited and received comment on this analysis and is responding to those comments in this notice.

III. Final Action on Issues for Which EPA Granted Reconsideration

EPA granted reconsideration of eight issues raised in the petitions of the Ash Grove Cement Company, the Cement Kiln Recycling Coalition, the Coalition for Responsible Waste Incineration, and the Sierra Club. Accordingly, we requested comment on the eight issues in two notices published on March 23, 2006 (71 FR 14665) and September 6, 2006 (71 FR 52624). We discuss below our final action regarding the eight issues raised in the four petitions for reconsideration and include our response to the major comments received on these issues.

A. Subcategorization of Liquid Fuel Boilers by Heating Value

In the October 12, 2005 final rule, we divided the liquid fuel boiler subcategory into two separate boiler subcategories based on the heating value of the hazardous waste they burn for purposes of establishing emission standards for metals and total chlorine (TCl): those that burn waste with a heating value below 10,000 Btu/lb, and those that burn hazardous waste with a heating value of 10,000 Btu/lb or greater. See 70 FR at 59422. Sources would shift from one subcategory to the other depending on the heating value of the hazardous waste burned at the time. *Id*. at 59476.

Sierra Club petitioned for reconsideration stating that EPA developed this subcategorization approach after the period for public comment and, thus, did not provide notice and opportunity for public comment.[4] We subsequently granted reconsideration of this provision. See 71 FR at 52627-28 (September 6, 2006). Although we granted reconsideration, we did not propose to change the approach.

This issue has now become moot because EPA has determined that the standard for the high heating value subcategory requires revision because it only applied to HAP in hazardous waste, not to all HAP input to the boiler (for example, HAP that may be present in fossil fuels or other non-waste inputs), which is contrary to the D.C. Circuit's decisions in *Brick MACT*, 479 F. 3d at 882-83. (MACT standards must apply to all HAP regardless of source of input). Moreover, once the high heating value subcategory is eliminated, there is no basis for a low heating value subcategory since the whole basis for differentiation no longer exists. Accordingly, EPA now agrees with the petitioner that the subcategorization scheme it adopted for liquid fuel boilers is not appropriate, and

[4] See letter from James Pew to Stephen Johnson, dated December 12, 2005, Section II, docket item EPA–HQ–OAR–2004–0022–0517.

EPA intends to amend these standards. See also preamble Sections IV.B and IV.F below (responding to comments on EPA's September 27, 2007 notice).

B. Correcting Total Chlorine (TCl) Data to 20 ppmv

In the October 12, 2005 final rule, we corrected all the total chlorine (TCl) measurements in the data base that were below 20 ppmv to account for potential systemic negative biases in the Method 0050 data. See 70 FR at 59427-29.[5] Sierra Club petitioned for reconsideration stating that EPA corrected the TCl measurements in response to comments on the proposed rule—after the period for public comment—and used the corrected data to revise the TCl emission standards.[6]

We granted reconsideration of our approach to account for these method biases to assess the true performance of the best performing sources. Reconsideration was appropriate because, as Sierra Club stated, we decided to correct the TCl data after the period for public comment on the proposed rule, and correcting the data significantly impacted the development of the TCl emission standards.

To account for the bias in the analytic method, we corrected all TCl emissions data that were below 20 ppmv to 20 ppmv. We accounted for within-test condition emissions variability for the corrected data by imputing a standard deviation that is based on a regression analysis of run-to-run standard deviation versus emission concentration for all data above 20 ppmv. This approach of using a regression analysis to impute a standard deviation is similar to the approach we used to account for total variability (i.e.,

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5 See also USEPA, ''Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards,'' Section 5.5, September 2005.

6 See letter from James Pew to Stephen Johnson, dated December 12, 2005, Section IV, docket item EPA-HQ-OAR-2004-0022-0517.

test-to-test and within-test variability) of particulate matter emissions for sources that use fabric filters.

1. Summary of the Final Action

The comments to the reconsideration notice did not provide a basis for us to conclude that it was inappropriate to correct all TCl emissions data that were below 20 ppmv to 20 ppmv to account for potential systemic negative biases in the Method 0050 data. Therefore, we reaffirm our approach of correcting the TCl measurements at promulgation and are making no changes to the October 12, 2005 final rule.

2. What Are the Responses to Major Comments?

Comment: Sierra Club (represented by Earthjustice) states that: (1) establishing floor emission levels based on measurements below 20 ppmv that are corrected to 20 ppmv is impermissible because, even assuming bias in the analytic method, the corrected measurements do not reflect the performance of the best performing sources; (2) projecting the variability of emissions for the average of the best performing sources considering the variability of emissions for sources that are not best performing sources is inappropriate; (3) the "statistical imputation" methodology used to calculate emissions variability is inappropriate because EPA admits it overestimates variability; and (4) to the extent EPA relied on achievability as a reason to change the TCl standard, the Agency acted unlawfully.

Response: We respond to each issue in turn:

a. *Corrected Measurements Do Not Reflect Performance of the Best Performing Sources*. The best performing sources are those with measurements below 20 ppmv. We

determined, however, and Sierra Club does not dispute, that those measurements are likely to be affected by a systemic negative bias in Method 0050 which collected these data so that the measured level of performance is biased low and therefore cannot credibly be deemed to reflect these sources' actual level of performance. 71 FR at 52629-30. Because measurements below 20 ppmv may not (indeed, likely do not) represent the performance of a source, we corrected the measurements to 20 ppmv, the only value of which there is any reasonable certainty. The corrected data thus are our best projection of the performance (not considering emissions variability) of those sources with the lowest measured TCl emissions, accounting for the bias in measurement.

We note that the Clean Air Act requires EPA "to make a reasonable estimate of the performance of the top 12 percent of units." *CKRC v. EPA*, 255 F.3d 855, 862 (D.C. Cir. 2001), *citing Sierra Club v. EPA*, 167 F. 3d 658, 662 (D.C. Cir. 1999) (interpreting 42 U.S.C. 7429(a)(2), which requires that "emissions standards for existing units in a category . . . shall not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in the category"). The court has made clear that EPA has authority to devise the means of deriving this estimate, provided the method the Agency selects "allow[s] a reasonable inference as to the performance of the top 12 percent of units." *Id*. Most importantly, though, EPA must show not only that it believes its methodology provides an accurate picture of the relevant sources' actual performance, but also why its methodology yields the required estimate. *Id*. We have explained the basis for the negative bias in the analytic method, the existence of which is not in dispute. The issue then becomes how best to estimate the performance of the best performing sources given that their measured performance reflects the bias of the analytic method.

We believe that correcting potentially biased measurements to 20 ppmv is appropriate because Method 0050 itself states that the method is not acceptable for demonstrating compliance with HCl emission standards less than 20 ppm.[7,8] TCl emission levels greater than 20 ppmv would be reported by Method 0050 without significant bias (and therefore are reliable measurements), while measurements reported to be below 20 ppmv may actually have been as high as 20 ppmv and cannot be reliably assessed below that number.

Sierra Club does not suggest alternative approaches to correct the potentially biased measurements to project the performance of those sources, but rather implies that the uncorrected measurements should be used to establish the floor emission level. This would be arbitrary and inappropriate because those data almost certainly (no absolute certainty is possible) do not represent the performance of those sources due to analytic bias, and moreover, fail to account for emissions variability of the best performers.

b. *Projecting Emissions Variability Considering Sources Other Than the Best Performing Sources*. We explained that, after correcting measurements below 20 ppmv to 20 ppmv, the corrected emission levels for the best performing sources naturally reflected little variability—corrected data for the best performing sources were generally the same values, on the order of 20 ppmv. 71 FR 52630/2. This had the effect of understating the variability associated with these data—i.e., these sources' performance. These sources' performance over time thus would not be assessed correctly, so some different type of estimate must be made. To address this problem, we performed a linear regression on the data base—including both best performing sources and other sources—

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7 See Method 0050, Section 1.2. Also, see equivalent Method 26A, Section 13.1.

8 As further evidence of the Method 0050 bias, the updated, equivalent method to Method 0050—Method 26A—states that that method has a possible measurable negative bias below 20 ppm HCl.

charting standard deviation against emissions, and extrapolated the regression downward to the emission level for each best performing source to impute a standard deviation.

Sierra Club states that it is inappropriate to use emissions variability for sources that are not best performing sources to project emissions variability for the best performing sources. We disagree here because we believe this is the best means of estimating the best performing sources' variability and hence their actual performance. See *Sierra Club. v. EPA*, 479 F. 3d 875, 882 (D.C. Cir. 2007) (EPA may consider variability of performers other than best if there is "a demonstrated relationship between the two"). First, Sierra Club is not correct that EPA is using variability of non-best performers as a proxy for the variability of the best performers. As just stated, EPA imputed the regression curve downward after examining all data and it is reasonable to do so because the relative standard deviation (i.e., variability of performance normalized for emission concentration)[9] of the test condition runs of the better performing sources (i.e., sources with lower emissions) here was not significantly different from the relative standard deviation of the test condition runs of the worse performing sources.[10] EPA reasonably assumed that this same relationship (i.e. the shape of the regression curve) would be the same at lower levels. The actual level of variability of the best performing sources resulting from this imputed regression curve shape is less for the best performing sources than for non-best sources. See generally, memorandum from Lucky Benedict,

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9 Relative standard deviation is calculated as the standard deviation times 100 divided by the average, and is expressed as a percentage.

10 As should be apparent from the following discussion, EPA is not using information on emission levels of worse performing sources to estimate the best performers' emission levels (the fact pattern of the *Cement Kiln Recycling Coalition* case and *Brick MACT* cases; see 255 F. 3d at 865 and *Brick MACT*, 479 F. 3d at 881-82).

EERGC, to Bob Holloway, USEPA, entitled "Analysis of Total Chlorine Data above 20 ppmv," dated March 21, 2007.

We have (uncorrected) variability results for several sources that performed close to the best performing sources—four sources emitted between 21 ppmv and 25 ppmv, and seven sources emitted between 21 ppmv and 28 ppmv. We considered using the variability of these sources as a surrogate for the variability for the best performers (i.e. those at 20 ppmv) but were concerned that this may overstate best performers' variability and hence result in a standard which is too high (i.e., insufficiently stringent).[11] Rather, we used variability results for all sources, irrespective of emission level, to develop a variability/emissions regression curve. This curve regressed variability[12] versus emissions through the low emitting sources that performed close to the best performers (e.g., including sources with emissions of 21 ppmv and 24 ppmv, only slightly higher than the 20 ppmv for the best performers). We then extrapolated the curve down to the 20 ppmv emission level to impute a standard deviation for the best performers.[13] As noted above, we determined that there is no significant difference in relative standard deviation for low emitting sources (e.g., sources emitting 21 ppmv to 38 ppmv) compared to high emitting sources (e.g., sources emitting 130 ppmv to 920 ppmv), and hence that it is reasonable to use all of the available data to derive a best fit shape of the regression curve.[14] This similarity confirms that data on all sources' variability can reasonably be

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11 For example, the variability (i.e., standard deviation) of test condition runs generally increases as emission concentrations increase.

12 We repeat that variability is measured as standard deviation.

13 USEPA, "Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards," September 2005, Section 8-1.

14 See memorandum from Lucky Benedict, EERGC, to Bob Holloway, USEPA, entitled "Analysis of Total Chlorine Data above 20 ppmv," dated March 21, 2007.

considered – by means of imputing the shape of the regression curve at the low end -- in estimating the variability of the best performing sources.

This approach does not substitute variability from non-best performers for variability of best performers. Rather, it uses all of the data to estimate how variability may change as performance improves to derive a best estimate of the variability of the best performers.[15]

c. *Statistical Imputation Is Inappropriate Because It Overstates Variability*. Sierra Club mistakenly believes that we used statistical imputation to project variability of the corrected data. As just discussed in Section B.2.b., we used a linear regression analysis specifically because an alternative approach that we used to project variability of data sets containing nondetects—statistical imputation—would overstate variability of the corrected data. 71 FR at 52630. We explained that the statistical imputation approach for correcting data below 20 ppmv without dampening variability would involve imputing a value between the reported value and 20 ppmv because the "true" value of the biased data would lie in this interval. This approach would be problematic, however, given that many of the reported values (based on the biased analytic method) were much lower than 20 ppmv; the statistical imputation approach would tend to overestimate the run-to-run variability (leading to a standard higher than the one we are adopting) and hence we rejected its use in this context.

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15 As it happens, if EPA were erroneously including information on variability of higher emitting sources in this analysis, it would result in a more stringent standard because the shape of the regression slope would be steeper and would cross the 20 ppmv point at a lower point (because less variability would be imputed at lower emission concentrations). See Figure 1 in the memorandum cited in the preceding footnote. In fact, because (as explained in the text above) relative standard deviations of higher emitting sources do not increase as emissions increase, EPA does not believe it committed this type of error.

d. *Achievability of a Floor Emission Level*. Sierra Club states that it is unlawful to consider whether a floor emission level is achievable. But the issue here is assessing sources' performance over time. If a best performing source on whose performance a MACT floor is based cannot itself comply with that floor standard, then that source's performance over time has been improperly assessed. Put another way, that source's variability (i.e., performance over time) has not been adequately accounted for. *Mossville Environmental Action Now v. EPA*, 370 F. 3d 1232, 1241-42 (D.C. Cir. 2004). Since the standard must be met "every day and under all operating conditions," it is imperative that the emission data used to represent the performance of the best performing sources truly represent the performance of those sources over time by, notably, accounting for emissions variability. *Id*. at 1242.

C. Use of PS-11 and Procedure 2 as Guidance for Extrapolating the Alarm Set-Point of a Particulate Matter Detection System (PMDS)

In its reconsideration petition, CKRC asked that EPA reconsider its references to Performance Specification 11 (PS-11) and Procedure 2 in the particulate matter detection system (PMDS) provisions of the October 12, 2005 final rule. We granted reconsideration because we developed the procedures for extrapolating the alarm set-point for PMDS that included references to PS-11 and Procedure 2, in response to comments on the proposed rule and after the period for public comment. 71 FR at 52630-31.

CKRC also stated that the reference to PS-11 for particulate matter Continuous Emissions Monitoring Systems (40 CFR Part 60, Appendix B) and Procedure 2 (Appendix F, Part 60) for use as guidance to implement provisions to extrapolate the

alarm set-point of a PMDS may effectively prevent its members from utilizing this option due to significant technical difficulties and excessive costs.[16] CKRC further stated that PS-11 and Procedure 2 contain a number of problems as they would apply to cement kilns, and that it has filed a petition for review in the U.S. Court of Appeals for the D.C. Circuit challenging EPA's final rule adopting PS-11 and Procedure 2, which case is being held in abeyance.

Finally, CKRC stated that use of a regression analysis approach to extrapolate the alarm set-point is not justified or necessary to establish an approximate correlation between the particulate matter detector system response and particulate matter concentrations. CKRC suggested that an alternative approach would be based on a linear relationship passing through zero and the mean of the PM comprehensive performance test results.

When we reviewed the procedures in the final rule for establishing the set-point in light of CKRC's concerns regarding use of a regression analysis to extrapolate the set-point and use of PS-11 and Procedure 2 as guidance, we identified several shortcomings of the final rule. Consequently, we proposed to revise the provisions for establishing the alarm set-point by extrapolation by: (1) adding procedures to establish the alarm set-point for operations under the Documentation of Compliance; (2) revising procedures to extrapolate the alarm set-point for operations under the Notification of Compliance; and (3) providing specific rather than generic references to PS-11 and Procedure 2 provisions that must be followed to extrapolate the alarm set-point. 71 FR at 52631-33.

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16 See letter from David P. Novello to Stephen L. Johnson regarding "Petition for Reconsideration of Certain Provisions of Hazardous Waste Combustor MACT Replacement Standards Rule," dated December 9, 2005, p. 9, docket item EPA-HQ-OAR-2004-0022-0520.

We also determined that the final rule was silent on what operators must do when the PMDS (or bag leak detection system (BLDS)) is malfunctioning (e.g., when it is out of control or inoperable). We explained in the reconsideration proposal that it is reasonable to require that operations when the PMDS or BLDS is unavailable be considered the same as operations that exceed the alarm set-point given that there would be no information to conclude otherwise. Thus, we proposed to require sources to correct the malfunction or minimize emissions, and require that the duration of the malfunction be added to the time when the PMDS or BLDS exceeds the alarm set-point. If the time of PMDS or BLDS malfunction and exceedance of the alarm set-point exceeds 5 percent of the time during any 6-month block time period, the source would have to 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 PMDS or BLDS malfunctions and the revisions to the design, operation, or maintenance of the combustor, air pollution control equipment, or PMDS (or BLDS) it is taking to minimize exceedances.

1. Summary of the Final Action

We are today promulgating: (1) revised procedures to extrapolate the PMDS alarm set-point which are less prescriptive than those we proposed in the reconsideration notice; (2) with respect to the excessive exceedance notification for the PMDS if the set-point is exceeded for more than five percent of the time during any 6-month block time period, a requirement, as proposed in the reconsideration notice, to also include the time the PMDS malfunctions (while the combustor is operating), as well as the time the PMDS set-point is exceeded; and (3) revised PMDS general requirements to clarify that, if the alarm set-point is exceeded or if the PMDS malfunctions, the source must take the

corrective measures it specifies in its operating and maintenance plan required under §63.1206(c)(7).

We discuss below the revised procedures to extrapolate the PMDS alarm set point. We discuss the other provisions—PMDS and BLDS malfunctions and clarification of general PMDS requirements—in the response to major comments below. Please note that the revised provisions are effective immediately, and today's final rule does not change the October 14, 2008 compliance date for existing sources established by the October 12, 2005 final rule. Sources can readily comply with the revised provisions promulgated today on the compliance time line established by the October 12, 2005 final rule.

The revised procedures to extrapolate the PMDS alarm set point address four aspects: (1) establishing the set-point for operations under the Documentation of Compliance; (2) establishing the set-point for operations under the initial Notification of Compliance; (3) PMDS quality assurance procedures; and (4) revising the set-point subsequent to periodic comprehensive performance testing and other testing, such as for quality assurance. See §63.1206(c)(9)(ii) through (v). In addition, please note that the final rule no longer references PS-11 or Procedure 2. We have concluded that the Relative Response Audit provisions of Procedure 2, and applying the correlation curve statistical parameters in PS-11, may not be appropriate in some situations. Accordingly, the final rule requires sources to recommend for approval site-specific procedures for PMDS quality assurance and to determine, as additional data pairs become available, when and how to evaluate correlation models that may better represent the relationship between reference method measurements and PMDS responses than a linear model.

a. *Documentation of Compliance Set-Point.* To establish the set-point for the Documentation of Compliance (DOC), the source must obtain a minimum of three reference method and PMDS data pairs, as proposed. 71 FR at 52631/3. As proposed, a source: 1) may use existing data obtained within 60 months of the DOC; 2) must approximate the correlation of the reference method data to the PMDS data; 3) may assume a linear correlation; and 4) may use a zero-point. A source must request approval from the regulatory authority (in the continuous monitoring system test plan) of their determination whether multiple correlation curves will be necessary considering the design and operation of its combustor and PMDS (e.g., cement kilns equipped with an in-line raw mill and that use a light-scattering detector may need to establish separate correlation curves with the mill on and mill off).[17] We are including this provision in the final rule in light of comments indicating that multiple correlation curves may be needed to appropriately correlate reference method and PMDS responses in some situations.[18] As proposed, a source must establish the alarm set-point as the PMDS response that corresponds to a PM concentration that is 50% of the PM emission standard or 125% of the highest PM concentration used to develop the correlation, whichever is greater. The PM emission concentration used to extrapolate the alarm set-point must not exceed the PM emission standard, however.

b. *Initial Notification of Compliance Set-Point.* To establish the set-point for operations under the initial Notification of Compliance, a source must request approval from the regulatory authority (in the continuous monitoring system test plan) of

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17 USEPA, "Current Knowledge of Particulate Matter (PM) Continuous Emissions Monitoring," September 8, 2000, p. 7-3.

18 See letter from David P. Novello to Stephen L. Johnson regarding "Petition for Reconsideration of Certain Provisions of Hazardous Waste Combustor MACT Replacement Standards Rule," dated December 9, 2005, p. 20, docket item EPA-HQ-OAR-2004-0022-0520.

procedures they will use to establish an approximate correlation curve considering the three pairs of Method 5 or 5I data, the PMDS response data from the comprehensive performance test, and any additional data pairs, as warranted (e.g., data pairs during as-found operations; data pairs used for the Documentation of Compliance correlation curve). As proposed, the final rule: (1) requires sources to use a least-squares regression methodology to correlate PM concentrations to PMDS responses for data pairs; (2) allows sources to assume that a linear regression model approximates the relationship between PM concentrations and PMDS responses; and (3) requires sources to establish the alarm set-point as the PMDS response that corresponds to a PM concentration that is 50% of the PM emission standard or 125% of the highest PM concentration used to develop the correlation, whichever is greater. The emission concentration used to extrapolate the PMDS response must not exceed the PM emission standard. 71 FR at 52632-33.

In addition, a source must request approval from the regulatory authority (in the continuous monitoring system test plan) of their determination whether multiple correlation curves are needed, considering the design and operation of the combustor and PMDS for reasons discussed above. If multiple correlation curves are needed, a source must request approval of the number of data pairs needed to establish those correlation curves and explain how the data will be obtained.

We are not promulgating the proposed requirement to obtain three data pairs under as-found operations in addition to the performance test data pairs because the additional data may not significantly improve the assumed linear correlation model in all

cases.[19] Having three as-found data pairs would still result in too few data pairs to perform statistical analyses to identify the most appropriate correlation curve.[20] Additional as-found data pairs may be warranted, however, in situations such as those where the extrapolated alarm set-point correlates to a PM concentration close to the PM emission standard, or where a single correlation curve may be reasonable even though multiple curves may better represent the correlation. We conclude that it is more appropriate to make these determinations on a site-specific basis rather than mandate universal testing that may not be particularly useful.

c. *PMDS Quality Assurance*. For PMDS quality assurance, a source must request approval from the regulatory authority (in the continuous monitoring system test plan) of the quality assurance procedures that will reasonably ensure that PMDS response values below the alarm set-point do not correspond to PM emission concentrations higher than the value that correlated to the alarm set-point.[21]

Today's final rule requires a source to establish site-specific quality assurance measures rather than comply with the Relative Response Audit (RRA) provisions of Procedure 2 that apply to PM CEMS, which was required under the October 12, 2005

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19 For example, additional as-found data pairs would not likely improve compliance assurance for sources that extrapolate the alarm set-point to a response that correlates to only 50% of the PM emission standard.

20 Even with three as-found data pairs, there would be only nine data pairs available to establish the correlation curve—three data pairs from the DOC, three data pairs from the comprehensive performance test, and the three as-found data pairs. (There would be 10 data pairs if a zero-point were used.) Procedure 2 for PM CEMS (Appendix F, Part 60) requires a minimum of 12 data pairs for a relative correlation audit. See Section 10.3(8).

21 Please note that the rule also requires quality assurance procedures for sources that elect to establish the alarm set-point without extrapolation. In that situation, a source must request approval from the regulatory authority of the quality assurance procedures that reasonably ensure that PMDS response values below the alarm set-point do not correspond to PM emission concentrations higher than those demonstrated during the comprehensive performance test.

final rule and contemplated in the reconsideration proposal.[22] For PM CEMS, a RRA is comprised of three pairs of reference method and PM CEMS responses at as-found operating conditions. For PMDS, the RRA would involve obtaining three pairs of reference method and PMDS responses. We now conclude, however, that all of the quality assurance provisions established for PM CEMS may not be appropriate for PMDS given that PMDS responses will only be approximately correlated to PM concentrations rather than direct measures of such; therefore PMDS correlations will not be subjected to the statistical criteria applicable to PM CEMS under Section 13.2 of PS-11.

For example, one criterion under Procedure 2 for passing the RRA, Section 10.4(6)(iii), as we considered adopting it for PMDS, would require that at least two of the three sets of PMDS and reference method measurements must fall within a specified area on a graph of the correlation regression line. The specified area on the graph of the correlation regression line is defined by two lines parallel to the correlation regression line, offset at a distance of ±25 percent of the numerical emission limit value from the correlation regression line. In retrospect, and in light of comments on the reconsideration notice, we have determined that this criterion would be inappropriate for a PMDS. The correlation regression line for a PMDS would generally comprise six data pairs when the alarm set-point is established in the initial Notification of Compliance, while the correlation regression line for a PM CEMS would comprise 15 data pairs initially, and if a Reference Correlation Audit, which requires 12 data pairs, had been performed, a total of 27 data pairs. Consequently, the PMDS correlation curve would not be as well defined

[22] Section 10.3(6) explains how a RRA is performed for a PM CEMS, Section 10.4(6) establishes the criteria for passing a RRA for a PM CEMS, and Section 10.5 establishes procedures for PM CEMS that fail the RRA.

as the PM CEMS correlation curve—6 data pairs versus 15 to 27 data pairs—and, thus, the RRA criterion for PM CEMS under Section 10.4(6)(iii) would not be appropriate.

Please note that a less precise correlation is appropriate for PMDS because they will be used for compliance assurance (i.e., as an indicator for reasonable assurance that an emission standard is not exceeded) rather than compliance monitoring (i.e., as an indicator of continuous compliance with an emission standard). As such, exceedance of a PMDS response that appears to correlate to a PM emission level exceeding the PM standard is not evidence of a violation of the emission standard. 70 FR at 59490-91

In the interim until more definitive guidance is available, we recommend that sources consider whether some of the RRA provisions of Procedure 2 may be appropriate for PMDS.

d. *Revising the Initial Notification of Compliance Set-Point*. To revise the set-point subsequent to periodic comprehensive performance testing and other testing, such as for quality assurance, a source must propose to the regulatory authority for approval (in the continuous monitoring system test plan) an approach for how it will periodically revise the alarm set-point, considering the additional data pairs.

We are promulgating a site-specific approach to revise the set-point rather than the prescriptive approach proposed in the reconsideration notice (i.e., using the statistical parameters applicable to PM CEMS to identify the most appropriate correlation model). 71 FR at 52633/2. At proposal, we assumed that a minimum of 13 data pairs would be available for applying the PM CEMS statistical parameters, and that the parameters could be applied to as few as 13 data pairs. Under today's final rule, there could be as few as

six data pairs[23] (plus perhaps a zero-point) available prior to any quality assurance testing that may be approved or required by the regulatory authority. Consequently, it would be appropriate to continue to apply the new data pairs obtained from quality assurance testing and periodic comprehensive performance testing to the linear correlation model until enough data pairs are available to warrant applying statistical parameters to determine if there is a more appropriate correlation model (e.g., logarithmic, exponential). In addition, the number of data pairs needed for meaningful statistical analysis will depend on factors including the range of the data. For example, if much of the data are representative of the high end of the range of normal operations (or only two modes of operation—normal within a narrow range and high-end), statistical analysis may not help identify the most appropriate correlation model. Thus, we conclude that these determinations should be made on a site-specific basis.

We note that sources can consider adding newly obtained data pairs to the pool of existing data pairs and continue to apply a linear correlation model to extrapolate the alarm-set-point until it obtains enough data representative of a range of PM concentrations that would warrant statistical analysis to identify the most appropriate correlation model. After a source obtains enough of these data pairs (e.g., 12 to 15), the statistical parameters that they should consider to identify the best correlation model include: the confidence interval half range percentage, the tolerance interval half range percentage, and the correlation coefficient. PS-11 provides definitions of these statistical parameters and other information that may be useful when evaluating correlation models.

[23] A minimum of three data pairs are needed for the Documentation of Compliance, and an additional three data pairs are needed for the initial Notification of Compliance (i.e., obtained during the comprehensive performance test).

2. What Are the Responses to Major Comments?

Comment: CKRC states that eliminating general references to PS-11 and Procedure 2 while including references to specific provisions of those procedures does not address their fundamental problem—PS-11 and Procedure 2 are problematic in a number of ways for cement kilns. CKRC believes it is unnecessary to include or even refer to specific procedures to be used when extrapolating the set-point. Instead, the facility and regulatory authority can and should be encouraged to develop appropriate procedures on a case-by-case basis. CKRC states that other extrapolation procedures may become available, and should not be excluded or precluded.

Response: This is not the appropriate forum for addressing CKRC's challenges to PS-11 and Procedure 2. In response to comments received, however, the final rule no longer references PS-11 or Procedure 2. As discussed above, we have concluded that the RRA provisions of Procedure 2, and applying the correlation curve statistical parameters in PS-11, may not be appropriate in some situations. Accordingly, the final rule requires sources to recommend for approval site-specific procedures for PMDS quality assurance and to determine, as additional data pairs become available, when and how to evaluate correlation models that may better represent the relationship between reference method measurements and PMDS responses than a linear model.

Comment: CKRC states that it is inappropriate to sum times when the alarm set-point is exceeded and times that the PMDS is malfunctioning (and the source continues to operate). If the sum of these times exceeds 5 percent of the operating time in a 6-month block time period, the source would be required to submit an excess exceedance report to

the regulatory authority. This would create unnecessary burdens and imply incorrectly that PM emissions may be excessive.

Response: We explained in the reconsideration notice that it is reasonable to require that operations when the PMDS is unavailable be considered the same as operations that exceed the alarm set-point given that there would be no information to conclude otherwise. We maintain this view, and the commenter did not provide a basis for us to conclude that this requirement is inappropriate. In filing the excess exceedance report, however, the source is free to identify the portion of the exceedance time that was due to the PMDS malfunctioning.

Comment: CKRC states that it is possible to improperly interpret §63.1206(c)(9)(ii)(C) in the October 12, 2005 final rule to require compliance with the alarm set-point, implying that an exceedance of the alarm set-point is a violation of the operating requirements.

Response: We agree, and have revised the requirement to clarify that, if the alarm set-point is exceeded, the corrective measures specified in the operation and maintenance plan must be followed. See revised §63.1206(c)(9)(i)(G) through (I) and 63.1206(c)(9)(vii).

D. Tie-Breaking Procedure for New Source Standards

The petition of the Coalition for Responsible Waste Incineration (CRWI) sought reconsideration of the tie-breaking procedure used to identify the single best performing source in cases where the MACT floor methodology identified multiple sources with the

same single best System Removal Efficiency (SRE)/Feed aggregated scores.[24] In the rare instances when a tie occurred, we selected the source with the lowest emissions (of the tied sources) as the criterion to break the tie. See 70 FR at 59447 and 71 FR at 52634. As noted in CRWI's petition, this occurred for the mercury and low volatile metals new source standards for incinerators. Noting that EPA did not discuss the concept of selecting the source with the lowest emissions as the criterion to break ties (because this unusual situation did not occur at proposal), the CRWI argued in its petition that EPA had provided no opportunity to comment on the tie-breaking procedure. Pursuant to section 307(d)(7)(B) of the CAA, we granted the CRWI's petition for reconsideration.

As stated in the September 6, 2006 notice announcing reconsideration of this issue, the arguments the CRWI presented in its petition for reconsideration did not initially persuade us that our tie-breaking procedure – selecting the source (of the tied sources) with the lowest emissions as the single best performing source – was erroneous or inappropriate. 71 FR at 52634. However, because we did not discuss the concept of selecting the source with the lowest emissions as the criterion to break ties in the proposed rule, we decided to grant reconsideration on this issue and provide an opportunity for public comment on the tie-breaking procedure for new sources.

In the notice of reconsideration, we requested comment on our decision to select the source (of all tied sources) with the lowest emissions as the single best performing source for purposes of new source floor determinations. We also specifically requested comment on alternative tie-breaking criteria including (1) using the single source (of the tied sources) with the best SRE; (2) selecting the single source (of the tied sources) with

[24] System removal efficiency is a measure of the percentage of HAP that is removed prior to being emitted relative to the amount fed to the unit from all inputs (e.g., hazardous waste, raw materials). For additional discussion of the SRE/Feed methodology, see 70 FR at 59441-447.

worst SRE; and (3) using some other form of averaging (e.g., the 99th percentile upper prediction limit) of the tied sources.

1. Summary of the Final Action

The comments to the reconsideration notice did not provide a basis for us to conclude that the tie-breaking procedure used in the final rule was incorrect, impermissible, or otherwise flawed. Therefore, we reaffirm the validity of the determination made at promulgation and are making no changes to the final rule. Because we are retaining the same tie-breaking procedure as promulgated in the October 12, 2005 rule, the new source incinerator emission standards promulgated for mercury and low volatile metals under §63.1219(b)(2) and (b)(4) remain unchanged.

2. What Are the Responses to Major Comments?

In response to the notice of reconsideration, we received four comment letters on this issue. These comment letters are available in the official public docket.[25] A summary of major comments received on this reconsideration issue and EPA's responses to those comments are provided below.

Comment: Three commenters state that EPA misconstrues the language of section 112(d)(3) of the CAA, especially the phrase "best controlled similar source." These commenters argue that section 112(d)(3) does not preclude the possibility that more than one source could be considered "best." Moreover, EPA is not required to select the single best performing source in instances where EPA's floor methodology identifies more than one best performing source. Instead of applying a tie-breaking

[25] See comments 0565, 0567, 0569, and 0573 in the docket (EPA-HQ-OAR-2004-0022).

procedure, these commenters state that EPA should establish the floor at a level that all can meet (e.g., the highest emissions achieved among the tied sources).

Response: We disagree with the commenters' interpretation of section 112(d)(3). As we explained in the reconsideration notice, we believe that the tie-breaking procedure adopted in the final rule is a reasonable interpretation of section 112(d)(3)'s language (it is, at the least, reasonable to interpret section 112(d)(3) to base the new source floor on the performance of a single source, since the provision refers to "source" singular, not plural). 71 FR at 52634. The commenter cites legislative history in support of its interpretation. H. Rep. No. 101-490 at 328. That legislative history refers to "similar sources" after describing standards for new and existing sources, and the commenter views this language as supporting its view that the floor standard for new sources can be based on more than one best performing source. It is not clear that this passage is referring to new source standards, or whether instead that the plural reference is only meant to apply to existing sources. It is also not certain that the legislative history is even applicable, since it interprets a version of section 112(d)(3) not identical to the final version, and one which may have allowed consideration of costs at the floor level of control. See H. Rep. No. 101-490 at 328 ("In addition, EPA has to consider the above statutory factors, including costs, in determining stringency and similarity"). In any case, EPA is not aware of any compelling policy reason to adopt the commenter's interpretation. As explained in the reconsideration notice, basing the floor standard on the performance of a single source having the lowest emissions is an entirely reasonable means of selecting the best performing source among sources with best feedrate and system removal. 71 FR at 52634.

Comment: These same commenters state that EPA is inconsistent in its application of the tie-breaking procedure to other standards. Two new source standards are cited by commenters as instances where EPA did not select a single best performing source among MACT pool sources. Specifically, the commenters refer to the total chlorine standards for new incinerators and the total chlorine standards for new liquid fuel boilers (for the category of sources that burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb).

Response: Both standards cited by the commenters are cases where nearly all available total chlorine data reflect the revised data handling procedure to account for method bias for total chlorine measurements below 20 ppmv. (See related discussion in Section III.B above on this issue.) In these instances, we corrected all total chlorine measurements that were below 20 ppmv to 20 ppmv to establish the total chlorine floors.[26] For incinerators, all 25 runs of total chlorine emissions data from the sources that comprise the MACT pool were corrected to 20 ppmv, and, in the case of liquid fuel boilers (low heating value subcategory), 17 of 18 runs were corrected to 20 ppmv. Given that both MACT pools of best performing sources (incinerators and liquid fuel boilers) comprised sources with the same level of performance from an emissions perspective (because nearly all of the best performing sources' emissions were adjusted to the same emissions level to account for bias in the analytic method), the case is not analogous to where performance among sources differ. The commenter's point also is without practical significance since an identical new source standard would have been

[26] In addition, to address run-to-run variability given that nearly all runs for these data sets were corrected to 20 ppmv, we imputed a run standard deviation based on a regression analysis of run standard deviation versus total chlorine concentration for sources with total chlorine measurements greater than 20 ppmv. Thus, emissions at the upper prediction limit at a 99th percentile confidence level from these sources are identical.

promulgated regardless of source selected (given identical performance by the best performing sources).

Comment: Three commenters state that the tie-breaking procedure is not reasonable because it is based on a method that produces arbitrary results and is impermissible under the statute. The commenters argue that breaking the tie based on emissions levels (of the tied sources for the mercury and low volatile metals standards) is inappropriate because such standards would arbitrarily reflect HAP levels in raw materials and fossil fuels. In addition, the tie-breaking procedure is impermissible because it imposes what amounts to beyond-the-floor standards without consideration of the beyond-the-floor factors (e.g., the floors identified by EPA would require one or more of the tied source having to install upgraded air pollution control equipment to achieve the floor) including costs, energy, and non-air health and environmental impacts.

Response: We disagree with the commenters' statement that the mercury and low volatile metals standards represent *de facto* beyond-the-floor standards. In EPA's view, a purported floor standard which forces the best performer on whose performance the floor standard is based to change its practices is a *de facto* beyond-the-floor new source standard (or, put another way, has mis-assessed the source's performance). This is not the case for the mercury and low volatile metals standards for new incinerators. These standards reflect the performance of a combination of front end control (limiting the feedrate of mercury in the hazardous waste) and back end control (performance of a control technology such as particulate matter control). Sources have the ability to control emissions of mercury (and low volatile metals) by either of these control techniques as did the single best performing source as identified by our tie-breaking procedure (of the

tied sources). Thus, we have not improperly estimated the performance of the best performing source since that source is capable of replicating its own performance.

E. New Source Particulate Matter Standard for New Cement Kilns

In the October 12, 2005 final rule, we based the particulate matter standard for new cement kilns on emissions data from the Ash Grove Cement Company kiln located in Chanute, Kansas (Ash Grove Chanute) and promulgated a standard of 0.0023 gr/dscf.[27] The petitions of the Ash Grove Cement Company and the Cement Kiln Recycling Coalition requested that EPA reconsider the 0.0023 gr/dscf standard for new cement kilns.[28] The petitioners stated that the 0.0023 gr/dscf standard was not properly noticed because we did not discuss using the emissions data from Ash Grove Chanute as part of the new source MACT cement kiln floor analysis in the April 20, 2004 proposed rule.[29] However, the particulate matter data from Ash Grove Chanute was considered (in fact, it was the single best performing source upon which the 0.0023 gr/dscf standard was based) in the particulate matter MACT floor analysis in the final rule. 70 FR at 59419.

Pursuant to section 307(d)(7)(B) of the CAA, we granted reconsideration of the new source particulate matter standard for new cement kilns. 71 FR 14665. Reconsideration of the standard was appropriate because we adopted the calculation using particulate matter emissions data from the Ash Grove Chanute plant after the

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27 See USEPA, "Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards," September 2005, Appendix F, Table "APCD-CK-PM." The Ash Grove Chanute test data were from performance testing conducted in December 2001 and March 2002.

28 The petitions for reconsideration for the Ash Grove Cement Company and the Cement Kiln Recycling Coalition are included in the docket (EPA-HQ-OAR-2004-0022). See docket items 0516 and 0520, respectively.

29 In the 2004 proposed rule, we stated that it was not appropriate to use the Ash Grove Chanute data for the MACT floor analysis for existing sources. 69 FR at 21217 n. 35. While the proposed rule was thus clear that available particulate matter data from Ash Grove Chanute would not be used in the MACT floor analysis for existing sources, we did not state whether or not these data would be evaluated in the new source floor analysis. Thus, no revision of the standard is necessary.

period for public comment on the proposed rule. In addition, the petitioners argued that the particulate matter standard of 0.0023 gr/dscf was derived using unrepresentative test data from Ash Grove Chanute, resulting in a standard that the source itself could not achieve. To support their position, petitioners provided additional particulate matter performance data from the Ash Grove Chanute plant.

In the notice of reconsideration, we stated that "it appears that the promulgated new source standard for particulate matter for cement kilns is overly stringent in that it does not fully reflect the variability of the best performing source over time (the "emission control that is achieved in practice," using the language of section 112(d)(3))." 71 FR at 14668. Incorporating the newly submitted particulate matter data from the Ash Grove Chanute plant into the MACT floor analysis, we proposed a revised particulate matter standard for new cement kilns of 0.0069 gr/dscf. 71 FR at 14669-70. We also proposed revisions to the particulate matter standards for new incinerators and liquid fuel boilers (*Id.*). As discussed in the reconsideration notice, the MACT floor methodology for particulate matter includes a "universal variability factor" to address long-term variability in particulate matter emissions of sources using fabric filters. 71 FR at 14668 and 70 FR at 59440.[30] When we included the newly submitted Ash Grove Chanute data in the universal variability factor analysis, the long-term variability relationship changed, which led to the proposed (small) changes to the incinerator and liquid fuel boiler new source particulate matter standards.

[30] The universal variability factor relationship is not developed for each source category, but is based on relevant data from all hazardous waste combustor source categories. See "Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards," September 2005, Sections 5.3 and 7.4.

1. Summary of the Final Action

We are today promulgating revised new source standards for particulate matter for cement kilns and incinerators that burn hazardous waste. The revised particulate matter standards for new cement kilns and new incinerators are 0.0069 gr/dscf and 0.0016 gr/dscf, corrected to 7 percent oxygen, respectively. These amendments revise 40 CFR 63.1219(b)(7) and 63.1220(b)(7)(i).

We are not, however, revising the particulate matter standard for new liquid fuel boilers as proposed. In the March 23, 2006 reconsideration notice, we proposed to revise the particulate matter standard to 0.0088 gr/dscf (20 mg/dscm) from 0.0087 gr/dscf (20 mg/dscm) as a result of a minor change in the universal variability factor relationship. 71 FR at 14670. In a subsequent action, we decided to express all particulate matter standards in the same format used in the October 12, 2005 final rule. See 73 FR at 18973 (April 8, 2008). In the case of liquid fuel boilers, this would be in the units of mg/dscm. Since the standard promulgated in the October 2005 rule and the standard calculated in the reconsideration proceedings are identical – 20 mg/dscm – no change in the standard is necessary.

As proposed, we are amending the compliance date requirements under 40 CFR 63.1206 to require that new cement kilns (i.e., sources that commenced construction or reconstruction after April 20, 2004, the date of the rule proposing the full set of MACT standards for cement kilns) comply with the revised particulate matter standard by the later of **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]** or the date the source starts operations. 71 FR at 14671. See amendments to 40 CFR 63.1206(a)(1)(ii)(B). In addition, we are not amending the compliance date requirements

for new incinerators for reasons discussed in the proposed rule (*Id*.).

2. What Are the Responses to Major Comments?

We received fifteen comment letters in response to the notice of reconsideration. These comment letters are available in the official public docket. A summary of major comments received on this reconsideration issue and EPA's responses to those comments are provided below.

Comment: One commenter points out that EPA characterized the newly submitted data by Ash Grove Chanute as "normal" in the March 2006 reconsideration notice and states that it is arbitrary and capricious to include any emissions data characterized as other than "compliance test" (e.g., "normal" or "in-between" data) in the MACT floor analysis for particulate matter. [31] According to the commenter, EPA's established methodology for particulate matter only considers data characterized as "compliance test." As an example, the commenter cites the incinerator analysis included in the October 2005 rule as evidence that EPA inappropriately departed in the reconsideration notice from the established MACT floor methodology for particulate matter. In addition, the commenter states that it is inappropriate to include in the MACT floor analysis data rated as other than "compliance test" due to regulatory oversight and statistical variability considerations. Finally, the commenter states that other source categories should also be afforded the same opportunity to submit "normal" emissions data for inclusion in the floor analyses.

Response: While it is true that we do not consider "normal" emissions data for some MACT floors, we disagree with the commenter that the particulate matter standards

[31] We classified emissions data of each test condition for each pollutant in one of four ways: "compliance test," "normal," "in between," and "not applicable." 69 FR at 21218-19.

are based solely on data rated as "compliance test." The MACT floor standards for particulate matter are identified using the Air Pollution Control Technology (APCD) methodology. See 70 FR at 59447; see also Section III.A of September 27, 2007 notice (72 FR at 54878). For reasons discussed in the technical support document, the APCD approach only considers "compliance test" emissions data for sources not equipped with fabric filters. However, for fabric filter equipped sources, all available valid emissions data, including those rated as "normal" (i.e., day-to-day, as opposed to compliance test data) are included in floor analysis for particulate matter.[32, 33] Given that Ash Grove Chanute uses a fabric filter to control emissions of particulate matter, it is appropriate to include in the MACT floor analysis available emissions data rated as "normal," which we did in the reconsideration notice. Therefore, we disagree with the commenter that we deviated from the established APCD approach methodology in the March 2006 reconsideration notice.

We also note that the commenter is incorrect in stating that the incinerator MACT floor standards for particulate matter are based only on "compliance test" data. Eleven fabric filter-equipped sources comprise the MACT pool for incinerators. When evaluating the floor for particulate matter, available emissions data from all sources but one (source no. 3000) included either "normal" or "in between" data in the analysis.[34]

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32 See USEPA, "Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards," September 2005, Section 7.4, and also Section 5.3. Valid emissions data includes those characterized as "compliance test," "normal," and "in between."

33 We concluded in the October 12, 2005 rule that normal emissions data from fabric filter-equipped sources should also be included in the particulate matter floor analysis because particulate matter emissions are relatively insensitive to baghouse inlet loading and operating conditions. 70 FR at 59424.

34 USEPA, "Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards," September 2005, Appendix F, Table APCD-INC-PM. For example, the single best performing source was source no. 341, whose valid particulate matter performance data include both "compliance test" data (condition C10) and "in between" data (condition C12). Another best performing incinerator in the MACT pool was source 3010 that included a total of nine valid test conditions (one

Finally, we disagree that it is inappropriate to include "normal" and "in between" emissions data from fabric filter-equipped sources in the APCD approach analysis. As discussed in the October 12, 2005 rule, particulate matter emissions from fabric filter-equipped sources are more difficult to maximize (compared to other control equipment) during compliance testing because particulate matter emissions are relatively insensitive to fabric filter inlet loadings and operating conditions.[35] As a result, in addition to "compliance test" data, we also used "normal" and "in between" rated emissions data from fabric filter-equipped sources. We did this not only for cement kilns, but also for other source categories with best performing sources equipped with fabric filters. Given that the particulate matter floor analysis was applied equally to all source categories, the commenter's suggestion of revising the MACT floor standards for other source categories is without merit.

Comment: One commenter states that it is arbitrary for EPA to revise the particulate matter MACT floor standard based on the selective use of new data from one source (i.e., the data submitted by Ash Grove Chanute). According to the commenter, EPA must collect data from all cement kiln sources. The commenter also states that it was arbitrary and capricious for EPA to accept the newly submitted data (showing higher emissions of particulate matter) for the Ash Grove Chanute kiln while refusing to consider or collect other emissions data from other newly constructed cement kilns that may refute the claim that new baghouses inevitably deteriorate.

"compliance test," five "normal," and three "in between"). Individual test condition ratings can be found in the hazardous waste combustor data base. See docket item EPA-HQ-OAR-2004-0022-0433.

[35] USEPA, "Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards," September 2005, Section 5.3.

Response: First, the commenter's belief that the proposed revision was based entirely on "new" data – data for periods after EPA closed the data information record – is not correct. The most salient data indicating that the source's performance over time had been mischaracterized comes from 2003, within the period for which EPA accepted performance data. The data showed the Ash Grove Chanute test average over two tests to be 0.0062 gr/dscf (without any statistical adjustment for variability), higher than its predicted maximum performance of 0.0023 gr/dscf.[36] These data would have been presented to EPA and included in the data base for the promulgated rule had EPA provided proper notice, and would have necessarily changed the estimate of the performance of the Ash Grove Chanute kiln.

Second, the remaining information was presented to EPA in the context of reconsideration, and EPA had no choice but to consider it. Nor was EPA's consideration of the new information arbitrary. EPA did not selectively seek new information to alter a standard, nor did an industry group selectively present data to EPA which it could have presented during the rulemaking. Nor did EPA review only "cherry-picked" data on the performance of the relevant source. Rather, EPA has reasonably considered all of the information on the performance of the source characterized as "best controlled", which source's performance formed the sole basis for the new source standard at issue.

Comment: Two commenters state that the particulate matter standard of 0.0023 gr/dscf (the standard promulgated in the October 12, 2005 rule) is readily achievable by

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[36] Incidentally, these data are yet another instance where performance tests failed to accurately characterize a source's performance (despite the commenter's reiterated assertions that such tests account for all variability because they are conducted under so-called worst-case conditions). Indeed, in this instance, even the EPA-predicted level of 0.0023 gr/dscf (which is a value reflecting statistical adjustment to account for both short-term and long-term variability) did not adequately account for the source's long-term variability.

cement kilns and should not be revised. These commenters state that it is arbitrary and capricious for EPA to use the new Ash Grove Chanute data because the higher emission levels seen with the 2003-2005 data may be the result of other factors besides normal deterioration of a new baghouse after the initial break-in period. The commenters suggest other explanations for the higher emissions including: (1) Ash Grove Chanute had no regulatory incentive to optimize the kiln's performance in subsequent tests because the source was subject to an emission standard that is less stringent than 0.0023 gr/dscf; and (2) Ash Grove Chanute does not use a baghouse leak detection system with its baghouse that would have allowed it to detect and fix smaller leaks. Therefore, according to the commenters, the possibility that Ash Grove Chanute allowed the kiln's performance to deteriorate by failing to install testing equipment and conduct necessary maintenance is at least as plausible as normal degradation of a new baghouse after the initial break-in period.

Response: We disagree with the comment that a particulate matter standard of 0.0023 gr/dscf represents the performance of the best performing source, considering performance variability, for new cement kilns, based on available data and information. The MACT floor standard is to be based on *actual* performance data (accounting for variability), not as the commenter would have it on what *could* be achieved by using other control methods not in use at the best performing source (e.g., a bag leak detection system at Ash Grove Chanute).[37] The question of what the best performer would do if it were equipped differently is legally irrelevant in establishing a floor for new sources since it does not relate to the best performing source's actual performance. The Ash

[37] In fact, and as acknowledged by the commenters, no cement kilns are currently using a bag leak detection system with their kiln baghouse.

Grove Chanute data from 2003-2005 show that the source we identified as the single best performer in the October 12, 2005 rule – Ash Grove Chanute – cannot achieve the 0.0023 gr/dscf standard promulgated in that rule when it operates under the operation and maintenance practices that were required and otherwise appropriate for the source.[38] In other words, the promulgated standard demonstrably did not account for the source's legitimate operating variability – its performance over time when operated and maintained properly.

We also disagree that Ash Grove Chanute allowed its kiln's performance to deteriorate during subsequent testing in 2003-2005 because there was no regulatory incentive to optimize the kiln's performance. The commenters speculate that because Ash Grove Chanute operated at particulate matter levels so far below allowable levels in 2001-2002, Ash Grove could have been less concerned with tuning, optimizing and maintaining the baghouse for the 2003-2005 testing. The applicable regulations require the kiln to be properly operated and designed. Thus, Ash Grove Chanute required to maintain good air pollution control practices for minimizing emissions during the 2003-2005 testing (e.g., see §§63.6(e)(1) and 63.1206(c)(7)).

The emission data themselves do not support the commenters' claim and support that the source was properly operated. First, the kiln's performance did not "deteriorate" over time. The kiln had lower emission levels when tested in 2005 (and 2004) than it did during the 2003 tests.[39] When the kiln was tested on successive days in 2005, the nine

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[38] At the time of testing, the fabric filter performance was maintained by compliance with an opacity standard.

[39] The data were: one test condition conducted in December 2003 averaged 0.0062 gr/dscf; a second test condition conducted in September 2004 averaged 0.0015 gr/dscf, and three test conditions conducted in November 2005 averaged 0.0060, 0.0035, and 0.0017 gr/dscf, respectively. These are actual

test runs conducted over a consecutive three day period show that average emissions of particulate matter decrease from the previous day: day one emissions averaged 0.0060 gr/dscf, day two averaged 0.0035 gr/dscf, and emissions on day three averaged 0.0017 gr/dscf.[40] These test results showing "improved" performance combined with Ash Grove Chanute's statements that there were no changes in the maintenance of the air pollution control equipment during the three days of testing do not support the commenter's argument that Ash Grove Chanute's 2003-2005 data reflect an ineffective ongoing maintenance program. Indeed, the day three results are among the lowest emissions achieved by the source in our data base.[41] Thus, neither the claimed lack of a regulatory incentive to maintain levels achieved in 2001-2002 nor failure to maintain the air pollution control system would explain why particulate matter emissions "improved" over this three day period, or "improved" between 2003 and 2005. The obvious explanation is that these varying results illustrate the source's normal operating variability.

Comment: One commenter claims that Ash Grove Chanute's 2003-2005 emissions data resulted from tests that were not conducted under the same operating conditions as the initial tests in late 2001 and early 2002. According to the commenter, varying combustion gas flow rates and process conditions explain the higher particulate matter emissions in the 2003-2005 data.

Response: Hazardous waste combustor sources are subject to site-specific operating requirements that must be maintained in order to ensure continued compliance

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measurements, and do not include adjustments for run-to-run variability, or application of the Universal Variability Factor.

40 We note that the day three particulate matter results are only slightly higher than levels achieved in 2002: 0.0017 gr/dscf vs. 0.0013 gr/dscf.

41 See docket item EPA-HQ-OAR-2004-0022-0546.1, page 9.

with the hazardous waste combustor MACT standards, including the particulate matter standard. These operating requirements are established during a compliance test when sources generally operate under conditions that are at the extreme high end of the range of normal operations. Sources do this to provide themselves operating flexibility for day-to-day operations while complying with the rule's standards and operating requirements. While operating conditions may vary among the available Ash Grove Chanute data, the 2003-2005 data were generated while operating within the limits established during the compliance test. Therefore, we reject the suggestion that the data are not reflective of Ash Grove Chanute's performance over time.

Comment: The same commenter states that EPA based the proposed standard of 0.0069 gr/dscf on a cement kiln source (Giant Cement Company, SC) that ceased operations in 2005. The commenter notes that this is inappropriate and inconsistent with the approach discussed in the October 12, 2005 final rule whereby EPA concluded that MACT floor standards should be based only on the performance of sources that actually are operating (i.e., burning hazardous waste). 70 FR at 59419.

Response: We agree with the commenter that this source ceased operations in 2005. While we continue to believe that the approach to exclude "no longer operating sources" from the MACT floor analysis is appropriate, we believe this situation is different given that the vast majority of standards are not at issue in these reconsideration proceedings. We also note that the MACT floor standard for new cement kilns would increase slightly (the commenter evidently assumed a decrease) to 0.0071 gr/dscf if we were to make the data base change the commenter suggests.

F. Beyond-the-Floor Analyses to Consider Multiple HAP That Are Similarly Controlled

The petition of the Sierra Club sought reconsideration of several beyond-the-floor determinations, including beyond-the-floor analyses to consider multiple HAP that are controlled by a single control mechanism. One of the concerns was whether EPA had adequately complied with public notice and comment requirements regarding the beyond-the-floor evaluations included in the October 12, 2005 final rule. Noting that EPA had included a new revised beyond-the-floor analysis (in response to the petitioner's comments to the April 20, 2004 proposed rule) in the final rule, the Sierra Club argued that EPA had provided no opportunity to comment on the revised beyond-the-floor analysis. Pursuant to section 307(d)(7)(B) of the CAA, we granted the Sierra Club's petition for reconsideration with respect to beyond-the-floor analyses to consider multiple HAP that are controlled by a single control mechanism.[42]

In the notice of reconsideration, we requested comment on a revised beyond-the-floor analysis whereby we evaluated the achievability, within the meaning of section 112(d)(2) of the CAA, of beyond-the-floor standards for all HAP for each source category or subcategory. 71 FR at 52635. We called this analysis the "comprehensive beyond-the-floor analysis" (or comprehensive analysis). *Id*. In general, the comprehensive analysis was an evaluation of beyond-the-floor control options that would achieve emission reductions of all HAP, based on what we consider reasonable assumptions of performance of each control method, from levels achieved at the MACT floor. Evaluated control methods included techniques such as activated carbon injection

[42] In its petition for reconsideration, the Sierra Club also requested that EPA reconsider beyond-the-floor standards based on wet and dry scrubbing. We denied the Sierra Club's petition to reconsider these rule provisions for reasons discussed in a letter to Sierra Club. See docket item EPA-HQ-OAR-2004-0022-0558 (August 22, 2006).

or carbon beds, improved or new particulate matter control equipment, and acid gas scrubbing devices.

Given that some control methods are capable of achieving reductions of multiple HAP, we apportioned the costs of a specific control method (e.g., an activated carbon injection system) among the HAP that it would control. Control method costs are apportioned on a source-by-source basis to those HAP requiring emission reductions to achieve the beyond-the-floor standard. We did this because some control methods are more achievable (within the meaning of section 112(d)(2)) than other methods. In addition, apportioning costs of control to each HAP allowed us to determine that beyond-the-floor standards are warranted for a subset of HAP for a given category or subcategory in cases where adopting beyond-the-floor standards for all HAP (the comprehensive analysis) was not justified. For example, based on the results of the comprehensive analysis at proposal for the existing source solid fuel boiler category, we tentatively rejected setting beyond-the-floor standards for all HAP because we judged the suite of standards as unachievable.[43] However, based on our proposed methodology to apportion control costs, we judged the beyond-the-floor standard for particulate matter as achievable.[44]

1. Summary of the Final Action

After careful consideration of the comments, we are reaffirming most of the

[43] The aggregate total annualized cost of the comprehensive analysis was $8.8 million and would result in the following emission reductions: 0.3 g TEQ of dioxin/furans; 468 tpy of particulate matter; 0.03 tpy of mercury; 0.47 tpy of semivolatile metals; 0.52 tpy of low volatile metals; 794 tpy of total chlorine; and 0.97 tpy of non-dioxin/furan organic HAP. See July 2006 technical support document supporting the reconsideration notice (Appendix A, page 10 of 37 and Table 4-4, page 4-6).

[44] The beyond-the-floor analysis of particulate matter alone resulted in total annualized costs of $1.5 million and would result in a reduction of 468 tpy of particulate. These estimates equate to a cost-effectiveness of $2,569 per ton of particulate matter, which we proposed to be justified (Appendix A, page 3 of 37).

beyond-the-floor determinations made at promulgation of the October 12, 2005 final rule and initially determined not to change in the subsequent reconsideration notice. That is, we continue to conclude that several beyond-the-floor standards are achievable, namely the beyond-the-floor standards for particulate matter for existing and new solid fuel boilers. However, because we have determined for independent reasons not to defend the dioxin/furan standards for liquid fuel boilers (see Section IV.D below), that issue has become moot. These beyond-the-floor standards were promulgated in the October 12, 2005 final rule. In addition, we are concluding that beyond-the-floor standards for the remaining standards (of those EPA is defending) are not warranted.[45] Therefore, we are making no changes to the final rule as a result of reconsideration of the beyond-the-floor standards.

2. What Are the Responses to Major Comments?

In response to the notice of reconsideration, we received seven comment letters on this issue. These comment letters are available in the official public docket.[46] A summary of major comments received on this reconsideration issue and EPA's responses to those comments are provided below.

Comment: Regarding EPA's rejection of several beyond-the-floor analyses that included a cost-effectiveness evaluation of the beyond-the-floor standard, one commenter states that the CAA requires that EPA's standards must reflect the "maximum" degree of reduction that is achievable considering the "cost of achieving such emission reduction" and any non-air quality health and environmental impacts and energy requirements.

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45 USEPA, "Technical Support Document for HWC MACT Standards: Petitions for Reconsideration Support Document," February 2008, Section 4.

46 See comments 0563, 0564, 0565, 0567, 0568, 0569, and 0573 in the docket (EPA-HQ-OAR-2004-0022).

According to the commenter, the only relevant factors regarding the cost measures are (1) whether it is too costly to be "achievable;" and (2) whether it would yield additional reductions, so that EPA's standard would not reflect the "maximum" achievable degree of reduction without it. The commenter further states that cost-effectiveness is not relevant to either of these questions and that cost-effectiveness is not a metric for cost.

Response: We disagree with the commenter's interpretation. We addressed a comment similar to this one in a recent final rule for the Portland Cement Manufacturing NESHAP. 71 FR at 76534 (December 20, 2006). For readers' convenience, our response is repeated below:

The statute requires that EPA consider ''the cost of achieving such emission reduction'' (section 112 (d)(2)) in determining the maximum emission reduction achievable. This language does not mandate a specific method of taking costs into account, as the commenter would have it, but rather leaves EPA with significant discretion as to how costs are to be considered. See *Husqvarna AB v. EPA,* 254 F. 3d 195, 200 (D.C. Cir. 2001). In that case, the court interpreted the requirement in section 213(a)(3) of the CAA (which mirrors the language in section 112(d)(2)) that nonroad engines "achieve the greatest degree of emission reduction achievable through the application of [available] technology * * * giving appropriate consideration to the cost of applying such technology," and held that this language "does not mandate a specific method of cost analysis." The court therefore "f[ound] reasonable EPA's choice to consider costs on the per ton of emissions removed basis."

Moreover, where Congress intended that economic achievability be the means of assessing the reasonableness of costs of technology-based environmental standards, it

says so explicitly. See Clean Water Act section 301(b)(2)(A) (direct dischargers of toxic pollutants to navigable waters must meet standards reflecting "best available technology economically achievable"). There is no such explicit directive in section 112(d)(2). EPA accordingly does not accept the commenter's interpretation.

Comment: The same commenter argues that the concept of cost-effectiveness is at odds with the mandate of section 112(d)(2) that requires beyond-the-floor standards to reflect the "maximum" achievable degree of reduction. According to the commenter, cost-effectiveness is an inherently subjective measure that compares "cost" with a benefit (the amount of pollution reduced). By asserting discretion to set a beyond-the-floor standard at a level yielding not the "maximum" degree of reduction that is "achievable" but, instead, the degree of reduction that EPA believes is cost-effective, the commenter argues that EPA alters the statutory mandate and defeats Congress's purpose.

Response: First, the commenter is simply not correct that section 112(d)(2) precludes EPA from considering cost-effectiveness as a means of evaluating costs. In addition to the authority cited in the previous response, see *Bluewater Network v. EPA*, 372 F. 3d 404, 411, (D.C. Cir. 2004) a case interpreting the same statutory language described in the previous response (section 213(a)(3) of the Act), which is substantially identical to the language in section 112(d)(2). Rejecting an argument that EPA must require the greatest technically achievable reductions immediately, the court stated "the lesson from *Husqvarna* … is not that the EPA must adopt the most stringent standards based on the most advanced control technologies but that the EPA is to arrive at standards that reduce emissions to the greatest degree possible after considering the spectrum of available technologies and the costs and benefits associated with those

technologies." Considering costs and benefits associated with control technologies is essentially synonymous with the cost per increment of HAP removed, viz. cost effectiveness.[47]

The comment also mischaracterizes the proposed beyond-the-floor methodology. The commenter essentially states that EPA's proposed beyond-the-floor analyses may not reflect the "maximum" degree of HAP reduction that is achievable by a given beyond-the-floor control technology or method. This is simply not the case. As proposed in the reconsideration notice, the beyond-the-floor control options are based on what we consider a reasonable assumption of a given control method's consistent performance given the levels achieved at the floor. Therefore, for each HAP, this performance estimate does indeed reflect the maximum degree of reduction that is achievable. Using total chlorine as an example, when evaluating beyond-the-floor standards based on duct injection dry scrubbing for lightweight aggregate kilns and solid fuel boilers, we assumed an incremental control level of 75% (from levels achieved at the floor).[48] We then evaluated the cost impacts per ton of total chlorine emission reduction, and the adverse energy and solid waste impacts, but only at the control level of 75%. That is, we did not evaluate the costs and corresponding emission reductions of a given control method – in this example duct injection dry scrubbing – for less stringent beyond-the-floor standards (e.g., less efficient control levels of 70%, 60%, 50%, etc for duct injection dry scrubbing)

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47 See also, *Bluewater Network v. EPA*, 370 F. 3d 1, 20 (D.C. Cir. 2004) ("We agree that EPA may rely on cost and other statutory factors to set standards at a level less stringent than that reflected by across-the-fleet implementation of advanced technologies. This court noted in *Husqvarna* that 'the overriding goal of [§213] is air quality and the other listed considerations, while significant, are subordinate to that goal.' 254 F. 3d at 200. Nevertheless, as the court emphasized in reflecting on very similar language in §202(*l*) of the CAA, the provision 'does not resolve how the Administrator should weigh all [the statutory] factors in the process of finding the 'greatest emission reduction achievable.'' *Sierra Club v. EPA*, 355 U.S. App. D.C. 474, 325 F. 3d 374, 378 (D.C. Cir. 2003)".

48 See USEPA, "Draft Technical Support Document for HWC MACT Standards: Reconsideration of the Beyond-the-Floor Evaluations," July 2006, Section 3, page 3-2.

and then select the most cost efficient of the various control levels evaluated. Thus, the beyond-the-floor analyses presented in the reconsideration proposed rule do correspond to a "maximum" degree of HAP reduction.

Comment: The same commenter states, contrary to EPA's claim, that *Husqvarna AB v. EPA*, 254 F.3d 195, 200 (D.C. Cir 2001) does not support EPA's interpretation of section 112(d)(2). According to the commenter, although EPA apparently based its cost analysis on cost-effectiveness in *Husqvarna*, its decision to do so was neither challenged nor at issue in that case, and *Husqvarna* does not endorse it.

Response: The commenter's reading of *Husqvarna* is not correct. The case both holds that language substantially identical to that in section 112(d)(2) "does not mandate a specific method of cost analysis," and explicitly upholds the cost-effectiveness method for assessing costs used in the rule, since it upheld "the EPA's choice to consider costs on the per ton of emissions removed basis." 254 F. 3d at 200. The court also rejected arguments that EPA was required to conduct incremental cost-effectiveness analyses (justifying each successive increment of control as cost effective), *id*., surely an unnecessary step if the Agency could not lawfully conduct any type of cost effectiveness analysis at all as a means of ascertaining if a standard is achievable considering costs.

Comment: The same commenter further states that EPA's proposed method for determining cost-effectiveness for multiple HAP that are controlled by a single control mechanism is arbitrary and unrelated to any relevant inquiry under the CAA. The commenter notes several deficiencies, including: (1) The proposed beyond-the-floor methodology is arbitrary because EPA did not explain how the cost of a single control device (e.g., an activated carbon injection system) is apportioned among the different

HAP controlled by it in the comprehensive analysis; (2) EPA assigned inappropriately the entire cost of a single control mechanism to each different HAP controlled by it that yielded false information and a meaningless analysis; and (3) EPA failed to assess the cost of a control method against all of the HAP controlled by it.

Response: We disagree with all the points raised in the comment as explained below. With respect to the first point made by the commenter, the technical support document supporting the reconsideration notice explained how the cost of a single control device was apportioned among the HAP controlled by it in the comprehensive analysis. The data used in the beyond-the-floor cost calculations and the cost apportioning results were also included in the appendices of the technical support document. Simply stated, the costs of a beyond-the-floor control technology or technique is apportioned among the HAP that it would control according to the formula shown in the technical support document.[49]

For purposes of responding to the comment that EPA's proposed beyond-the-floor methodology requires beyond-the-floor controls to be purchased and installed more than once (thus overestimating total control costs), the following example illustrates why the methodology does not do what the commenter suggests. This example shows how the beyond-the-floor costs are apportioned using the detailed information presented at proposal in Appendix A of the technical support document.[50] Source no. 487 is an incinerator that would need reductions in emissions of dioxin/furans, mercury, particulate

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49 USEPA, "Draft Technical Support Document for HWC MACT Standards: Reconsideration of the Beyond-the-Floor Evaluations," July 2006, Section 3.1.3. We note that the formula to apportion beyond-the-floor costs is shown in Section 3.1.3, paragraph (b), on pages 3-4 and 3-5.

50 USEPA, "Draft Technical Support Document for HWC MACT Standards: Reconsideration of the Beyond-the-Floor Evaluations," July 2006. All page references related to this discussion are from this document.

matter, and semivolatile metals in order to achieve the suite of beyond-the-floor standards (page 13 of 37 in Appendix A) in the comprehensive analysis. Emission reductions of dioxin/furans and mercury would be achieved by a new activated carbon injection system and improvements to the existing fabric filter, while reductions in particulate matter and semivolatile metals would be achieved by the same improvements to the existing fabric filter (*id.*). Thus, costs associated with the activated carbon system are apportioned between dioxin/furans and mercury, while the costs of the fabric filter improvements are allocated among all four HAP. We estimated the combined total annualized costs of one activated carbon injection system and the fabric filter improvements for source 487 to be approximately $396,000 (*id.*). In the comprehensive beyond-the-floor analysis, the costs were allocated according to the discussion in Section 3.1.3 of the technical support document. The results of the proposed analysis show that $178,000 was allocated each to dioxin/furan and mercury and the remaining $40,000 was allocated equally to particulate matter and semivolatile metals (page 27 of 37 in Appendix A). The sum of these allocated costs equals the total cost of the new activated carbon injection system and fabric filter improvements -- $396,000 ($178,000 + $178,000 + $40,000). Thus, as this example shows, we disagree with the commenter that the comprehensive beyond-the-floor analysis inflates control costs by requiring beyond-the-floor costs to be purchased and installed more than once.[51]

We further disagree with the commenter that our approach to apportion control costs is inherently arbitrary and unrelated to any relevant inquiry under the CAA. Apportioning control costs in the context of the comprehensive analysis allows us to

[51] This example remains valid as an illustration, although EPA has determined for independent reasons not to defend the standards for some of the HAP given in the example.

evaluate the costs in relation to the HAP controlled. This is particularly true in the hazardous waste combustor NESHAP because numerous emission standards are established, including standards for dioxin/furans, mercury, semivolatile and low volatile metals, particulate matter, hydrogen chloride and chlorine, hydrocarbons and carbon monoxide.[52] The allocation approach allows us to evaluate the costs associated with a specific HAP and compare it to costs that we have accepted (or rejected) in other EPA air programs. Otherwise, given the extensive use of standards for individual HAP, such comparisons are difficult. Moreover, we are willing to assume higher costs for particularly toxic HAP and apportioning control method costs among the similarly controlled HAP helps us identify such cases. For example, consider the following two theoretical beyond-the-floor situations for a control method that achieves a total combined reduction of 100 tons of total chlorine and mercury at a cost of $1,000,000. Assume under the first scenario that the emission reductions would be split at 99.99 tons of total chlorine and 0.01 tons of mercury. Under the second scenario, 100 tons of total chlorine and mercury would also be reduced, but assume the emissions split is 90 tons of total chlorine and 10 tons mercury. While the overall cost and total reduction in emissions are constant between the two scenarios and may not be warranted as a beyond-the-floor control option, we may find the reductions for mercury under the second scenario as justified, given the greater reductions achieved for mercury, and given that mercury is a persistent bioaccumulative toxic compound.[53]

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[52] For example, as explained in an earlier footnote, we rejected as unachievable the costs associated with adopting beyond-the-floor standards for all HAP for solid fuel boilers. However, our cost allocation procedure showed us that the particulate matter standard was achievable even though beyond-the-floor standards for the remaining HAP were not.

[53] See also 64 FR at 52882 and 52897 (September 30, 1999), where EPA accepted a higher cost-effectiveness for semivolatile metal reductions for cement and lightweight aggregate kilns to ensure that

Finally, the commenter states that EPA failed to assess the cost of a control method against all the HAP controlled by it. We disagree. The table below, summarizing information in the record at the time we issued the reconsideration notice, presents the comprehensive beyond-the-floor analysis for each source category.[54] The summary table below shows the total annualized control costs and associated emission reductions for the beyond-the-floor option for all HAP and HAP surrogates.[55]

Table 1. Summary of Comprehensive Beyond-the-Floor (BTF) Analysis in Proposed Rule

Source Category	Total Annualized Cost of BTF Option	Emission Reductions of BTF Option	
		Total All HAP and HAP Surrogates	Reductions by HAP and HAP Surrogate
Incinerators	$20,200,000	140 t	D/F: 0.8 g; PM: 46 t; Hg: 0.2 t; SVM: 0.4 t; LVM: 0.2 t; TCl: 91 t; organic HAP: 2.4 t
Cement kilns	$27,800,000	499 t	D/F: 1.4 g; PM: 322 t; Hg: 0.7

these sources are using the best controls for HAP introduced almost exclusively from the burning of hazardous waste.

54 USEPA, "Draft Technical Support Document for HWC MACT Standards: Reconsideration of the Beyond-the-Floor Evaluations," July 2006, Section 3.1.3, Table 4-4, and Appendix A. The examples in the text are to illustrate the reasonableness of the general methodology for making beyond-the-floor determinations. EPA has determined, for independent reasons, not to defend certain of the standards included in the above Table.

55 The PM standard is used as a surrogate to control: (1) Emissions of nonenumerated metals (antimony, cobalt, manganese, nickel, and selenium) that are attributable to all feedstreams (both hazardous waste and remaining inputs); and (2) all nonmercury metal HAP emissions (both enumerated and nonenumerated metal HAP) from the nonhazardous waste process feeds at cement kilns, lightweight aggregate kilns, and liquid fuel boilers (e.g., emissions attributable to coal and raw material at a cement kiln, and emissions attributable to fuel oil for liquid fuel boilers).

			t; SVM: 1.3 t; LVM: 0.06 t; TCl: 141 t; organic HAP: 33 t
Lightweight aggregate kilns	$4,200,000	279 t	D/F: 1.1 g; PM: 9.1 t; Hg: 0.02 t; SVM: 0.02 t; LVM: 0.01 t; TCl: 270 t; organic HAP: 0.2 t
Liquid fuel boilers	$24,400,000	679 t	D/F: 0.4 g; PM: 437 t; Hg: 0.06 t; SVM: 0.1 t; LVM: 1.1 t; TCl: 241 t; organic HAP: 0.1 t
Solid fuel boilers	$8,800,000	1,264 t	D/F: 0.3 g; PM: 468 t; Hg: 0.03 t; SVM: 0.5 t; LVM: 0.5 t; TCl: 794 t; organic HAP: 1.0 t
Hydrochloric production furnaces	$904,000	17 t	D/F: 0.1 g; TCl: 17 t; organic HAP: 0.01 t

Comment: The same commenter states that EPA proposed a flawed beyond-the-floor analysis with respect to organic HAP (other than dioxin/furans) that would be controlled by activated carbon injection. According to the commenter, carbon monoxide and hydrocarbons are not valid surrogates for non-dioxin/furan organic HAP, in general,

and are irrational as a basis for evaluating the cost-effectiveness of activated carbon injection for the organic HAP that it controls because EPA did not propose a cost-effectiveness of the control measure. As a result, the proposed beyond-the-floor analysis overstated costs and understated effectiveness.

Response: To the extent the commenter is suggesting that carbon monoxide and hydrocarbons are generally poor surrogates for organic HAP, we strongly disagree. We have fully explained in earlier rules our rationale of using these organic HAP surrogates when establishing MACT floor standards for hazardous waste combustors. 64 FR at 52847-52. Furthermore, the beyond-the-floor analysis of control methods for organic HAP that do not control other HAP regulated by this rule (e.g., use of an afterburner or use of better combustion practices to reduce organic HAP emissions) are not at issue in this proceeding.

As stated in the reconsideration notice, we indicated that it was inappropriate to identify numerical beyond-the-floor standards for carbon monoxide and hydrocarbons based on activated carbon injection. 71 FR at 52636. We continue to believe this decision is sound for the reasons discussed in the proposed rule. However, in response to comments, we have examined the activated carbon injection beyond-the-floor analysis discussed in the reconsideration notice. In the proposed rule we estimated total annualized costs and emission reductions of dioxin/furans, mercury, and organic HAP associated with activated carbon injection.[56] Aggregating the costs and emission reductions for the three HAP, the cost-effectiveness of the activated carbon injection option can be estimated for each source category. For each source category, the cost-

[56] USEPA, "Draft Technical Support Document for HWC MACT Standards: Reconsideration of the Beyond-the-Floor Evaluations," July 2006, page 4-6, Appendix A, pages 2 and 4.

effectiveness results were considered unreasonable, within the meaning of section 112(d)(2). For example, the cement kiln standards were found to be most cost-effective at approximately $560,000 per ton of organic HAP, mercury, and dioxin/furan removed. Given that 98% of the 34 tpy of HAP reduced under the activated carbon injection option are organic HAP, we find that this cost-effectiveness value exceeds estimates previously rejected by EPA for organic HAP control for non-hazardous waste cement kilns. 71 FR at 76531.

Comment: One commenter states that some of the emission standards promulgated in the October 12, 2005 final rule already represent beyond-the-floor standards because EPA has not shown that 12% of existing sources can achieve the standards without modification. Thus, the commenter states that the beyond-the-floor analyses are moot until EPA justifies the existing standards as beyond-the-floor standards.

Response: We disagree with the commenter. The MACT floor standards are based on the performance of actual sources within each source category. That is, we did not base MACT floors on theoretical sources. Given that the control methods needed to achieve the MACT floor standards are fully integrable and compatible, we are not obligated to establish a suite of floor standards that are simultaneously achievable by at least six percent of the sources because the standards are not technically interdependent. See *Chemical Manufacturers Ass'n*, 870 F. 2d at 239 (best performing sources can be determined on a pollutant-by-pollutant basis so that different plants can be best performers for different pollutants).

Comment: One commenter suggests that EPA better explain how costs were allocated among multiple HAP in the comprehensive analysis and why the chosen method is reasonable and appropriate.

Response: In finalizing the technical support document, we have expanded the discussion as suggested by the commenter. See "Technical Support Document for HWC MACT Standards: Petitions for Reconsideration Support Document," October 2008.

G. Dioxin/Furan Standard for Incinerators with Dry Air Pollution Control Devices

The petition of the Sierra Club sought reconsideration of the dioxin/furan standard for existing incinerators with either a dry air pollution control devices or waste heat boiler.[57] In the October 12, 2005 final rule, we promulgated a dioxin/furan standard of 0.40 ng TEQ/dscm provided that the combustion gas temperature at the inlet to the initial particulate matter control device is 400°F or below (see §63.1219(a)(1)(i)). The final standard for this subcategory was less stringent than that proposed (0.28 ng TEQ/dscm) as a result of a data base change between proposal and promulgation. 71 FR at 52636-638. We made this data base change, which pertained to incinerator source 327 (specifically, test condition C10) in our data base, in response to public comments to the proposed rule. 70 FR at 59432. In its petition for reconsideration, the Sierra Club stated that the dioxin/furan floor standard increased as a result of EPA's post proposal decision to use different data to represent source 327 and that EPA had provided no opportunity for public comment on this data handling decision. Pursuant to section 307(d)(7)(B) of the CAA, we granted the Sierra Club's petition for reconsideration of the dioxin/furan

[57] The Sierra Club also petitioned EPA to reconsider the dioxin/furan standard for the subcategory of incinerators with wet or no air pollution control devices. As discussed in the September 6, 2006 notice, we denied this reconsideration request (71 FR at 52627). See also docket item EPA-HQ-OAR-2004-0022-0558.

standard for incinerators with either a dry air pollution control device or waste heat boiler.

As stated in the September 6, 2006 reconsideration notice, the arguments provided by Sierra Club in its petition for reconsideration did not convince us that our decision on what emissions data to use to represent source 327 for the dioxin/furan MACT floor analysis was erroneous or inappropriate. Therefore, in the reconsideration notice we solicited comment on the identical MACT floor analysis (for dioxin/furans for this incinerator subcategory) and underlying data handling decision regarding source 327 as promulgated in the October 12, 2005 final rule. 71 FR at 52636-38. That is, we proposed not to use the dioxin/furan test results where source 327 encountered operational problems with its carbon injection system. Instead, we proposed to use other valid emissions data in our emissions data base from this source in the MACT floor analysis. In response to the notice for reconsideration, we received five comment letters on this issue. These comment letters are available in the official public docket.[58]

1. Summary of the Final Action

The comments to the reconsideration notice provided limited new information regarding the dioxin/furan standard for incinerators with either a dry air pollution control devices or waste heat boiler. No new technical information on the dioxin/furan test results that EPA excluded were received in comments. We received one comment letter that challenged whether we exercised appropriate judgment in excluding the one test result from source 327. After evaluation of the comments, we are deciding to retain the dioxin/furan standard as promulgated and are making no changes to the final rule.

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[58] See comments 0563, 0565, 0567, 0568, and 0569 in the docket (EPA-HQ-OAR-2004-0022).

Because we are not revising the dioxin/furan standard for incinerators, the standard as promulgated under §63.1219(a)(1) remains unchanged.

2. What Are the Responses to Major Comments?

We received five comment letters in support of and one comment letter objecting to our decision to replace the 2001 data for source no. 327 with other dioxin/furan emissions data in our data base. A summary of major comments received on this reconsideration issue and EPA's responses to those comments are provided below.

Comment: A comment was received stating that EPA did not explain why the MACT floor standard was based exclusively on compliance test data. The same commenter argues that the 2001 test results from source 327 (i.e., the test data during which operational problems with the carbon injection system occurred) were conducted under compliance test conditions and should be characterized as such in EPA's data base. Finally, the commenter states that whether or not the test results for source 327 were used to establish operating parameter limits is not relevant in determining whether they are compliance test data.

Response: We disagree with the comment. As explained in the September 6, 2006 reconsideration notice, we solicited comment on the identical MACT floor analysis and standard that was promulgated for this subcategory of incinerators. 71 FR at 52636-38. As explained in the proposed rule, EPA's data base is comprised of emissions data from tests conducted for various reasons. For MACT floor analysis purposes, all emissions data were characterized in one of four ways: "compliance test" data, "normal" data, "in-between" data, and "not applicable" data. See 69 FR at 21218-219 (April 20, 2004). After characterizing the data, we followed a general "data hierarchy" to identify

the data to use for each emissions standard. 69 FR at 21229. For the subcategory of existing incinerators with either a dry air pollution control device or waste heat boiler, we tentatively concluded at proposal and confirmed in the 2005 final rule that it is appropriate to base the dioxin/furan standard on "compliance test" emissions data associated with the most recent test campaign. See 69 FR at 21240 (April 20, 2004) and page 10-4 of "Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards" (September 2005). Therefore, the record clearly shows our consistent intent to use compliance test data to determine the MACT floor standard for this subcategory of incinerators, as the data most representative of the performance of sources in this subcategory.

In response to public comments to the April 20, 2004 proposed rule, the characterization of source 327's test data (i.e., test condition 327C10 in our data base) was changed from "compliance test" to "not applicable" because the carbon injection system malfunctioned during the test. As discussed in the technical support document, one of the reasons data may be characterized as "not applicable" is if problems were encountered during testing that "prevented the data from being used for regulatory compliance purposes." The operational troubles experienced during testing prevented source 327 from using the data in question to set operating parameter limits, a regulatory compliance purpose. See "Draft Technical Support Document for HWC MACT Standards, Volume II: HWC Data Base" (March 2004), pages 2-3 to 2-6, and "Technical Support Document for HWC MACT Standards, Volume II: HWC Data Base" (September 2005), pages 2-11 to 2-13. If the data are unsuitable for regulatory purposes (which is unquestioned here), then EPA can reasonably decline to use the data to

characterize the source's performance for standard setting purposes.

Comment: One commenter states that our decision not to use the 2001 test data from source 327 and instead use dioxin/furan emissions data with higher levels from 1992 is arbitrary and capricious. This is because EPA had no reason to believe that source 327 would perform worse than the level it achieved despite operational problems.

Response: The 2001 test data in our data base for source 327 do not represent the source's performance over time because the source encountered operational problems during testing. As a result, we believe it is inappropriate to use such data when identifying MACT floor standards (or any other standards, for that matter). The fact remains that we have no valid data reflecting the performance and performance variability of this source when using a carbon injection system. While dioxin/furan emission results may be lower using the carbon injection system, we are not in possession of such data. It is also a fact that none of the available 1992 emissions data (i.e., the only compliance test data in our data base for this source) is low enough to be considered among the 12 percent of best performers. As a result, available valid emissions data for source 327 have no direct impact on the MACT floor analysis.

Comment: One commenter stated that the dioxin/furan standard is unlawful and arbitrary and capricious because the calculated MACT floor of 0.42 ng TEQ/dscm is less stringent than the current interim standard of 0.40 ng TEQ/dscm. Therefore, these results indicate that the MACT floor methodology does not yield floors reflecting the actual performance of the relevant best sources.

Response: We disagree with the comment for the same reasons discussed in Part Four, Section III.F of the October 12, 2005 final rule. 70 FR at 59458.

H. Provisions of the Health-Based Compliance Alternative

The October 12, 2005 final rule allowed sources to establish and comply with 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 established under §§63.1216, 63.1217, 63.1219, 63.1220, and 63.1221. See 70 FR at 59413-19 and §63.1215.

Sierra Club petitioned for reconsideration stating that EPA changed several provisions of the health-based compliance alternative after the period for public comment and therefore did not provide notice and opportunity for public comment.[59] In addition, Sierra Club stated that three new provisions are problematic: (1) it is unlawful to allow sources to comply with the health-based compliance alternative without prior approval from the permitting authority; (2) it is unlawful to allow a source to obtain an unlimited extension of the compliance date if their eligibility demonstration is disapproved and the source is unable to change the design or operation of the source to comply with the MACT emission standards by the compliance date; and (3) the Agency cannot rely on the Title V program as the vehicle for establishing health-based compliance alternatives.

We granted reconsideration of these provisions because we developed them in response to comments on the proposed rule, after the period for public comment as Sierra Club stated. Furthermore, to address Sierra Club's concerns, we proposed to revise the rule pertaining to these provisions as follows: (1) the rule would state that the operating requirements specified in the eligibility demonstration are "applicable requirements" as defined in 40 CFR 70.2 or 71.2 and therefore must be incorporated in the Title V permit;

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[59] See letter from James Pew to Stephen Johnson, dated December 12, 2005, Section XII, docket item EPA-HQ-OAR-2004-0022-0517.

(2) a source may comply with the health-based compliance alternative without prior approval from the permitting authority provided that the source has made a good faith effort to provide complete and accurate information and to respond to any requests for additional information; and (3) the compliance date extension cannot exceed one year if the eligibility demonstration is disapproved and the source is unable to change the design or operation to comply with the MACT emission standards by the compliance date.

1. Summary of the Final Action

We are today promulgating revisions to the health-based compliance alternative as proposed in the reconsideration notice. The comments to the reconsideration notice did not provide a basis for us to conclude that the health-based compliance alternative, as we proposed to revise it, was inappropriate. Therefore, we reaffirm the health-based compliance alternative that we promulgated in the October 12, 2005 final rule, as revised today subsequent to the reconsideration notice.

Please note that the revised provisions are effective immediately, and today's final rule does not change the October 14, 2008 compliance date established by the October 12, 2005 final rule. Sources can readily comply with the revised provisions promulgated today on the compliance time line established by the October 12, 2005 final rule.

2. What Are the Responses to Major Comments?

Comment: Sierra Club states that the health-based compliance alternatives are implemented through Title V permits, and because Title V permits expire, this is evidence that the health-based alternatives are not emission standards within the meaning of CAA section 112(d)(4).

Response: In the reconsideration notice, we explained that, because the health-based compliance alternative requirements are clearly defined (e.g., HCl-equivalent emission limits, chlorine feedrate limits), and because any standards or requirements created under CAA section 112 are considered "applicable requirements" under 40 CFR part 70, the compliance alternatives would be incorporated into Title V permits.[60] 70 FR at 59481; 71 FR at 52639.

Nonetheless, in response to Sierra Club's reconsideration petition that the Agency cannot rely on the Title V program as the vehicle for establishing health-based compliance alternatives we proposed to revise the rule to add clarifying regulatory language stating that §63.1215 requirements are applicable requirements under part 70 and therefore must be included in the Title V permit as would any other applicable requirement.

We are promulgating that requirement today (see §63.1215(e)(3)) and disagree with the commenter's view that the health-based alternatives are implemented through the Title V permit rather than established as a national standard by rule. The rule itself establishes not only the standard's level of protection, which is uniform nationwide and assures that emissions of total chlorine from each source complying with the alternative standard will be less than the threshold level for total chlorine with an ample margin of safety[61], but also establishes each and every step that sources must use to calculate that standard. The permit writer ascertains that the source has applied the rule properly (e.g., has not put incorrect factual inputs into the equations and formulae provided in the rule).

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60 Applicable requirements defined under §70.2 must be included in Title V permit, as required under §70.6(a)(1).

61 Specifically, that exposure to the actual individual most exposed to the facility's emissions, considering off-site locations where people congregate for work, school, or recreation, is less than that level. See §63.1215(c)(ii).

Thus, the rule not only establishes the level of control (which is uniform nationally, as just stated) but the exclusive means of developing the emission limit which satisfies that level. Moreover, sources must establish a numerical limit (using the exclusive protocols set out in the rule) before permitting. This limit is immediately enforceable against the source. The permitting process determines if this limit was determined correctly (i.e. whether the source applied the protocols in the rule correctly). See §63.1215(e) and (g).

The situation is analogous to the way parametric monitoring limits implementing numeric section 112 (d)(2) standards are established: a national rule establishes a numerical standard and specifies which parameters are to be monitored; a source determines the actual levels of those parameters based on site-specific conditions and establishes enforceable parametric monitoring limits for itself; and a permit writer decides whether to ratify the source's determination and memorializes the quantified parametric monitoring limit in the source's permit. *Id*. There is no suggestion that this process violates the requirement that EPA establish national emission standards.

Comment: Sierra Club states that allowing sources to comply with the health-based compliance alternatives without prior approval from the permitting authority further confirms that the alternatives are not standards at all, and violates the CAA by allowing sources to operate without any assurance that HAP emissions are controlled.

Response: The comment is confusing, since MACT standards are implemented in advance of permitting (as are the alternative section 112 (d)(4) standards), and are, of course, emission standards. Further, the health-based compliance alternative is a requirement established by EPA "which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis," and so is an "emission standard" under

section 302 (k) of the Act (which definition applies to section 112 (d)). The section 112 (d)(4) standard is an emission concentration limit (ppmv) for total chlorine that is demonstrated not to result in a Hazard Index[62] for hydrogen chloride and chlorine gas exceeding 1.0.

Comment: Sierra Club states that EPA's "individualized source-by-source loophole program" does not provide emission standards. The comment continues that since section 112 (d) standards must be established on a category or subcategory basis, the most a section 112 (d) (4) standard can lawfully do is require all sources to emit at the uniform limit which will not result in adverse effects to human health with an ample margin of safety. The commenter continues that to satisfy section 112 (d) (4), that standard must moreover account for the individual circumstances of each emitting source (including receptor location).

Response: The standards adopted in the rule apply on a categorical basis and assure that each source in the category adopting this alternative emits total chlorine at a level which is protective of human health with an ample margin of safety. The level of protection afforded is identical in each instance the compliance alternative is satisfied: exposure to less than the hazard index for total chlorine (which hazard index reflects an ample margin of safety), and hence exposure to less than the threshold level of effect for total chlorine. Individual circumstances of each emitting source (such as dispersion characteristics and the location of most-exposed receptor) must be accounted for in

62 The Hazard Index is the sum of the Hazard Quotients for hydrogen chloride and chlorine gas. The Hazard Quotient (HQ) is the ratio of the predicted ambient air concentration of a pollutant to the air concentration at which no adverse effects are expected. For chronic inhalation exposures, the HQ is calculated as the air concentration divided by the reference concentration (RfC). For acute inhalation exposures, the HQ is calculated as the air concentration divided by the acute reference exposure level (aREL).

demonstrating that the source is eligible for the alternative standard (just as actual parametric monitoring limits implementing numeric limits are established post-rule to account for individual circumstances). See §63.1215(c)(2) which requires that the demonstration of eligibility show that emissions of total chlorine (measured as HCl equivalence) be shown to be less than the Hazard Index for chronic exposure "for the actual individual most exposed to the facility's emissions, considering off-site locations where people reside and where people congregate for work, school, or recreation"; see also §63.1215(c)(3)(v) requiring the demonstration to account for emissions from all emitting hazardous waste combustors at a site. As explained in the previous response, this provision thus satisfies the statutory definition of "emission standard," as well as all applicable section 112 (d) requirements.

Comment: Sierra Club states, without analysis, that the provision violates RCRA as well as the Clean Air Act, because the standards are insufficient to protect public health and the environment.

Response: EPA showed in promulgating the provision that emissions would be protective of human health and the environment (70 FR at 59479-80), and commenter has not provided information to the contrary.

Comment: The commenter cites legislative history to the 1990 amendments (1 Legislative History at 866) in which Congress rejected a provision which would have allowed individual sources to waive out of MACT requirements by demonstrating that their HAP emissions pose negligible risk to public health. The commenter views this history as supporting its argument since it regards the provision here as analogous.

Response: EPA does not believe the provision discussed in the legislative history is analogous. It would have allowed a demonstration of low risk for all toxics, not just threshold pollutants. Section 112 (d) (4) is limited in scope to threshold pollutants where the Administrator has identified a level that protects public health with an ample margin of safety. EPA's rule here reasonably implements that authority.

Comment: Sierra Club states that it is impermissible and further indication that the health-based compliance alternatives are not emission standards to allow an automatic extension of the compliance date upon disapproval of an eligibility demonstration to allow the source time to make changes to the design or operation of the combustor or related systems as quickly as practicable to enable the source to achieve compliance with the total chlorine MACT standards. Sources must comply with MACT standards within no more than three years, absent an individualized demonstration of a need for further time to install controls.

Response: We disagree with the characterization that the time extension is automatic. Section 63.1215(e)(2)(i)(B) states that the permitting authority ***may*** extend the compliance date by up to one year (as revised by today's rule) to allow the source to make changes to the design or operation of the combustor to achieve compliance with the MACT total chlorine standards. An individualized showing is required to support such an extension. In addition, an extension would be granted only for the time needed (but not exceeding one year) to make the changes required to achieve compliance with the emission standards. That is expressly the purpose of the time extension provision of CAA section 112(i)(3)(B), which allows extensions of a section 112 (d) standard's effective date for up to one year where necessary for the installation of controls.

Comment: Sierra Club states that EPA lacks authority to grant source-by-source exemptions from Section 112 emission standards.

Response: We agree. The health-based compliance alternatives are section 112 emission standards, as we have explained in this preamble and in the October 12, 2005 final rule. See 70 FR at 59479. Thus, no sources are exempted from such standards.

IV. Response to Comments to the September 27, 2007 Notice

On September 27, 2007, EPA issued a notice for public comment which discussed the standards that EPA promulgated in October 2005, and specifically identified which standards EPA believes are consistent with the Act and caselaw, and which standards are not and need to be reexamined through a subsequent rulemaking. 72 FR 54875. With respect to those standards EPA announced it intended to defend, the notice indicated the portions of the rationale upon which EPA intended to rely, and which portions EPA would no longer rely upon as a justification for the standards. EPA sought public comment on this analysis and placed edited versions of various support documents in the public docket, edited to remove portions of the rationale on which EPA no longer planned to rely, and solicited public comment on these edits.

After receipt of public comment, EPA has further narrowed the number of standards it intends to defend. We respond here to the principal public comments with respect to those standards which EPA has announced its intention to defend. However, as an initial matter, one commenter argued that EPA may not amend portions of the record or revise rationales for the final rule without proposing to amend the rule, i.e. recommencing rulemaking procedures. EPA disagrees. The Clean Air Act provides that EPA may reconsider rules based on new information which arose after the period for

public comment. CAA section 307 (d) (7) (B). The *Brick MACT* opinion is such a type of new information. *Sierra Club v. EPA*, 479 F.3d 875 (2007) (*Brick MACT*). Also, EPA may decide itself to reconsider a rule based on existence of such new information (i.e. initiate reconsideration *sua sponte*). See 72 FR at 76553 (December 20, 2006)). EPA essentially adopted that course here, providing notice and opportunity for public comment as required by section 307 (d) (7) (B) (including a comment period ultimately extended to two months (see 72 FR 59067 (October 18, 2007)). However, to make explicit that this action is part of a reconsideration process, EPA is including its responses to comment here as part of the reconsideration process already initiated for the Hazardous Waste Combustor MACT rule.[63] Final edited versions of the various support documents are also included in the public docket.

With one exception, all commenters to the September 2007 notice supported EPA's analysis of the standards and did not suggest any changes to that analysis. The one adverse commenter was Earthjustice (on behalf of Sierra Club), which submitted extensive comments raising various challenges. Earthjustice, however, did not contest EPA's main premise: sources which emit more hazardous air pollutant (HAP) over time than other sources (e.g., those with lower emissions in single tests) do not have to be regarded as best performing, and this holds true for those higher-emitting sources which may emit less HAP in a single snapshot test. 72 FR at 54877. EPA set out at length in the October 2005 rule and the September 2007 notice why it believes it identified as best performers sources emitting the lowest amount of HAP over time and reasonably

[63] EPA also does not believe any commenters were prejudiced by the procedure EPA adopted, since all the commenters had notice of EPA's action, and had ample time to submit comments, of which they availed themselves. In addition, EPA provided notice to the general public by means of publication in the **Federal Register** so any interested person could respond.

estimated their levels of performance. Most of the responses below deal with the fact issue of the reasonableness of this analysis.

Before addressing these specifics, we first address certain general points. EPA demonstrated in both the preamble to the final rule and in the September notice that the commenter's preferred approach for the existing source floor of taking the average of the lowest emitting sources in single tests did not properly characterize these sources' performance because it ignored their short and long-term variability and thus their performance over time. The commenter now maintains that even if this is true, it is irrelevant because EPA must still show that the sources the Agency identified as best are in fact best performers. Although EPA must of course provide a reasoned explanation justifying its selection of best performers and their level of performance, EPA believes it is clear on this record that one cannot presume that sources with lowest HAP emission in single tests are best performers, or presume that single snapshot performance test information is an adequate representation of sources' actual performance over either short or long time periods. A further consequence, as explained in the following paragraph, is that whatever methodology is utilized for identifying best performing sources necessarily involves some type of estimate as to sources' performance and that the starting point for such estimates need not be sources with lowest HAP emissions in single tests.

Earthjustice, however, seizes on EPA's conclusion that sources rejected by EPA as best performers "likely" perform worse over time, calling this unwarranted speculation, and suggests more data-gathering to develop a legally-mandated quantum of proof (e.g. Earthjustice's Comments pp. 1, 2, 8; docket item EPA-HQ-OAR-2004-0022-0613). As the commenter is aware, however, no reliable quantification of performance

over time is now possible (except for particulate matter emissions from sources equipped with fabric filters (see 72 FR at 54879)) because continuous emission monitors for HAP do not exist, or for HAP for which CEMS are just beginning to be implemented for HWCs, there are too few data to evaluate sources' performance. Long-term performance of sources for HAP therefore are necessarily estimates. EPA's conclusion that sources it selected as best performers "likely" emit less HAP over time is an accurate reflection that definitive proof (i.e., day-in, day-out quantified performance) is impossible in the absence of continuous emission monitoring results. More data collection would yield more snapshot results, so long-term performance would still have to be estimated.[64] However, the record demonstrates that EPA's conclusions are not mere speculations, but rather are supported by sound evidence and are consequently reasonable. *Mossville Environmental Action Now v. EPA* (*Mossville*), 370 F. 3d at 1240-41 (D.C. Cir. 2004) (summarizing case law that EPA may use estimates to assess performance of best-performing sources, and stating further that courts will accept these estimates if they have a reasoned basis).

Finally, Earthjustice repeats earlier comments that because sources maximize operating parameters when they conduct compliance tests in order to obtain an ample compliance margin, compliance tests already account for total operating variability. However, as explained in the rulemaking, compliance tests can only account for controllable operating variability, and there are numerous uncontrollable factors that result in short and long-term variability not accounted for in compliance tests. 70 FR at 59439 (October 12, 2005). The record shows that in virtually every case when

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64 However, in this rule, EPA has carefully compiled and studied data from different tests from lowest emitting sources in single tests to best estimate these sources' long-term performance.

comparisons with other test conditions are possible, lowest emitters in one compliance test emitted more HAP in other tests.[65] Indeed, in most of the comparisons, the sources emitted more than their estimated performance including run-to-run variability (which we refer to as UPL99).[66] *Id.* [67] Another example, as discussed above, is the Ash Grove Chanute source, where the source in later tests emitted more particulate matter than projected by EPA even after adjusting the source's initial test results to account for run-to-run and test-to-test variability. This empirical demonstration shows that lowest emitting sources in single tests can emit more HAP over time, and that the amounts emitted routinely can exceed even their estimated short-term variability or total variability. Necessarily, the demonstration also shows that the single test condition measurements do not fully encompass these sources' actual variability. EPA thus correctly concluded that run-to-run and test-to-test variability – short-term and long-term variability over and beyond performance measured in a single stack test – are real and appreciable, and consequently an element of sources' performance. See Technical Support Document ("TSD") Vol. III, Sections 16.3 to 16.6, 17.2 and 17.3.[68]

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65 See memorandum from Bob Holloway to docket entitled "Analysis of Available Performance Data from Best Performing Sources", September 8, 2008.

66 The UPL99 means the 99th percentile upper prediction limit and is an estimate of the value that the source would achieve in 99 of 100 future tests if it could replicate the operating conditions of the compliance test. 70 FR at 59437 (October 12, 2005).

67 The commenter challenged EPA's statements, maintaining that these data do not show which sources are the best performers. See, e.g. Earthjustice's comments p. 3. EPA developed these data to show that the commenter's argument that test conditions already account for all of sources' operating variability "and then some" (Earthjustice's comments p. 4) is demonstrably incorrect, and that an approach of averaging snap shot emission tests – even after adjusting results to account for run-to-run variability, still does not fully account for sources' full operating variability – i.e. their performance over time.

68 USEPA, "Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards", (TSD Vol. III) September 2005. Unless otherwise specified, all TSD references in this section of the notice are to this document, which is available in the docket to the rule.

A. Standards for Particulate Matter

1. Standards for Incinerators, Cement Kilns, Lightweight Aggregate Kilns, and Solid Fuel Boilers

EPA has carefully reviewed all of its data for particulate matter and concluded, with certain exceptions, that the current standards require some revision (in some cases due to record correction issues rather than to issues related to section 112 (d)(3) and the *Brick MACT* opinion).[69] The exceptions are the new source particulate matter standards for incinerators, cement kilns (see also Section III.E above), and lightweight aggregate kilns, and the particulate matter standards for existing and new solid fuel boilers. For these standards, EPA believes that it properly assessed which sources are best performing and reasonably estimated their level of performance. EPA also has previously indicated why more stringent, beyond-the-floor standards are or are not achievable for these source categories. See 71 FR at 14670; TSD Vol. III, Sections 10.3.4, 12.3.4, 14.3.2 and 14.3.4.

2. Standards for Liquid Fuel Boilers

EPA believes that the particulate matter standard for existing and new liquid fuel boilers requires revision for the reasons discussed in the September 2007 notice. 72 FR at 54880.

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69 With respect to standards for particulate matter for incinerators, for example, EPA is concerned that the database includes certain types of specialty chemical demilitarization operations where metals are not volatilized within the common pool of incinerators (see also n. 72 below with respect to high and low volatility metals emitted by incinerators). With respect to particulate matter emitted by cement kilns, further study of operating conditions of one of the sources classified as a best performer may require reassessment of that source's performance.

B. Standards for Semivolatile Metals and Low Volatile Metals

1. Standards for Incinerators and Solid Fuel Boilers

EPA selected as best performers for semivolatile (lead and cadmium, or SVM) and low volatile (arsenic, beryllium and chromium, or LVM) HAP metals the sources with the best combination of hazardous waste feedrate control of the respective metals and best system removal efficiency (generally, most efficient emission controls). EPA continues to believe that these sources will emit the least SVM and LVM over time since they will have the least long-term variability. 72 FR 54880-881. Comparative test data support this conclusion. Sources with lower SVM and LVM emissions in single tests either have had emissions in historic tests that are higher than the emissions of the sources EPA identified as best performing, can reasonably be projected to emit more than the EPA-identified best performers based on their historic performance (historic system removal efficiency applied to amount fed in performance test would result in higher emissions than EPA-identified best performers), [70] or are simply unrepresentative.[71]

Earthjustice states that such comparisons are unwarranted because there is no reason to assume a source would operate with a worse efficiency than in their compliance test. Earthjustice Comments p. 9. Removal efficiency is, however, a key aspect of

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[70] For example, incinerator source 327, which in a single test condition had a UPL99 for SVM which is 25 times less than the highest-emitting of the best-performing sources in the MACT pool, would emit over three times more SVM than that highest-emitting best performer assuming it fed the same amount of metals as in its compliance test but removed them from its emissions at the efficiency demonstrated in other of its historic compliance tests. TSD Vol. III, Table 17.6 and App. E, Table SF-INC-SVM.

[71] Certain of the sources (incinerator sources 494 and 3011) are specialty operations feeding large chunks of metal contaminated with trace organics (e.g., inert materials, bulk explosives, metal waste). These metals generally are not emitted because of the large particle size of the feed—SVM are not volatilized and LVM are not entrained in the combustion gas. These operations are not representative of usual incineration, where metals are present in the feed as organometallic compounds or metal dispersed in an organic or aqueous liquid such that SVM is generally volatilized and LVM is generally entrained in the combustion gas. USEPA, "Technical Support Document for HWC MACT Standards, Volume II: HWC Data Base", (TSD Vol. II) September 2005, App. B in data sheet "inc-svm.xls", App. C in data sheets "494.xls" and "3011.xls".

normal operating variability. Contrary to Earthjustice's suggestion, a source does not choose to operate with worse control efficiency. Control equipment simply does not operate uniformly day-in, day-out. That variation in performance affects emissions and is part of a source's operating performance. Moreover, EPA carefully examined whether the sources were properly designed and operated during the comparative test conditions and determined that they were. TSD Vol. III pp. 17-13 to 16. The commenter presents no information questioning that analysis.

Earthjustice also states repeatedly that EPA selected this floor methodology for SVM and LVM to assure that all sources could meet MACT floors, citing to 70 FR at 59442. E.g., Earthjustice's Comments p. 11. EPA never made such a statement, and the record does not support the commenter's assertion. For example, 60% (13 of 22) of incinerators had emissions in the relevant test conditions (those considered in establishing the standard) that were higher than the SVM floor, and over 70% (19 of 26) had higher LVM emissions in those test conditions. TSD Vol. III, App. E, Tables SF-INC-SVM and SF-INC-LVM.

2. Standards for Cement Kilns, Lightweight Aggregate Kilns, and Liquid Fuel Boilers (Low and High Heating Value Subcategories)

EPA has determined that these standards should be re-examined and not defended in litigation.

3. Alternative to the Particulate Matter Standard for Liquid Fuel Boilers

EPA promulgated alternatives to the particulate matter standard for each subcategory of liquid fuel boilers (i.e., high and low heating value subcategories) under

§63.1217(e). EPA believes that these alternatives require revision for the reasons discussed in the September 2007 notice. 72 FR at 54882.

4. Alternative Metal and Total Chlorine Standards for Cement Kilns and Lightweight Aggregate Kilns

EPA promulgated alternatives to the mercury, semivolatile volatile metals, low volatile metals, and total chlorine standards for cement and lightweight aggregate kilns. See alternatives under §63.1206(b)(9), (b)(10), and (b)(15). EPA has determined that these alternatives should be re-examined and not defended in litigation. 72 FR at 54882-83.

C. Standards for Total Chlorine

1. Standards for Incinerators, Cement Kilns, Lightweight Aggregate Kilns, Liquid Fuel Boilers, and Solid Fuel Boilers

All comments on these source categories are already addressed either in the final agency action on reconsideration (issue of analytical bias with stack sampling method for total chlorine, see Section III.B of this preamble above), or in earlier parts of this rulemaking. TSD Vol. III, Chapter 19. With respect to the standards for total chlorine for existing and new cement kilns and liquid fuel boilers (high heating value subcategory) and new lightweight aggregate kilns, EPA believes these standards require revision for the reasons signaled in the September 2007 notice. 72 FR at 54883. Finally, with respect to the standards for total chlorine for liquid fuel boilers (low heating value subcategory), EPA has determined that these standards should also be re-examined and not defended in litigation for reasons discussed in Section IV.F.3 below.

2. Hydrochloric Acid Production Furnaces

EPA adheres to the analysis set out in the September 2007 notice: the pool of best performing sources are those emitting the least total chlorine and EPA has discretion to express these sources' performance in terms of percent reduction. Sections 112 (i) (5) (A) and 129 (a) (4) of the Act support this conclusion (a point not addressed by Earthjustice in its comments). See 72 FR at 54884/2.

Earthjustice states that standards expressed in terms of control efficiency are not "emission standards" under the Act. This is incorrect. An "emission standard" includes "a requirement … which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis." CAA section 302 (k). Standards requiring HAP reduction of a given per cent limit the emission quantity, rate, and (in any realistic scenario) concentration of the HAP and so falls squarely within the statutory definition.

Earthjustice stresses the following language from *Brick MACT*: "EPA cannot circumvent *Cement Kiln's* holding that section 7412 (d) (3) requires floors based on the emission level actually achieved by the best performers (those with the lowest emission levels), not the emission level achievable by all sources….". EPA is not establishing a floor for these sources based on an emission level achievable by all sources (six of ten sources in the category had test conditions with higher (less efficient) performance than the MACT floor (see TSD Vol. III, App. E, Table SO-HCLPF-CL)), or otherwise looking to performance of sources other than the lowest emitting to establish this floor.

D. Standards for Dioxins/Furans

1. Standards for Incinerators

a. Dry Air Pollution Control Device or Waste Heat Boiler Subcategory. The commenter challenges establishing the floor at the level of the 2002 Interim Standard. EPA did so because the average of the performance of the top 12 percent of lowest emitting sources was slightly higher than that level, accounting for run-to-run (short-term) variability. TSD Vol. III, App. C, Table E-INCDWHB-DF. Under these circumstances, the Interim Standard is the best emissions information available to EPA as to the performance of the lowest emitting sources. As in *Mossville*, EPA may establish a MACT floor at a regulatory level when the best performing sources performance over time (i.e., accounting for variability) "barely satisfied" the regulatory limit. EPA thus disagrees with the commenter that the floor cannot be established at the level of the Interim Standard because the Interim Standard is a level sources are required to meet, not the lowest level achieved.

The commenter also continues to dispute that incinerators with dry air pollution control devices or waste heat boilers are a separate subcategory for purposes of a dioxin/furan standard. As explained at 69 FR 403 (January 5, 2004), subcategorization on the basis of air pollution control technology is not legally permissible. But in this case, dry air pollution control devices and waste heat boilers do not capture dioxins but form them, making this a different type of process for purposes of a dioxin/furan standard.

b. Wet Air Pollution Control Device or No Air Pollution Control Device Subcategory. EPA established the floor at the level of the Interim Standard because the

lowest emitting sources in single test conditions had dioxin emissions in other tests much higher than the Interim Standard. EPA's analysis was strongly influenced by comparative test data from incinerator source 3016, which appeared to show multiple orders of magnitude operating variability. EPA has since re-reviewed all of the test data for this source and has found that the amount of variability from this source was overstated because results of one of the three test runs in test condition 2 were inadvertently omitted from the calculation. Remaining sources demonstrate operating variability, but not enough to justify retention of the Interim Standard as the MACT floor. EPA therefore does not intend to defend this standard in litigation, and will re-examine it.

2. Standards for Cement Kilns and Lightweight Aggregate Kilns

EPA believes it erred in the way in which it assessed the relative stringency of the calculated floors and the 2002 Interim Standards (i.e., the dioxin/furan standards promulgated under §§63.1204 and 63.1205) so that the promulgated standard is expressed incorrectly.

3. Standards for Liquid Fuel Boilers

For existing liquid fuel boilers-dry air pollution control subcategory, the commenter again challenges whether sources with dry air pollution control devices can be categorized separately from other boilers for purposes of assessing dioxin/furan performance. This point is addressed in Section IV.D.1.a above. With respect to the remaining dioxin/furan standards (new source liquid fuel boilers-dry air pollution control subcategory and existing and new source liquid fuel boilers-wet or no air pollution

control system subcategory), EPA believes that these standards require revision for reasons discussed in the September 2007 notice. 72 FR at 54886.

4. Standards for Solid Fuel Boilers and Hydrochloric Acid Production Furnaces

As discussed in the September 2007 notice, EPA believes that these dioxin/furan standards require revision. 72 FR at 54886.

E. Standards for Non-Dioxin/Furan Organic HAP

EPA has determined that these standards – carbon monoxide and hydrocarbons, as surrogates for control of non-dioxin/furan organic HAP – should be re-examined and not defended in litigation.

F. Standards for Mercury

1. Standards for Incinerators

The commenter challenges use of the 2002 Interim Standard as the standard for mercury for existing sources. EPA did so because the average of the mercury emissions from the best performing sources under any of the possible ranking methodologies was higher than the Interim Standard. 72 FR at 54887. The commenter states that this is impermissible (although any alternative would lead to a less stringent standard than the one EPA promulgated). The commenter further states that under *Mossville*, regulatory levels can constitute a floor if there is a factual showing that best performers emit at a level close to that regulatory level. Earthjustice's Comments p. 24. EPA agrees. That factual showing exists here: the best performers are emitting at a level even higher than the regulatory level (reflecting performance before the Interim Standard took effect). The

regulatory level thus is a reasonable measure of best performance. *Mossville*, 370 F. 3d at 1240-41.

2. Standards for Cement Kilns and Lightweight Aggregate Kilns

As discussed in the September 2007 notice, EPA believes that the mercury standards for existing and new cement kilns require revision. 72 FR at 54887-88. With respect to the mercury standards for existing and new lightweight aggregate kilns, EPA has determined that these standards should be re-examined and not defended in litigation.

3. Standards for Liquid Fuel Boilers

In the promulgated rule, EPA had subcategorized liquid fuel boilers based on thermal content of hazardous waste burned and established separate standards for high heating value and low heating value boilers. EPA has determined not to defend the high heating value subcategory standards for the reasons stated at 72 FR at 54888. This decision also necessitates revision of the mercury standards for the low heating value subcategory because all sources' data will now be in a common pool – i.e. there will no longer be high and low heating value subcategories. See also preamble discussion at III.A above.

4. Standards for Solid Fuel Boilers

The commenter again raises the issue of consideration of and means of calculating run-to-run variability. EPA's response is at 70 FR 59438-40. EPA continues to believe that these standards are based on the average performance of the best performing sources and that EPA has reasonably ascertained that level of performance.

G. Normalization

Ordinarily, one cannot meaningfully compare performance of different entities without providing a common metric of comparison. Miles per gallon is an example, whereby meaningful comparison of fuel economy can be made for vehicles traveling different distances. Stating that two vehicles traveled 200 and 300 miles respectively says nothing about which has the better fuel economy performance. The commenter states nonetheless that normalization is impermissible under section 112 (d) (3). EPA continues to disagree. Section 112 (d) (3) does not address the issue of whether sources' performance can be expressed and compared in normalized units, so the commenter's argument that the approach is forbidden as a matter of law appears incorrect. See also 70 FR at 59451, 72 FR at 54888, and *National Lime II*, 233 F. 3d at 631, 632 (rejecting *Chevron I* argument that section 112 (d) (3) requires EPA to establish MACT floors "at the lowest recorded emission level for which it has data" because "[s]ection [112's] additional phrase says nothing about what data the Agency should use to calculate emission standards"). EPA's interpretation is moreover reasonable, since normalizing emission results allows a meaningful way to determine which performers are better, the very purpose of section 112 (d) (3).

V. What Other Rule Provisions Are Being Amended or Clarified?

We are making several corrections to 40 CFR part 63, Subpart EEE. In addition, we are clarifying the particulate matter standard for cement kilns.

A. What corrections are we making?

1. Revisions to §63.1207(d)

The last sentences under §63.1207(d)(4)(i) and (ii) refer to demonstrating compliance with "the replacement standards promulgated on or after October 12, 2005." This regulatory language is confusing. We are revising these paragraphs to clarify that the "replacement" standards are the standards under §§63.1219, 63.1220, and 63.1221. Accordingly, we are amending §63.1207(d)(4).

2. Revisions to §63.1207(m)

Section 63.1207(m) waives the performance test if the HAP metals or total chlorine feed rate (after conversion to an exhaust gas concentration using continuously monitored exhaust gas flow data) is less than the applicable emission rate, assuming that 100 percent of the constituent in the feed is emitted from the combustion unit. This provision applies to emission standards expressed either on a volumetric flow rate of exhaust gas basis (i.e., µg/dscm or ppmv) or on a hazardous waste thermal concentration basis (i.e., pounds of HAP emitted attributable to the hazardous waste per million Btu of heat input from the hazardous waste).

The performance test waiver provisions under §63.1207(m)(1), which addresses emission standards expressed on a volumetric flow rate of exhaust gas basis, currently state that a source is "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." The twelve-hour rolling average requirement under §63.1207(m)(1) was appropriate when this provision was codified in 1999 because

all the metals and total chlorine feedrate limits were specified as twelve-hour rolling average limits. 64 FR at 52967, 53060-62 (September 30, 1999). However, when we finalized standards for liquid and solid fuel boilers in 2005, twelve-hour rolling average limits were not required for all standards. See, for example, the rolling average requirements under §63.1209(n)(2)(v). Moreover, we also finalized in the 2005 rule a new provision that allows sources to use shorter averaging periods than those specified in the rule because shorter averaging periods result in more stringent control of the parameter. Section 63.1209(r).[72] EPA inadvertently failed to revise §63.1207(m)(1) to remove the twelve-hour rolling average requirement in the October 2005 rule. Today, we are correcting that inadvertent error. Accordingly, we are revising §63.1207(m)(1)(i).

3. Revisions to §63.1220(a)(2) and (b)(2)

In an April 8, 2008 rule, we revised the mercury standards under §63.1220(a)(2) and (b)(2) by clarifying that a source must comply with the maximum concentration of mercury in the hazardous waste limitation and either a hazardous waste maximum theoretical emission concentration feed limit or stack gas concentration limit. 73 FR at 18972 (April 8, 2008) and 71 FR at 52641 (September 6, 2006). However, the mercury standards issued on April 8 were not amended correctly, which resulted in the maximum theoretical emission concentration feed limit requirement being incorrectly repeated under §63.1220(a)(2)(iii) and (b)(2)(iii). Today, we are removing §63.1220(a)(2)(iii) and (b)(2)(iii), which paragraphs were correctly and previously incorporated under §63.1220(a)(2)(ii) and (b)(2)(ii), respectively.

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[72] USEPA, "Technical Support Document for HWC MACT Standards, Volume IV: Compliance with the HWC MACT Standards", September 2005, Section 2.2.6.

B. Clarification of the PM Standard for Cement Kilns

In their comments on the proposed rule, the Ash Grove Cement Company (Ash Grove) and Cement Kiln Recycling Coalition (CKRC) each sought clarification regarding the portion of the new source particulate matter (PM) standard specifying that the prescribed concentration limit be "corrected to 7% oxygen."[73] Ash Grove raised its point in the context of its plans to build a new cement kiln at its Foreman, Arkansas plant. The plant will be configured with an energy-saving design in which combustion gases from the kiln and non-combustion gases from the clinker cooler would be combined prior to passing through the in-line raw mill, the PM control device, and the emission stack. The purpose of this configuration is to recover heat from the clinker cooler exhaust to aid in drying the raw feed in the in-line raw mill. CKRC endorsed Ash Grove's comments and sought the clarification more generically with respect to member companies' plans to employ similar energy-saving engineering configurations in new kiln designs.

Ash Grove and CKRC noted in their comments that, under their proposed design, the PM standard would be unattainable if the facility were required to correct the combined gas stream to 7 percent oxygen. The commenters acknowledged that the oxygen correction procedure is a necessary component of a concentration-based emission standard because it prevents a facility from meeting the standard by simply diluting the regulated, dust-laden gas stream with clean air. In this case, however, Ash Grove proposes to combine two regulated, dust-laden gas streams for legitimate energy recovery purposes. In their comments, Ash Grove and CKRC asked EPA to clarify that, in the Ash Grove design, the oxygen associated with the clinker cooler exhaust does not

73 See docket items EPA-HQ-OAR-2004-0022-0538 (p. 5) and -0541 (p. 2).

represent dilution air and should not be included in the oxygen correction calculation when determining compliance with the PM standard of the Subpart EEE MACT standard. That is, the oxygen contribution in the combined stream attributable to the clinker cooler gas should be "subtracted" when assessing compliance with the Subpart EEE standard.

The Agency acknowledges that combining the two regulated gas streams, as proposed in the Ash Grove design, is not impermissible dilution that the oxygen correction factor of Subpart EEE is meant to prevent.[74] We also recognize that applying the oxygen correction factor to the combined gas stream in this case would be tantamount to requiring a clinker cooler PM emission rate of zero, which is not physically possible.

Facilities which opt to combine their emissions streams, for heat recovery or other legitimate purposes, are referred to the Agency's long standing compliance policy. In the case where two (or more) separately-regulated streams are physically combined in common duct work prior to control, they are evaluated for compliance with the more stringent standard; or, in the case where two (or more) separately regulated streams are physically combined for a legitimate process purpose, they should be evaluated for compliance with the emission standard of the affected facility from which the gases are discharged.[75] These policies were developed specifically for application of the opacity

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74 See also memorandum entitled "Potential Environmental Benefits of Combining Kiln Combustion and Clinker Cooler Gas," dated September 15, 2008, in the docket to the rule.

75 See letter from Michael S. Alushin, USEPA, to Evelyn Rodriquez Cintron, Commonwealth of Puerto, entitled "Opacity Limit for Commingled Emission Streams," dated March 24, 2005; letter from Michael S. Alushin, USEPA, to Francis Torres, Torres and Garcia P.S.C., entitled "Opacity Limit for Commingled Emission Streams," dated March 24, 2005; memorandum from John B. Rasnic, USEPA, to USEPA Regional Directors and Regional Counsels, entitled "Opacity Limitation for In-line Portland Cement Plants," dated September 7, 1996; and memorandum from John B. Rasnic, USEPA, to USEPA Regional Directors and Regional Counsels, entitled "Opacity Limitations for the Portland Cement Plant New Source Performance Standards," dated April 6, 1995. These documents are available on the Agency's Applicability Determination Index website at http://cfpub.epa.gov/adi/.

standard, where once two (or more) gas streams are combined, it is not possible to evaluate them separately.

In the case of streams combined from the clinker cooler and the kiln, where separate PM emission standards apply, facilities may submit site-specific compliance procedures to eliminate the effect of the clinker cooler exhaust gas on the Subpart EEE oxygen correction calculation. Any method proposed must be evaluated against the standards forbidding circumvention at 40 CFR 63.4(b) and against the requirements to provide means for accurate sampling of applicable emission standards at 40 CFR 63.7(d). Any claims made under these provisions should be submitted to the appropriate delegated authority for site-specific implementation.

Two commenters raised procedural objections to the Ash Grove and CKRC requests for clarification on this oxygen correction issue.[76] These comments appear to be based on the premise that EPA legally would be required to publish a new notice of proposed rulemaking before clarifying the issue. We disagree that such a new notice is necessary in situations such as this, where it is merely responding to requests for clarification and the clarification is fully consistent with the plain text of the governing regulation (as explained above). EPA also provided actual notice to all commenters and invited reply comments on the issue, both a permissible means of giving notice and one which removes any possible prejudice to persons receiving such notice. See *Small Refiners lead Phase-Down Task Force v. EPA*, 705 F. 2d 506, 540, 549 (D.C. Cir. 1983).

76 See docket items EPA-HQ-OAR-2004-0022-0548 and -0579

VI. Summary of Environmental, Energy, and Economic Impacts

A. What facilities are affected by the final amendments?

A description of the affected source categories is discussed in the April 20, 2004 proposed rule. 69 FR at 21207-09. In the October 12, 2005 final rule, we estimated that there are a total of 267 sources subject to the rule requirements, including 116 boilers (104 liquid fuel boilers and 12 solid fuel boilers), 92 on-site incinerators, 25 cement kilns, 15 commercial incinerators, nine lightweight aggregate kilns, and ten hydrochloric acid production furnaces. 70 FR at 59530. While we are aware of several changes to the universe of operating hazardous waste combustors, these estimates remain a reasonable representation of existing operating sources.[77]

Today's action also revises the particulate matter standards for new cement kilns and new incinerators. Based on comments received in response to the March 23, 2006 proposed rule, EPA does not believe that there are any cement kiln or incinerator sources that are currently complying with the new source particulate matter standards. In addition, EPA estimates that the majority of, if not all, sources that will be subject to the revised new source standards over the next five years will not be greenfield sources, but sources that upgrade at existing facilities (e.g., a new state-of-the-art preheater/precalciner kiln to replace one or more existing wet process cement kilns).[78]

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77 Given the small size of the lightweight aggregate kiln category, it is worth mentioning that the Solite Cascade plant in Virginia has ceased operations. Prior to closure, this plant operated four kiln sources. See also 70 FR at 59426.

78 Examples of cement plants pursuing plant modernizations can be found in several docket items, including EPA-HQ-OAR-2004-0022-0383 (pg. 4), EPA-HQ-OAR-2004-0022-0521 (Attachments F, G, and H), and EPA-HQ-OAR-2004-0022-0604 (pg. 8).

B. What are the air quality impacts?

For existing sources, we estimate that there will be no air emission impacts as the result of this rule. This is because today's rule is not revising any of the emission standards promulgated in the October 12, 2005 final rule. Furthermore, the final amendments to the compliance and monitoring provisions will not affect the current level of control at existing facilities subject to the rule.

For new sources, we are promulgating revised particulate matter standards for cement kilns and incinerators. The revised particulate matter standards for new cement kilns and new incinerators are 0.0069 gr/dscf (an increase from 0.0023 gr/dscf) and 0.0016 gr/dscf (an increase from 0.0015 gr/dscf), corrected to 7 percent oxygen, respectively. For a new preheater/precalciner cement kiln with an average gas flow rate of 250,000 dry standard cubic feet per minute (dscfm) emitting particulate matter at 0.0069 gr/dscf, we estimate emissions of particulate matter would be approximately 59 tons per year. A similarly designed new cement kiln emitting particulate matter at 0.0023 gr/dscf would emit approximately 20 tons per year. And for an incinerator with an average gas flow rate of 25,000 dscfm, we estimate that particulate matter emissions would increase by approximately 170 pounds per year per new incinerator if it were emitting particulate matter at 0.0016 gr/dscf as compared to 0.0015 gr/dscf. However, as discussed in Section VI.A above, we do not believe that there are any cement kiln or incinerator sources that are currently in operation and complying with the particulate matter standards for new sources. Thus, we estimate that there will be no actual increases in particulate matter emissions at currently operating facilities as a result of today's action. Moreover, we believe that the majority of new cement kiln and incinerator

sources over the next five years will be sources that upgrade at existing facilities (e.g., an older existing source replaced by a new source). See discussion in Section VI.A above. For these facilities, particulate matter emissions will actually decrease from current levels because the new source standards finalized today are more stringent than the standards for existing sources. For example, the reduction in particulate matter emissions for a new preheater/precalciner cement kiln with an average gas flow rate of 250,000 dscfm emitting particulate matter at 0.028 gr/dscf (the existing source standard) as compared to 0.0069 gr/dscf (the new source standard) is approximately 180 tons per year.[79]

C. What are the water quality, solid waste, energy, cost and economic impacts?

This rule will result in negligible impacts to water quality, solid waste, and energy requirements from levels presented in the October 12, 2005 rule. 70 FR at 59529. We likewise estimate minimal cost and no economic impacts (as compared with the total costs and economic impacts that were calculated for the October 12, 2005 rule).[80]

VII. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order (EO) 12866 (58 FR 51735, October 4, 1993), this action is a "significant regulatory action" because it raises novel legal or policy issues. Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for review under EO 12866 and any changes made in response to OMB recommendations have been documented in the docket for this action.

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79 USEPA, "Technical Support Document for HWC MACT Standards: Petitions for Reconsideration Support Document," October 2008, Section 2.3.3.

80 USEPA, "Technical Support Document for HWC MACT Standards: Petitions for Reconsideration Support Document," October 2008, Section 7.

In addition, this final rule is not considered to be an economically significant action because the social costs for this rule are significantly below the $100 million threshold established for economically significant actions. This is because this final rule does not have any significant new regulatory requirements as compared to the requirements discussed in the October 12, 2005 final rule, a rule with estimated total social costs of $22.6 million per year. See 70 FR at 59537.

B. Paperwork Reduction Act

This action does not impose any new information collection burden. Today's rule amendments consist of new compliance options, clarifications, and corrections to the existing rule that impose no new net information collection requirements on industry or EPA. However, the Office of Management and Budget (OMB) has previously approved the information collection requirements contained in the existing regulations (see 40 CFR part 9) under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq*. and has assigned OMB control number 2050-0171, EPA ICR number 1773.08. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9.

C. Regulatory Flexibility Act

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

For purposes of assessing the impacts of today's rule on small entities, small entity is 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. As discussed in the October 12, 2005 final rule (of which today's final rule amends), we determined that hazardous waste combustion facilities are not owned by small governmental jurisdiction or nonprofit organizations. 70 FR at 59538. Therefore, in that rule only small businesses were analyzed for small entity impacts (a small entity was defined either by the number of employees or by the dollar amount of sales). We found that few – a total of eight out of 145 facilities – of the sources affected by the October 2005 rule were owned by small businesses. Finally, our analysis indicated that none of these facilities are likely to incur annualized compliance costs greater than one percent of gross annual corporate revenues. Cost impacts were found to range from less than 0.01 percent to 0.46 percent of annual gross corporate revenues. 70 FR at 59538.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this rule on small entities. We note that today's final rule does not alter the number or

type of small businesses that were discussed in the October 12, 2005 final rule. In addition, this rule revises or clarifies several compliance provisions that increases flexibility and improves implementation.

D. Unfunded Mandates Reform Act

This rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. EPA is taking this action to make certain amendments, corrections, and clarifications to the October 12, 2005 final rule (70 FR 59402 and 59538). Thus, this rule is not subject to the requirements of section 202 and 205 of UMRA.

This rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. The amendments, corrections, and clarifications made through this action contain no requirements that apply to such governments, impose no obligations upon them, and will not result in any expenditures by them or any disproportionate impacts on them. This rule is not subject to section 203 of UMRA.

E. 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."

This final rule does not have federalism implications. The final rule does not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This rule makes certain amendments, corrections, and clarifications to the October 12, 2005 final rule (70 FR 59402 and 59538). These final amendments and clarifications do not impose requirements on State and local governments. Thus, Executive Order 13132 does not apply to this rule.

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

This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). Today's rule amendments, corrections, and clarifications do not impose requirements on tribal governments. They also have no direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes. Finally, tribal governments do not own or operate any sources subject to the Hazardous Waste Combustor MACT rule. Thus, Executive Order 13175 does not apply to this rule.

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

EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying to those regulatory actions that concern health or safety risks, such that the analysis required under section 5-501 of the Order has the potential to influence the regulation. This final rule is not subject to Executive Order 13045 because it is based solely on technology performance. Furthermore, this final rule is not considered "economically significant" as defined under EO 12866.

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

This rule is not a "significant energy action" as defined in Executive Order 13211 (66 FR 28355 (May 22, 2001)) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Further, we have concluded that this rule is not likely to have any adverse energy effects because energy requirements will not be significantly impacted by the amendments, corrections, and clarifications finalized by this action.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law No. 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. NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

The amendments, corrections, and clarifications finalized today do not involve technical standards. Therefore, EPA did not consider the use of any voluntary consensus standards.

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

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

EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low income populations because it does not affect the level of protection provided to human health or the environment. The corrections and clarifications in today's rule will not affect the current level of control at facilities subject to these rules. In addition, for reasons discussed in Section VI above, we estimate that the revised particulate matter emission standards for new cement kilns and new incinerators will not result in any adverse or disproportional health or safety effects on minority or low-income populations. As a result, we believe

our findings regarding Executive Order 12898 published in the October 12, 2005 rule are not adversely impacted by today's action. 70 FR at 59539.

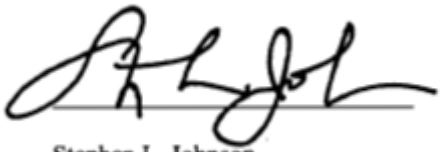
K. Congressional Review

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

List of Subject in *40 CFR Part 63*

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

Dated:



OCT 16 2008

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 63--NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

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

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

2. Section 63.1206 is amended as follows:

a. By revising paragraph (a)(1)(ii)(B)(3).

b. By revising paragraphs (c)(8)(iii), (c)(8)(iv), and (c)(9).

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

(a) * * *

(1) * * *

(ii) * * *

(B) * * *

(3) If you commenced construction or reconstruction of a cement kiln after April 20, 2004, you must comply with the new source emission standard for particulate matter under §63.1220(b)(7)(i) by the later of **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]** or the date the source starts operations.

* * * * *

(c) * * *

(8) * * *

(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 or malfunction. The corrective measures plan must include, at a minimum, the procedures used to determine and record the time and cause of the alarm or bag leak detection system malfunction in accordance with the requirements of paragraph (c)(8)(iii)(A) of this section as well as the corrective measures taken to correct the control device or bag leak detection system malfunction or to minimize emissions in accordance with the requirements of paragraph (c)(8)(iii)(B) of this section. 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 or bag leak detection system malfunction within 30 minutes of the time the alarm first sounds; and

(B) You must alleviate the cause of the alarm or bag leak detection system malfunction 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 or the bag leak detection system is malfunctioning 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 bag leak detection system malfunctions and the revisions to the design, operation, or maintenance of the combustor, baghouse, or bag leak detection system you are taking to minimize exceedances and bag leak detection system malfunctions. To document compliance with this requirement:

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

(B) You must record the percent of the operating time during each 6-month period that the alarm sounds and the bag leak detection system malfunctions;

(C) If inspection of the fabric filter demonstrates that no corrective action is required, then no alarm time is counted; and

(D) If corrective action is required, each alarm shall be counted as a minimum of 1 hour. Each bag leak detection system malfunction shall also be counted as a minimum of 1 hour.

(9) *Particulate matter detection system requirements*. You must continuously operate a particulate matter detection system (PMDS) that meets the specifications and requirements of paragraphs (c)(9)(i) through (v) of this section and you must comply with the corrective measures and notification requirements of paragraphs (c)(9)(vii) and (viii) of this section if your combustor either: is equipped with an electrostatic precipitator or ionizing wet scrubber and you do not establish site-specific control device operating parameter limits under §63.1209(m)(1)(iv) that are linked to the automatic waste feed cutoff system under paragraph (c)(3) of this section, or is equipped with a baghouse (fabric filter) and you do not operate a bag leak detection system as provided by paragraph (c)(8)(i)(B) of this section.

(i) *PMDS requirements*.—(A) The PMDS 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 PMDS 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 PMDS 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.

(*1*) *Set-points established without extrapolation*. If you establish the alarm set-point without extrapolation under paragraph (c)(9)(iii)(A) of this section, you must request approval from the regulatory authority, in the continuous monitoring system test plan, of the quality assurance procedures that will reasonably ensure that PMDS response values below the alarm set-point correspond to PM emission concentrations below those demonstrated during the comprehensive performance test. Your recommended quality assurance procedures may include periodic testing under as-found conditions (i.e., normal operations) to obtain additional PM concentration and PMDS response run pairs, as warranted.

(*2*) *Set-points established with extrapolation*. If you establish the alarm set-point by extrapolation under paragraph (c)(9)(iii)(B) of this section, you must request approval from the regulatory authority, in the continuous monitoring system test plan, of the quality assurance procedures that will reasonably ensure that PMDS response values below the alarm set-point correspond to PM emission concentrations below the value that correlates to the alarm set-point.

(E) You must include procedures for installation, operation, maintenance, and quality assurance of the PMDS in the site-specific continuous monitoring system test plan required under §§63.1207(e) and 63.8(e)(3);

(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 a 6-hour rolling average as provided by paragraphs (c)(9)(ii), (c)(9)(iii), and (c)(9)(iv) of this section;

(H) Your PMDS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must update the 6-hour rolling average of the detector response each hour with a one-hour block average that is the average of the detector responses over each 15-minute block; and

(I) If you exceed the alarm set-point (or if your PMDS malfunctions), you must comply with the corrective measures under paragraph (c)(9)(vii) of this section.

(ii) *Establishing the alarm set-point for operations under the Documentation of Compliance*. You must establish the alarm set-point for operations under the Documentation of Compliance (i.e., after the compliance date but prior to submitting a Notification of Compliance subsequent to conducting the initial comprehensive performance test) of an existing source as follows:

(A) You must obtain a minimum of three pairs of Method 5 or 5I data, provided in appendix A-3 to part 60 of this chapter, and PMDS data to establish an approximate correlation curve. Data obtained up to 60 months prior to the compliance date may be used provided that the design and operation of the combustor or PMDS has not changed in a manner that may adversely affect the correlation of PM concentrations and PMDS response.

(B) You must request approval from the regulatory authority, in the continuous monitoring system test plan, of your determination whether multiple correlation curves are needed considering the design and operation of your combustor and PMDS.

(C) You must approximate the correlation of the reference method data to the PMDS data.

(*1*) You may assume a linear correlation of the PMDS response to particulate matter emission concentrations;

(*2*) You may include a zero point correlation value. To establish a zero point, you must follow one or more of the following steps:

(*i*) Zero point data for in-situ instruments should be obtained, to the extent possible, by removing the instrument from the stack and monitoring ambient air on a test bench;

(*ii*) Zero point data for extractive instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air;

(*iii*) Zero point data also can be obtained by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas); and

(*iv*) If none of the steps in paragraphs (c)(9)(ii)(B)(*2*)(*i*) through (*iii*) of this section are possible, you must estimate the monitor response when no PM is in the flue gas (e.g., 4 mA = 0 mg/acm).

(*3*) For reference method data that were obtained from runs during a test condition where controllable operating factors were held constant, you must average the test run averages of PM concentrations and PMDS responses to obtain a single pair of data for PM concentration and PMDS response. You may use this pair of data and the zero point to define a linear correlation model for the PMDS.

(D) You must establish the alarm set-point as the PMDS response that corresponds to a PM concentration that is 50% of the PM emission standard or 125% of the highest PM concentration used to develop the correlation, whichever is greater. For reference method data that were obtained from runs during a test condition where controllable operating factors were held constant, you must use the average of the test run averages of PM concentrations for extrapolating the alarm set-point. The PM emission concentration used to extrapolate the alarm set-point must not exceed the PM emission standard, however.

(iii) *Establishing the initial alarm set-point for operations under the Notification of Compliance*. You must establish the initial alarm set-point for operations under the Notification of Compliance as provided by either paragraph (c)(9)(iii)(A) or paragraph (c)(9)(iii)(B) of this section. You must periodically revise the alarm set-point as provided by paragraph (c)(9)(iv) of this section.

(A) *Establishing the initial set-point without extrapolation*. (1) If you establish the initial alarm set-point without extrapolation, the alarm set-point is the average of the test run averages of the PMDS response during the runs of the comprehensive performance test that document compliance with the PM emission standard.

(2) During the comprehensive performance test, you may simulate PM 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.

(B) *Establishing the initial set-point by extrapolation*. You may extrapolate the particulate matter detector response to establish the alarm set-point under the following procedures:

(*1*) You must request approval from the regulatory authority, in the continuous monitoring system test plan, of the procedures you will use to establish an approximate correlation curve using the three pairs of Method 5 or 5I data (see methods in appendix A-3 of part 60 of this chapter) and PMDS data from the comprehensive performance test, the data pairs used to establish the correlation curve for the Documentation of Compliance under paragraph (c)(9)(ii) of this section, and additional data pairs, as warranted.

(*2*) You must request approval from the regulatory authority, in the continuous monitoring system test plan, your determination of whether multiple correlation curves are needed considering the design and operation of your combustor and PMDS. If so, you must recommend the number of data pairs needed to establish those correlation curves and how the data will be obtained.

(*3*) During the comprehensive performance test, you may simulate PM 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.

(*4*) Data obtained up to 60 months prior to the comprehensive performance test may be used provided that the design and operation of the combustor or PMDS has not changed in a manner that may adversely affect the correlation of PM concentrations and PMDS response.

(*5*) You may include a zero point correlation value. To establish a zero point, you must follow the procedures under paragraph (c)(9)(ii)(C)(*2*) of this section.

(6) You must use a least-squares regression model to correlate PM concentrations to PMDS responses for data pairs. You may assume a linear regression model approximates the relationship between PM concentrations and PMDS responses.

(7) You must establish the alarm set-point as the PMDS response that corresponds to a PM concentration that is 50% of the PM emission standard or 125% of the highest PM concentration used to develop the correlation, whichever is greater. The emission concentration used to extrapolate the PMDS response must not exceed the PM emission standard.

(iv) *Revising the Notification of Compliance alarm set-point*. (A) *Revising set-points established without extrapolation*. If you establish the alarm set-point without extrapolation under paragraph (c)(9)(iii)(A) of this section, you must establish a new alarm set-point in the Notification of Compliance following each comprehensive performance test as the average of the test run averages of the PMDS response during the runs of the comprehensive performance test that document compliance with the PM emission standard.

(B) *Revising set-points established with extrapolation*. If you establish the alarm set-point by extrapolation under paragraph (c)(9)(iii)(B) of this section, you must request approval from the regulatory authority, in the continuous monitoring system test plan, of the procedures for periodically revising the alarm set-point, considering the additional data pairs obtained during periodic comprehensive performance tests and data pairs obtained from other tests, such as for quality assurance.

(v) *Quality assurance*. (A) *Set-points established without extrapolation*. If you establish the alarm set-point without extrapolation under paragraph (c)(9)(iii)(A) of this

section, you must request approval from the regulatory authority, in the continuous monitoring system test plan, of the quality assurance procedures that reasonably ensure that PMDS response values below the alarm set-point correspond to PM emission concentrations below the average of the PM concentrations demonstrated during the comprehensive performance test. Your recommended quality assurance procedures may include periodic testing under as-found conditions (i.e., normal operations) to obtain additional PM concentration and PMDS response run pairs, as warranted.

(B) *Set-points established with extrapolation*. If you establish the alarm set-point by extrapolation under paragraph (c)(9)(iii)(B) of this section, you must request approval from the regulatory authority, in the continuous monitoring system test plan, of the quality assurance procedures that reasonably ensure that PMDS response values below the alarm set-point correspond to PM emission concentrations below the value that correlated to the alarm set-point.

(vi) *PMDS are used for compliance assurance only*. For a PMDS for which the alarm set-point is established by extrapolation using a correlation curve under paragraphs (c)(9)(ii), (c)(9)(iii)(B), and (c)(9)(iv)(B) of this section, an exceedance of the PMDS response that appears to correlate with a PM concentration that exceeds the PM emission standard is not by itself evidence that the standard has been exceeded.

(vii) *PMDS 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 PMDS alarm or malfunction. The corrective measures plan must include, at a minimum, the procedures used to determine and record the time and cause of the alarm or PMDS malfunction as well as the

corrective measures taken to correct the control device or PMDS 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 or PMDS malfunction within 30 minutes of the time the alarm first sounds or the PMDS malfunctions; and

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

(viii) *Excessive exceedances notification*. If you operate the combustor when the detector response exceeds the alarm set-point or when the PMDS is malfunctioning 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, emission control device, or PMDS 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 and PMDS malfunction, the time corrective action was initiated and completed, and a brief description of the cause of the alarm or PMDS malfunction and the corrective action taken;

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

(C) If inspection of the emission control device demonstrates that no corrective action is required, then no alarm time is counted; and

(D) If corrective action to the emission control device is required, each alarm shall be counted as a minimum of 1 hour. Each PMDS malfunction shall also be counted as a minimum of 1 hour.

3. Section 63.1207 is amended by revising paragraphs (d)(4) and (m)(1)(i) introductory text to read as follows:

§63.1207 What are the performance testing requirements?

* * * * *

(d) * * *

(4) *Applicable testing requirements under the interim standards*. (i) *Waiver of periodic comprehensive performance tests*. Except as provided by paragraph (c)(2) of this section, you must conduct only an initial comprehensive performance test under the interim standards (§§63.1203 through 63.1205); 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 apply only to tests used to demonstrate compliance with the standards under §§63.1219 through 63.1221.

(ii) *Waiver of confirmatory performance tests*. You are not required to conduct a confirmatory test under the interim standards (§§63.1203 through 63.1205). The confirmatory testing requirements in the introductory text to paragraph (d) and in paragraph (d)(2) of this section apply only after you have demonstrated compliance with the standards under §§63.1219 through 63.1221.

* * * * *

(m) * * *

(1) * * * (i) You are deemed to be in compliance with an emission standard based on the volumetric flow rate of exhaust gas (i.e., µg/dscm or ppmv) if the maximum theoretical emission concentration (MTEC) does not exceed the emission standard over the relevant averaging period specified under §63.1209(l), (n), and (o) of this section for the standard:

* * * * *

4. Section 63.1210 is amended by revising the table in paragraph (a)(1) to read as follows:

§63.1210 What are the notification requirements?

(a) * * *

(1) * * *

Reference	Notification
63.9(b)	Initial notifications that you are subject to Subpart EEE of this Part.
63.9(d)	Notification that you are subject to special compliance requirements.
63.9(j)	Notification and documentation of any change in information already provided under §63.9.
63.1206(b)(5)(i)	Notification of changes in design, operation, or maintenance.
63.1206(c)(8)(iv)	Notification of excessive bag leak detection system exceedances.

63.1206(c)(9)(v)	Notification of excessive particulate matter detection system exceedances.
63.1207(e), 63.9(e) 63.9(g)(1) and (3)	Notification of performance test and continuous monitoring system evaluation, including the performance test plan and CMS performance evaluation plan.[1]
63.1210(b)	Notification of intent to comply
63.1210(d), 63.1207(j), 63.1207(k), 63.1207(l), 63.9(h), 63.10(d)(2), 63.10(e)(2)	Notification of compliance, including results of performance tests and continuous monitoring system performance evaluations.

[1] You may also be required on a case-by-case basis to submit a feedstream analysis plan under §63.1209(c)(3).

* * * * *

5. Section 63.1215 is amended as follows:

a. By revising paragraphs (e)(2)(i)(B), (e)(2)(i)(C), and (e)(2)(i)(D).

b. By adding paragraph (e)(3).

§63.1215 What are health-based compliance alternatives for total chlorine?

* * * * *

(e) * * *

(2) * * *

(i) * * *

(B) Your permitting authority should notify you of approval or intent to disapprove your eligibility demonstration within 6 months after receipt of the original

demonstration, and within 3 months after receipt of any supplemental information that you submit. A notice of intent to disapprove your eligibility demonstration, whether before or after the compliance date, will identify incomplete or inaccurate information or noncompliance with prescribed procedures and specify how much time you will have to submit additional information or to achieve the MACT standards for total chlorine under §§ 63.1216, 63.1217, 63.1219, 63.1220, and 63.1221. If your eligibility demonstration is disapproved, the permitting authority may extend the compliance date of the total chlorine standards up to one year to allow you to make changes to the design or operation of the combustor or related systems as quickly as practicable to enable you to achieve compliance with the MACT total chlorine standards.

(C) If your permitting authority has not approved your eligibility demonstration by the compliance date, and has not issued a notice of intent to disapprove your demonstration, you may begin complying, on the compliance date, with the HCl-equivalent emission rate limits you present in your eligibility demonstration provided that you have made a good faith effort to provide complete and accurate information and to respond to any requests for additional information in a timely manner. If the permitting authority believes that you have not made a good faith effort to provide complete and accurate information or to respond to any requests for additional information, however, the authority may notify you in writing by the compliance date that you have not met the conditions for complying with the health-based compliance alternative without prior approval. Such notice will explain the basis for concluding that you have not made a good faith effort to comply with the health-based compliance alternative by the compliance date.

(D) If your permitting authority issues a notice of intent to disapprove your eligibility demonstration after the compliance date, the authority will identify the basis for that notice and specify how much time you will have to submit additional information or to comply with the MACT standards for total chlorine under §§ 63.1216, 63.1217, 63.1219, 63.1220, and 63.1221. The permitting authority may extend the compliance date of the total chlorine standards up to one-year to allow you to make changes to the design or operation of the combustor or related systems as quickly as practicable to enable you to achieve compliance with the MACT standards for total chlorine.

* * * * *

(3) The operating requirements in the eligibility demonstration are applicable requirements for purposes of parts 70 and 71 of this chapter and will be incorporated in the title V permit.

* * * * *

6. Section 63.1219 is amended by revising paragraph (b)(7) to read as follows:

§63.1219 What are the replacement standards for hazardous waste incinerators?

* * * * *

(b) * * *

(7) Except as provided by paragraph (e) of this section, particulate matter emissions in excess of 0.0016 gr/dscf corrected to 7 percent oxygen.

* * * * *

7. Section 63.1220 is amended by removing paragraphs (a)(2)(iii) and (b)(2)(iii) and revising paragraph (b)(7) to read as follows.

§63.1220 What are the replacement standards for hazardous waste burning cement kilns?

* * * * *

(b) * * *

(7) For particulate matter, both:

(i) Emissions in excess of 0.0069 gr/dscf corrected to 7 percent oxygen; and

(ii) Opacity greater than 20 percent, 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).

* * * * *