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COMMENTS OF THE COUNCIL OF INDUSTRIAL BOILER OWNERS
on
EPA Proposed Rule
Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units
75 Fed. Reg. 31938, EPA–HQ–OAR–2003–0119
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The Council of Industrial Boiler Owners (CIBO) appreciates the opportunity to comment on EPA's June 4, 2010 proposed rule addressing standards of performance for new stationary sources and emission guidelines for existing sources for commercial and industrial solid waste incineration units. 75 FR 31938.

CIBO is a broad-based association of industrial boiler owners, architect-engineers, related equipment manufacturers, and university affiliates with members representing 20 major industrial sectors. CIBO members have facilities in every region of the country and a representative distribution of almost every type of boiler and fuel combination currently in operation. CIBO was formed in 1978 to promote the exchange of information within the industry and between industry and government relating to energy and environmental equipment, technology, operations, policies, law and regulations affecting industrial boilers. Since its formation, CIBO has been active in the development of technically sound, reasonable, cost-effective energy and environmental regulations for industrial boilers. CIBO supports regulatory programs that provide industry with enough flexibility to modernize – effectively and without penalty – the nation's aging energy infrastructure, as modernization is the key to cost-effective environmental protection.

This rule is one of four interrelated rules published by the U.S. Environmental Protection Agency (EPA) on June 4, 2010, under the Clean Air Act (CAA) and the Resource Conservation and Recovery Act (RCRA): a rule setting major-source National Emission Standards for Hazardous Air Pollutants (NESHAPs) for industrial, commercial and institutional boilers and process heaters under CAA § 112 (Boiler rule);[1] a rule setting area-source NESHAPs for industrial, commercial and institutional boilers under CAA § 112 (Area Source rule);[2] a rule setting New Source Performance Standards (NSPS) and emission guidelines for commercial and industrial solid waste incinerators under CAA § 129 (CISWI rule);[3] and a RCRA rule defining "solid waste" to demarcate applicability under CAA § 112 and § 129 between boilers and CISWI units (Solid Waste Definition rule).[4]

CIBO members will be directly affected by this and the other related proposed rules and provide these comments to assist EPA to moderate its proposal so that regulated entities can feasibly comply with applicable CAA standards.

As an overriding issue, CIBO believes EPA's current schedule, with promulgation by December 16, 2010 is wholly inadequate for the necessary evaluations, deliberations, and revisions that are

[1] National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, 75 Fed. Reg. 32006 (proposed June 4, 2010) (to be codified at 40 C.F.R. pt. 63)(Boiler Rule).

[2] National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers, 75 Fed. Reg. 31896 (proposed June 4, 2010) (to be codified at 40 C.F.R. pt. 63)(Area Source Rule).

[3] Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units, 75 Fed. Reg. 31938 (proposed June 4, 2010) (to be codified at 40 C.F.R. pt. 60)(CISWI Rule).

[4] Identification of Non-Hazardous Secondary Materials That Are Solid Waste, 75 Fed. Reg. 31844 (proposed June 4, 2010) (to be codified at 40 C.F.R. pt. 241)(Solid Waste Definition Rule).

needed to this proposed rule. This rule in combination with the three other proposed combustion rules presents the largest set of rulemakings from an impact and cost perspective on the nation's manufacturing sector that EPA has ever issued. As such, the cost and potential impact on jobs in the US demand a thorough deliberation and thought process so that the most reasonable and defensible rule can be finalized that meets the intentions of the Clean Air Act. Requiring EPA to do all of the work required in less than 4 months puts EPA in an untenable position and the results of having too little time will be a less than optimum regulatory result. Therefore, CIBO recommends that EPA pursue at least 6 months additional time in preparation for promulgation of final Subpart DDDDD, Subpart JJJJJJ, and Subpart CCCC and DDDD rules.

However, in the case of CISWI, CIBO believes the issues that need to be addressed are so encompassing and the required results of further evaluation so different than the proposed rule, that a re-proposal is called for. EPA should issue a revised proposed rule, after it analyzes new data that is available, or takes any one of the following additional actions that will affect the proposed rule, which will necessitate notice and comment.

First, in the CISWI Test Data Database memo (dated April 26, 2010 from ERM) CITE, EPA states that they have additional data obtained in late 2009, did not have sufficient time to review and evaluate the data, and plans to incorporate the data into the final rule. Any additional data analysis will need the same level of scrutiny as the data analysis EPA provided for proposed rule. Second, EPA needs to subcategorize units now in the energy recovery category subcategory, for the reasons noted above. Adding subcategories will affect a large portion of the covered sources, and sources will need to review the impact of the revised rule, especially how EPA determines the MACT floor standards once the data is subdivided and this new set of data is incorporated. Third, if EPA decides to use the alternative definition of non-hazardous secondary materials that are solid waste, that alternative is likely to have a dramatic effect on the standards. Last, EPA indicated that that it may set beyond the floor standards. 75 FR 31959. Any one of these changes to the rule would trigger a requirement for an opportunity for the public to comment on revisions to the rule. Changed floors, changed basic definitions, and changed subcategories would not constitute logical outgrowths of the proposal and the CAA and APA would require re-proposal and additional comment by affected sources.[5]

SUMMARY OF RULE

This proposed rule establishes new source performance standards (NSPS) and emission guidelines (EG) for new and existing commercial and industrial solid waste incineration (CISWI) units. The rule, regulates the emissions of mercury, lead, cadmium, hydrogen chloride, particulate matter, carbon monoxide, dioxins/furans, nitrogen oxides, and sulfur dioxide under § 129 of the Clean Air Act. Under the proposed revisions, the rule would cover five CISWI subcategories.

[5] *See Envtl. Integrity Project v. EPA,* 425 F.3d 992, 996 (D.C. Cir. 2005); *Shell Oil Co. v. EPA,* 950 F.2d 741, 750-51 (D.C.Cir.1991)

In addition to emissions regulations, the proposed rule would require stack testing for newly regulated subcategories, monitoring for newly regulated subcategories, additional monitoring and stricter regulations for new sources, annual inspections of emission control devices, annual visible emissions test of ash handling operations, and would create specific procedures for test data submittal. The rule does not provide standards separately for periods of startup, shutdown or malfunction.

SUMMARY OF COMMENTS

CIBO's members support the goals of improving the environment and protecting human health, yet EPA has overstepped its regulatory authority under § 129 of the Clean Air Act in some of the provisions of the proposed rule.

The proposed revisions to the new source performance standards and the emissions guidelines for CISWI units are too expansive and lack a supporting record. In many respects, the proposed standards go far beyond what is necessary to protect human health and the environment, amounting to a set of arbitrary, unachievable standards.

CIBO has responded to a number of areas where EPA has requested comments, suggesting ways to more appropriately address the requirements of the CAA, while balancing the costs of such modifications.

Relevant parts of CIBO's comments on the proposed Boiler MACT Rule are hereby incorporated by reference. *See* Attachment 1.

SPECIFIC COMMENTS

I. The Costs of the Rule to Regulated Sources is Grossly Underestimated

EPA estimates the CISWI rule will require a "total capital investment of $574 million with an associated total annual cost of $216 million." EPA estimated the rule will result in monetized benefits of "$240 million to $580 million (2008$, 3 percent discount rate) in the implementation year (2015)." EPA's estimate of monetized benefits of the proposed regulatory action at a 7 percent discount rate are $210 million to $520 million (2008$). 75 FR 31967-68.

Although EPA's estimates indicate that the total capital cost of the proposed rule will be $574 million, the total capital cost of the rule will be far in excess of that amount for all affected sources for installation of emissions controls required to meet the proposed standards. Major capital investments in add-on control technology will be required for continued operation of the ICI power house and energy base of the country.

A. Specific Concerns with EPA's Cost Estimate

1. EPA states energy impacts for replacement of waste material energy input with fossil fuel to be equivalent to 56 TBtu/yr. The stated cost impacts do not appear to take the increased cost of fossil fuel into account. The cost of using the alternative fuels is obviously lower than fossil fuel cost, or it would not be burned currently. At a cost

differential of $4/MMBtu assuming natural gas would be the fossil fuel of choice (mandated based on proposed rules), the increased cost for fuel would be $224MM/yr. EPA stated this would be $216 MM/yr. 75 FR 31967.

2. Benefits are all based on PM reductions from the controls. The benefit of the HAP regulation insofar as it reduces HAPs, cannot be known according to EPA:

> These benefits estimates represent the total monetized human health benefits for populations exposed to less PM 2.5 in 2015 from controls installed to reduce air pollutants in order to meet these standards…
>
> The benefits from reducing carbon monoxide and HAP have not been monetized in this analysis, including reducing 29,000 tons of CO, 590 tons of hydrochloric acid, 5.4 tons of Cd, 6.0 tons of lead and 280 pounds of Hg each year. Although we do not have sufficient information or modeling available to provide monetized estimates for this rulemaking, we include a qualitative assessment of the effects associated with these air pollutants in the RIA for this proposed rule, which is available in the docket. 75 FR 31968

3. The cost to comply will lead to facility closures, which the D.C. Circuit has recognized is contrary to congressional intent.
4. The rule will increase solid waste landfilled due to shutdowns and no new units.

B. Estimates of Costs of Controls are Greatly Underestimated

EPA's estimated costs of controls to comply with the rule are significantly lower that the real cost impact on sources. CIBO estimated the capital costs for installation of additional control technologies on existing boilers. The approach used by CIBO to estimate capital costs differed from EPA's in several respects, as described in CIBO's comments on the proposed Boiler MACT rule. *See* Attachment 1. CIBO members have sources that will be subject to CISWI or alternatively, to MACT standards. The reasoning and estimated costs for controls that CIBO determined would be required to meet proposed MACT standards provide information from which CISWI controls and cost estimates can be extrapolated. CIBO conservatively estimates that the cost to sources to implement CISWI will be significantly higher than EPA estimates.

II. EPA did not Provide a Reasonable Comment Period for the Four Interrelated Rules.

The four interrelated rules raise an unprecedented number of issues for the Agency in determining the appropriate emissions standards for these very large, diverse source categories. Nevertheless, EPA provided only 60 days for regulated sources and other members of the public

to analyze and comment on the rules.[6] Affected sources asked EPA for an additional 90-day period to permit affected sources to quality control data, review the database and analysis, consider EPA's proposed and alternative proposed regulatory options, and develop comments that would demonstrate the significant compliance problems with the standards as proposed. CIBO appreciated EPA's agreement to provide an additional 3 weeks for comment for 3 of the 4 rules (EPA did not extend the comment period for the Solid Waste Definition Rule).

It is important to be clear, however, that even with the 3-week extension of the comment period, the time EPA allotted for comment for four interrelated rules of this complexity, broad application and economic impact failed to constitute the reasonable opportunity for public comment guaranteed by the Clean Air Act and the Administrative Procedures Act. 42 U.S.C. § 7607(h) (2006).

In their request for comment to EPA, regulated sources made the followng and other points to EPA.

Under basic principles of due process and administrative law, EPA must provide the public with a reasonable opportunity to comment on proposed rules. Under the CAA, 30-day comment period would be reasonable for a single, ordinary proposed rule. The truncated comment period violates the clear terms of the CAA and deprives sources of a means to adequately protect their interests and rights in the administrative and judicial processes.

The complexity, breadth of applicability, and economic impact of the proposed rules, and because EPA published the four rules simultaneously, demands even more time to comment, as regulated facilities must also assess the impact of the rules as they interrelate, raising many more operational and practical questions.

The rules will have an extraordinary impact in terms of applicability and compliance costs, covering what EPA estimates to be this scope of facilities nationwide: Boiler MACT rule, 13,555 units located at 1,608 different facilities. 75 FR 32048; Area Source rule, 183,000 existing boilers at 91,000 facilities (75 FR at 31914, 31924) and 6,800 new boilers over the next three years (75 FR at 31914); CISWI rule, 176 units (75 FR at 31950-51); and the Solid Waste Definition rule would cover sources at facilities in at least 85 NAICS codes (75 FR at 31845).

EPA allocated to itself 30 months to collect and analyze data to develop emissions standards and reserved for itself almost 4 months to review comments and prepare a final rule. In contrast to the 34 months that EPA has allocated to its own rulemaking efforts, EPA gave sources 2 months (and an additional 3 weeks) to evaluate the same data and proposed standards, and then write substantive comments that could meaningfully inform the rulemaking process.

EPA adopted a very aggressive timeframe for developing these rules and its database contained countless errors that sources needed to first quality control before analyzing the conclusions EPA

[6] In fact, EPA originally provided 45 days for comment on the 4 rules. *See* 75 FR 32682 (June 9, 2010)(extending initial 45-day comment period to 60 days).

reached in reliance on the data. EPA did not make MACT floor memo Excel files available in the docket for the Boiler rule until 3 weeks into the original 60-day comment period.

The rules would also benefit significantly from the generation of additional emissions information. EPA's MACT Floor tables indicate that eleven of the thirty MACT Floor emission limitations for existing sources were determined using less than five sources due to a lack of available data.[7] No time was allocated for additional data-gathering. See *Comment Extension Request* and *EPA's Response to Request* Attachments 2 & 3.

III. Lack of Data on Materials Used by Sources

EPA acknowledges that it used inadequate data on which to base realistic standards. In the proposed rule, EPA "recognizes it has imperfect information on the exact nature of the non-hazardous secondary materials which energy recovery units and kilns combust." Nor has EPA taken into account "other issues potentially relevant in a determination as to whether non-hazardous secondary materials are solid waste," as the term has been defined under RCRA. 75 FR 31940.

It is evident from the CISWI Test Data Database memo (dated April 26, 2010 from ERM), that EPA has not properly evaluated the additional data gathered from late 2009. By failing to analyze all the data available, the rule will be flawed in determining which materials are solid waste and which are not, and even which sources are subject to CISWI. Given that, there is a need for more flexibility, alternative standards or more subcategories than are proposed.

IV. Floor Setting Methodology

The purpose of the floor setting procedure is to discover what techniques the "best performers" use to achieve low emissions so that the other, higher emitting sources in the category or subcategory can replicate those actions and achieve those same low levels. 75 FR 31943. As EPA noted in *Cement Kiln Recycling Coalition v. Environmental Protection Agency*, the intent of the standard setting process is to discover the "objective, duplicable control" techniques so that other performers in the source category could emulate those techniques, reduce their emissions, and achieve those levels. 255 F. 3d 855, 863 (D.C. Cir. 2001). *See* EPA Response Brief, *CKRC v. EPA*, at n. 57.

Reproducibility is included in the statute's floor setting provisions as well. Under §112(d)(3), the floor standards must reflect the average emission limit achieved by the best performing sources (for existing sources) or the emission control achieved in practice by "best controlled similar source" (for new sources). Congress clearly intended that the best performers emissions levels and their technique must be capable of being reproduced by others in the source category. Thus, the Agency's floor determination must discover the techniques that the best performers are using to actually "control" emissions, i.e., exercising some degree of management that is duplicable by others. The Agency's analysis, therefore, must determine what is the maximum degree of reduction that the best similar source achieves through methods of control.

[7] *See* Table 2 and Table 3, 75 Fed. Reg. 32022-32023 (June 4, 2010).

EPA states that the UL computation assumes that the data available represents the entire population of data from the best performing CISWI units used to establish the proposed standards. However, this only represents variability for those units for the test data used, not for all operating conditions which may be typical for those units. In addition, those top 12% do not represent the diversity of sources and materials combusted in each subcategory population. Therefore, the EPA analysis and floors are inappropriate and biased toward lowest possible emission rates, not achievable emission rates. 75 FR 31952.

A. Multiple Tests Needed

In order to get the most accurate data to use in calculating the floor limits, it is necessary to run multiple tests, as opposed to the single tests relied upon in the Proposed Rule. Such little data could not be representative of the thousands of units which will be affected by this rule. EPA's data which is relied upon is flawed due to insufficient testing. In the final rule, CIBO recommends running multiple tests as a more reasonable approach for gathering data for CISWI floor determinations.

B. Fuel/feed variability

EPA did not consider variability sufficiently in establishing floors under the Proposed Rule. EPA identifies in preamble that composition of materials used in CISWI units is highly variable and is a key factor in the profile of emissions. 75 FR 31951. This being said the test data only represents variability for those units when test data was taken, not for all operating conditions which may be typical for those units. In addition, there is a wide range of sources and materials used in other CISWI units from which no test data was used, so the factors unique to facilities outside the top 12% are not adequately accounted for.

C. MACT Floors must Account for Inherent Variability in Fuel Supplies.

EPA recognized in the proposed Boiler and Process Heater MACT (see the Boiler MACT Floor Memo) that it can and must consider variability in the fuel supply when determining the MACT floor emission standard for fuel-dependent HAPs. EPA has made no effort to account for the variability of cadmium, lead, mercury, sulfur, and chlorine fuel supplies in the proposed CISWI rule. Now that CISWI is expanding to include energy recovery units that burn fossil fuel such as coal, it is necessary for EPA to consider data other than performance tests when setting the MACT floor standards.

It is well known that coal is a variable fuel supply and that these fuel dependent pollutants will vary over time. *See* Data and Comments submitted by Eastman Chemical Company on the proposed Boiler MACT and CISWI Rules. EPA needs to collect coal data either directly from the sources or from the suppliers that serve the top performers. If units do not have a large data set, then EPA should collect chlorine data available from the coal suppliers. Then, EPA should determine the UPL at the 99^{th} confidence levels using all the data available for each top performing unit. Then, the average and 99% UPL concentrations should be determined for the group of top performers. Then, similar to what EPA did in Appendix A-2c to the MACT Floor

Memo, calculate the ratio of the group's UPL to the group's average and use that as the Fuel Variability Factor to multiply by the average emission level achieved by the top performers.

Once EPA sets the MACT floor emission standards in this way, as is discussed elsewhere in these comments, EPA should allow compliance with the standard to be demonstrated using long term averages of the pollutant content in the fuel.

D. No Numeric Emission Standard for Dioxin/Furans (D/Fs) Should be Established at this Time.

EPA has established MACT floor standards for energy recovery units and burn-off ovens for D/Fs from an inadequate dataset and has no sound basis for supporting the assumption that a control technology is available that has been demonstrated to reduce D/Fs from these units exists.

The EPA has only recently gathered any D/F emissions data from units such as coal-fired boilers and has not yet fully developed an understanding of the variability of D/F emissions over time or an understanding of the cause of D/F emissions in coal-fired boilers. EPA has only one 3-run test from any given boiler from which to establish the MACT floor. Some of the reported emissions of D/F used to set the new source standards are at extremely low levels very close to detection limits. EPA has not established that these levels are repeatable over time or across variations in fuel by the best-performing units. Any given unit (even the top performers) is at great peril of failing the D/F emission limit in the annual performance tests. Such a result may well be the result of normal statistical variability which has not been accounted for in EPA's MACT floor analysis.

It is also important to point out that neither EPA nor the regulated sources have an adequate understanding of how to reduce or control D/F emissions from these units. Where no known technology or methodology exists to achieve the emission reduction, legally EPA cannot impose that requirement.

E. MACT Floor Analysis Should Include Continuous Emission Monitoring System (CEMS) Data and Use the Hazardous Waste Combustor (HWC) MACT Statistical Methodology

EPA did not include CO, SO2, or NOx data from CEMS that was provided by companies and resides in EPA's databases. For example, Eastman submitted CO, NOx, and SO2 data from temporary CEMS units on their Boiler 18 over a one week period of time. After discussions with EPA rule writers in which affected sources were encouraged to gather CEMS data as an alternative to stack test data, Eastman purposefully submitted such data and CIBO believes data such as this should be used. It is important that the MACT floor data represent the real-world variability of emissions and CEMS data is clearly superior to stack test data in this regard.

Although it is unclear why EPA chose to exclude CEMS data from its MACT floor determinations, one possibility is that EPA may believe it is not feasible to incorporate CEMS

data along with stack test data in its MACT floor analyses due to the method it has chosen to rank and statistically analyze the data. It has chosen to identify top performers by using the lowest 3-run stack test and then use all the run data from the top performers to determine the Upper Limit (UL) of the data set.

A better methodology is one which was used by EPA in the Hazardous Waste Combustor HWC MACT. In HWC, the Upper Predicted Level (UPL) is determined for each unit using all the test data available, ranking the units by the UPL, and then determining the UPL for that dataset (see the HWC MACT Technical Support Document, Vol. 3 p. 7-6 - 7-7). This methodology would allow CEMS data to be used along with stack test data and the UPL determined for each such unit. EPA should obtain hourly average CEMS data over a suitable period of time (several months or as much data as can be readily obtained) from each source it can identify that either has a permanent CEMS installed on the unit or provided data in its response to the ICR survey or testing program. These hourly averages should then be used to establish the UPL for that unit. This data from these units with CEMS data should be combined with stack test data, all the UPLs determined, and then the top 12 percent performers determined from the UPLs, and the UPL for the subcategory should be determined using the HWC MACT methodology. This procedure should be used for NOx, SO2, and CO, to allow for EPA to more appropriately account for intra-unit emission rate variability.

F. Statistical Approach

EPA requests comment on whether in setting the MACT floor, an alternative statistical approach should be used, if it should evaluate alternative calculations including 99% UPL to see the floor impact, and how additional variability could be applied. 75 FR 31943.

The statistical method used by EPA in setting MACT floors is flawed due to the use of data sets that are not statistically significant. EPA states that they used 99% UL (upper limit). This is the same method as in Hospital, Medical and Institutional Waste Incinerator (HMIWI) MACT, but with a different name. In the HMIWI MACT, the method was called UCL. The floor is calculated from data below 99% of units in MACT floor data population would fall. This sets up an automatic 1% failure rate for the top 12% sources. This must be addressed by using a statistical approach which increases the variability of the dataset.

EPA also is requesting comment on how to account for Detection Limit Limited (DLL) data in determining the floor since truncated data does not account fully for variability. CIBO agrees that this is a problem. The solution is to increase the variability factor. 75 FR 31943-44. EPA proposed a possible 2 step approach to DLL data: 1) identify highest test-specific detection level reported in a data set that is </= floor; and 2) determine the value 3x representative method detection level and compare it to the floor. If the number is less than the floor, then it is okay and if the number is greater than the floor, then 3x the value would be taken as the floor. CIBO supports this as one part of additional considerations that are need to adequately address this issue, but it is important to recognize that this only addresses measurement method variability, not combusted materials or unit variability. Both of those must be addressed through additional subcategories or additional variability factors. 75 FR 31944.

CIBO strongly supports the assertion that there is no requirement , legal or otherwise, to recalculate the MACT floors every 5 years.

V. Subcategory Selection

EPA has proposed establishing five subcategories for CISWI units: Incinerators, Energy Recovery Units,[8] Waste Burning Kilns, Burn-Off Ovens, and Small, Remote Incinerators. CIBO strongly supports subcategorization, but EPA has not considered the vast diversity of combustion units and materials combusted by CISWI units. The result of EPA's proposed subcategorization is that not all units that will fall within each proposed subcategory can demonstrate the emission limits achieved by best-performing units in that subcategory. 75 FR 31943. To avoid this scenario, the final rule should include further subcategorization, which along with appropriate data and floor setting methodology, will account for the diversity inherent in affected CISWI units.

A. EPA has Broad Discretion to Distinguish Among Classes, Types and Sizes of Sources, Even Within Subcategories.

EPA has broad authority to distinguish among groups of sources within a source category or subcategory in setting a MACT standard. The statute provides that EPA "may distinguish among classes, types and sizes of sources within a category or subcategory" when establishing MACT standards. 42 U.S.C. § 7412(d)(I). Congress's use of the broad terms "class," "type," and "size" shows that EPA is intended to have broad discretion in the appropriate factors that warrant distinguishing among sources, and EPA's proposed subcategories fall squarely within the meaning of "types" and "sizes." It is a well-established canon of statutory construction that courts "give the words of a statute their ordinary, contemporary, common meaning, absent an indication Congress intended them to bear some different import." *Williams v. Taylor*, 529 U.S. 420, 431 (2000) (quotations omitted).

Webster's Third New International Dictionary Unabridged (1993) defines "class" to mean "a group, set or kind marked by common attributes or a common attribute." It defines "type" as "qualities common to a number of individuals that serve to distinguish them as an identifiable class or kind," further clarifying that "'[t]ype', 'kind' and 'sort' are usually interchangeable" and that "'kind' in most uses is likely to be very indefinite and involve any criterion of classification whatsoever." To the extent that EPA may distinguish among sources within a category or subcategory on the basis of "any [reasonable] criterion of classification whatsoever," and may create subcategories as appropriate, the CAA clearly grants EPA authority to create subcategories of industrial boilers as CIBO proposes in the following discussion.

Subcategorization of boilers where differences among sources affect the applicability of control technology is consistent with MACT precedent and is appropriate because of the impact of these factors on the ability of these sources to maintain the same level of control as non-similarly

[8] This subcategory covers "energy recovery units (e.g., units that would be boilers if they did not burn solid waste) designed for heat recovery that combust solid waste materials." 75 Fed. Reg. 31,941, § 60.2875, 75 Fed. Reg. 31,999.

situated sources. For example, EPA created subcategories in the 1999 polyether polyols production MACT standard, finding "[s]ubcategorization was necessary due to the distinctively different nature of the epoxide and THF processes and its effect on the applicability of controls." 64 FR 29421. Similarly, in the 1998 flexible polyurethane foam production MACT standard, EPA found that "Subcategorization was necessary to reflect major variations in production methods, and/or HAP emissions that affect the applicability of controls." 61 FR 68407. Based on similar rationales, EPA created subcategories in the Group I polymers and resins MACT and the primary aluminum production MACT, and proposed to create subcategories in the polyurethane foam production MACT. Subcategorization based on fuel type is appropriate because the type of fuel affects the applicability of control technology.

EPA also has created subcategories in numerous cases where differences among sources affected the performance of control technology and, hence, the achievability of the MACT standard. For example, in the steel pickling MACT, EPA excluded specialty steel because the technology that is effective for removing acid gas (HCl) emissions from carbon steel manufacturing "may not be as effective" for removing acid gas (H2S04) emissions from specialty steel manufacturing. 64 FR 33208. Similarly, the phosphoric acid manufacturing MACT subcategorized the submerged combustion process and the vacuum evaporation process because the "submerged combustion process is not amenable to the same level of control as is the vacuum evaporation process." 64 FR 31362. In the leather finishing operations MACT, EPA "observed differences in achievable emission levels between the types of leather products produced ... [and therefore] we have established four different performance standards for the various leather products produced." 65 FR 58705. And in the proposed secondary aluminum production MACT, EPA "examined the processes, the process operations, and other factors to determine if separate classes of units, operations, or other criteria have an effect on air emissions from emission sources, or the controllability of those emissions." 64 FR 6960. In sum, EPA's proposed subcategories are amply supported by the language of the statute, the legislative history, applicable case law and the Agency's own past practices.

B. EPA Wrongly Concluded That All Incinerators Are Sufficiently Similar To Meet One Emission Limit

In justifying establishing a single subcategory for all incinerators, EPA states that: "[a]lthough the composition of the materials combusted is highly variable and is a key factor in the profile of emissions, we determined it was not appropriate to further subcategorize incinerators because the sources in this category are sufficiently similar such that the incinerators can achieve the same level of performance for the nine regulated pollutants." 75 FR 31951. This conclusion is obviously incorrect. The variability of combusted materials necessarily means variability in emissions concentrations, which variability cannot be masked exclusively by emissions control performance or statistical analysis. Thus, it will be extremely difficult for incinerators combusting materials other than what the best-performing incinerators are combusting to comply with the limits in the proposed rule if EPA does not refine the overly-broad incinerator subcategory. This inability to achieve the emission limits is amply demonstrated by simply looking at emissions from existing well controlled CISWI incinerators compared to the EPA-determined MACT floor emission limits.

C. Further Subcategories Are Required Within The Boiler Subcategory

1. EPA Should Create Subcategories Based On Fuel Type

EPA states, in section IV.B of the proposed rule, that its subcategorization decisions were "based on technical and other differences in the processes, such as combustor design, draft type and availability of utilities." 75 FR 31951. EPA further states that it based its proposed subcategories " on fundamental differences in the types and sizes of units that will be subject to the standards." *Id*. CIBO strongly supports this initial step, and also agrees with EPA that incinerators, waste burning kilns and burn-off ovens should be categorized differently from boilers. However, CIBO believes that, as written, the energy recovery unit category is too broad and needs further refinement. This is because, as currently proposed, that subcategory fails to recognize the design and operational differences between units that burn coal, biomass, liquid and gaseous fuels and the varying emissions profiles that result from those differences.

For example, coal-fired units face issues with SO_2 emissions that biomass-fired units do not. Coal contains significant concentrations of sulfur, whereas biomass generally contains little or no sulfur. Under the proposed rule, biomass-fired units would likely be the best-performing units for SO_2, and coal-fired boilers would be held to an emissions standard impossible to meet using available control technology. Further, reference to the proposed Boiler MACT floor standards for proposed biomass and coal units show that there are also significant differences in NOx, HCl, CO and mercury emissions, due to inherent differences in the design of those units, and also due to technological limitations with respect to available emissions control technologies for these units.

In, the Boiler MACT proposed rule, EPA acknowledged that "[b]oiler systems are designed for specific fuel types and will encounter problems if a fuel with characteristics other than those originally specified is fired."[9] 75 FR 32017. However, the CISWI proposed rule establishes emissions limitations for subcategories that do not address these different fuel types and the problems units of one fuel type may have in trying to meet the emissions profiles of best performing units, which may likely be utilizing a different fuel type. Thus, as proposed, the rule forces fuel switching, which even EPA concedes is technologically problematic for affected units. Neither Congress nor EPA intended this result. The best way to proceed with EPA's goals of establishing attainable emissions limits is to create additional subcategories for boilers based on fuel type.

2. Within the Coal Subcategory, EPA Should Create Subcategories for Circulating Fluid Bed Units and For Combination Units That Do Not Exclusively Burn Coal

Within the coal subcategory, EPA should create a subcategory for circulating fluid bed units, at least with respect to SO_2 floors. This is because, due to the unique design feature of circulating

[9] Specifically, EPA explained: "Changes to the fuel type would generally require extensive changes to the fuel handling and feeding system[.] Additionally, the burners and combustion chamber would need to be redesigned and modified to handle different types and account for increases or decreases in the fuel volume. . . . An additional effect of these changes would be extensive retrofitting needed to operate using a different fuel." 75 Fed. Reg. 32,017

fluid bed units, it is common practice to control SO_2 via limestone injection in the circulating bed. Compared to add-on control options such as spray dryer absorbers, wet scrubbers or duct sorbent injection, this technology is much more cost-effective and also results in lower SO_2 emission rates. Within the group of units burning some amount of coal and reporting SO_2 emissions in EPA's database for the Alternative Solid Waste definition scenario, two of these units (GASPNewsprintPB2 and PAPHGlatfelterPB5) stand out with lower SO_2 emission rates. To compare the other types of boilers which naturally would not have this type of technology available, to circulating fluid bed units is inappropriate.

Further, it is nonsensical to include combination units such as the unit at Packaging Corporation in Tennessee (which only burns about 30% coal), or the unit at Domtar in North Carolina (which only burns about 25% coal) in a floor determination along with units that burn nearly 100% . As discussed above, the biomass burned in these other units would have little or no sulfur, and thus these units' SO_2 emissions will be lower than non-combination units burning coal exclusively.

D. EPA Needs to Retain the Exemption for Rack, Part, and Drum Reclamation Units

The existing CISWI Subpart CCCC and DDDD rules include an exemption for rack, part, and drum reclamation units, which EPA has reclassified as burn-out ovens. Burn-out ovens are used to remove materials from racks, parts, and drums so that they can be easily reused. These are critical services that in many cases cannot be replaced with other alternatives. EPA has an obvious lack of understanding of these devices and their prevalence throughout industry.

1. EPA's Understanding of the Number of Burn-Off Ovens, and their Purpose Seems Lacking

EPA has vastly underestimated the number of burn-off ovens in operation and has improperly estimated the economic impact of its proposed emission standards for burn-off ovens. In the docket memorandum “MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category”, EPA states there are 36 existing burn-off ovens. Hence, the MACT floors are determined from a maximum of 5 sources. CIBO believes EPA has vastly underestimated the number of burn-off ovens at area and major sources in the U.S. Eastman alone has four such units. EPA should contact suppliers of these ovens to get a better estimate of the number of such units sold in the U.S. We suspect EPA is unaware of the actual number of these units because sources did not realize EPA was including burn-off ovens as solid waste incinerators. Burn-off ovens are specifically exempted from the definition of solid waste incinerators in the current NSPS Subparts CCCC and DDDD. Also, many of these units do not actually incinerate or combust the materials adhered to the parts being cleaned. Rather, they melt or use pyrolysis to decompose the materials. Therefore, respondents to EPA’s surveys would likely have overlooked these units. Further, if EPA were unaware of these units, they would not have even sent CAA Section 114 surveys to facilities (including area sources) where these units exist. Therefore, CIBO believes EPA must conduct a more thorough and targeted examination of these units before considering whether to propose emission standards.

CIBO also believes that it is apparent from the proposed rule that EPA does not understand the purpose and limitations for use of burn-off ovens. EPA appears to believe most facilities will cease to use burn-off ovens if the proposed limits are promulgated, and instead use abrasive blasting. Many applications cannot have material contact with the components being cleaned due to the need to maintain precise machined surfaces, meaning abrasive blasting is simply not possible. Burn-off ovens are the not only expedient and cost effective, but also the only recourse other than complete part replacement, which is prohibitively expensive. If such unachievable limits are imposed, it will lead to shutdown of manufacturing that relies on these activities and relocation to another global location if that is justified. As a result, jobs will be lost in the US.

2. Burn-Off Ovens are not Solid Waste Incinerators

Burn-off ovens do not fit the category of solid waste incinerators and EPA should create a source category under the §112 program if it believes these units warrant regulation for emission of hazardous air pollutants, which CIBO believes is not justified.

First of all, the purpose of these units is to clean parts for reuse, not incinerate solid waste. Secondly, most of these units do not use incineration or combustion processes. Rather, they use lower temperature processes such as melting or pyrolysis to melt/decompose materials such as plastic or polymer. These ovens are specifically designed to avoid flaming conditions which would damage the parts being cleaned. EPA should contact suppliers of these ovens to verify this information. The burn-off oven supplier to one CIBO member indicated, "[p]lease note that the furnace is not an incinerator. It has no open flames; it has a controlled 800 degrees Fahrenheit interior oven temperature for removing surface coatings of cured paint at a controlled rate of smoke emissions from the parts. The patented water spray injection system positively controls the rate of decomposition by reading the secondary chamber temperature and controlling that temperature by water mist injection into the furnace."

Third, burn-off ovens are very small sources with rated capacities equal to or less than 1 mmBtu/hr and utilize natural gas or electricity as the heat source. Burn-off ovens are also of various diverse designs, for example, open chamber and fluidized bed designs. Due to their function, these ovens have minimal emissions. Typically, they are used to remove product from parts. These products would include paints, plastics, and polymer. These products are organic matrixes with only trace levels (if any at all) of any HAPs such as inorganic catalysts. Fourth, the temperatures reached in burn-off units are not high enough to create dioxin/furan emissions. Finally, many of these ovens have limited use. Use of these ovens is dependent on production rate, product mix or changes, and other issues. Burn-off ovens are used as needed to clean parts and are thus operated only as needed. Many of these might operate once per day or less. Cycle times typically are in the range of 2-4 hours for the entire cycle. Thus trying to conduct emissions testing on these batch cycle ovens is problematic simply due to a lack of steady state operation.

EPA should carefully consider the necessity of subjecting these trivial sources to costly MACT or CISWI standards including the need for emissions testing, which basically cannot be done. EPA is correct in its assumption that, when faced with the compliance costs (even if no air pollution control devices are needed), many of these ovens would simply shut-down and facilities would seek other alternatives. However, these alternatives are also costly and not

necessarily better for the environment. Given the trivial emissions from these ovens, this outcome would be unfortunate and unjustified.

EPA does not have adequate data for burn-off units on which to base CISWI limits. Inadequate data exists for these units on which to base CISWI limits. For the pollutants Cd, HCl, Hg, and dioxins/furans, the only data in the docket are for two units which fall in the incinerator subcategory.[10] Unlike the rest of this subcategory, these two units are already subject to NSPS Subpart CCCC, which is why this particular stack test data exists. However, these units are not indicative of the rest of the category. Before EPA imposes CISWI limits on burn-off units, additional data should be obtained and analyzed.

3. EPA has not Adequately Considered the Costs of Forcing Burn-Off Oven Shut Down

EPA has not adequately considered the costs facilities will incur if burn-off ovens are shutdown: In the docket document "Compliance Cost Analyses for CISWI Units," EPA presents its cost-effectiveness estimates. On page 9 of the document, EPA states:

> "The nationwide average cost effectiveness for all units to choose the lowest cost option between complying and using an alternative disposal method was estimated as follows: $57,700/ton for burn-off ovens, $6,000/ton for waste-burning kilns, $7,700/ton for energy recovery units, 2,500/ton for incinerators, and -$26,600/ton for small, remote units."

Even EPA's estimates illustrate the high costs ($57,700/ton) of subjecting these trivial units to the CISWI regulation relative to the other subcategories. However, CIBO believes this estimate is far underestimated. Again, from page 9 of the CISWI cost analyses document, EPA states:

"For burn-off ovens, sandblasting was considered as an alternative disposal method. As shown in Table 7C, an estimated operational cost of $53.75 over 2000 hrs per year for each burn-off oven was assumed, with an additional 10 percent assumed for contingency costs. The result was an estimated flat rate of $118,250 per year to utilize an abrasive blasting service."

EPA has failed to recognize that the purpose of having on-site burn-off ovens is so that facilities can quickly clean parts and re-use them. It a facility has to send parts to an off-site facility for cleaning, the facility will have to stock additional parts so that it will not lose production time waiting on the parts to be returned from the cleaning facility. These expensive parts such as dies and extruder screws would add substantially to EPA's cost estimates.

4. Performance Tests To Demonstrate Compliance With The Proposed CISWI Standards Are Not Feasible For Burn-Off Ovens

It will be infeasible to conduct performance tests to demonstrate compliance with the proposed standards in many cases: Burn-out ovens are batch type units with run times as short as 2-4 hours. It will not be possible in many cases to conduct three runs and collect enough sample

[10] These are the units identified as "KSCNHWichita" and "NDCNHAmerica".

volume as required in Table 9 of the proposed rule. It will also not be possible in many cases to demonstrate compliance with pollutants such as cadmium and dioxins/furans. A source should not be barred from demonstrating compliance just because its operating practices do not fit the prescriptive demands of the proposed regulation.

For all of the above reasons, CIBO recommends that EPA retain the current exemption for rack, part, and drum reclamation units.

E. EPA Needs To Establish Achievable Subcategory Standards For Units Burning Secondary Materials For Purposes of Discard

For boilers or process heaters burning secondary materials for purposes of discard, EPA should establish achievable subcategory standards (e.g., coal-fired, oil fired, biomass fired) separate from traditional incinerators currently provided in 40 C.F.R. 60 Subparts CCCC and DDDD. CIBO members have coal-fired boilers that burn material that may meet the proposed definition of secondary materials that are non-hazardous solid waste. Thus, CIBO is concerned that the MACT floor applicable to these units be based on data representative of these units and that EPA properly utilizes the flexibility provided in Section 129(a)(2) of the Clean Air Act. This can only be done if EPA creates new subcategories for these units, and establishes achievable limits for included units.

VI. New Unit MACT Floors

EPA's proposed methodology for calculating new unit MACT floors selects the best performing source on a pollutant by pollutant basis with UL calculation only for the test runs for that unit. This methodology results in unachievable and indefensibly low emission limits for many types of units. The result is that the rule that will preclude installation of any new units that can combust alternative materials, which is counter to stated administration goals of improving energy efficiency and lessening dependence on fossil fuels. This approach obviously does not recognize the inherent differences in materials properties that in turn are dependent on the source, which cannot be a replica of the best performing source materials. Because of this, the entire floor setting process in this case is faulty. 75 FR 31954-56

EPA estimates no new CISWI sources will be constructed due to the costs associated with the MACT floor limits in the proposed NSPS. This obviously demonstrates the excessively stringent emission limits resulting from EPA's approach. The standards should not, as a policy matter, be so stringent that they work against use of alternate fuels. This needs to be redone in such a way that new facilities can be built. 75 FR 31959, 31966. In order to create a more equitable process, EPA needs to use their proposal in Boiler MACT as an example and set on sources with at least three runs. EPA also needs to consider achievability in setting the floor limits. By estimating no new units, it should be clear that the proposed units are unachievable, and must be modified.

VII. MACT Floors

MACT Floor Limits. The new MACT floor limits set in the proposed rule are unreasonably and unnecessarily low. Promulgating the rule as proposed would lead to inappropriately high costs for the affected sources, and does not take into account the economic impact as required by the

CAA. Limits as stringent as the ones proposed would need to be based on substantial evidence proving a actual benefit in order to be justified. No such evidence or record is provided by EPA. 75 FR 31945-46

Alternative Approach. While CIBO could support the alternative approach emission limits proposed for existing sources, the alternative approach limits for new solid fuel fired boilers are unreasonably strict. The levels for the new sources are so low that it would eliminate the potential for any new solid fuel fire boilers to burn solid waste materials. This approach will severely stifle the new development of modern, cleaner boilers and is not a rational proposal. 75 FR 31945-46

In the proposed rule, EPA notes that several of the MACT floor limits for energy recovery units and waste burning kilns under the alternative approach are not as stringent as the proposed rule, and that intermediate levels of control above the floor may be reasonable under that alternative approach. Therefore, it cannot be assumed that the identified initial alternative approach floors would be promulgated, but rather that above the floor lower emission limits could realistically result. 75 FR 31959

Achievability of Proposed Limits. The limits proposed by EPA are far too low for the majority of existing sources to achieve. EPA has presented limited evidence that the limits are achievable for most existing sources, yet there is ample evidence that a low number of sources would meet the proposed limits. The proposed unachievable limits would not only curtail the opening of any new units, but would lead to the closure of existing units. The proposed limits are unachievable because they were based on an analysis of a very low number of units, which are not representative of what is achievable for most top units. EPA should draw data from a more broad and representatively accurate sample of existing units.

In calculating the limits, EPA averaged "zeroes" into the floor. This was not an appropriate calculation, because those zeroes were achieved by units that did not have the element being calculated in their fuel or waste. The use of these weighted numbers skews the calculated limits to a level which is unachievable by the majority of units, and in a way that is an inappropriate use of data.

Detection Limit. After the first CISWI rule was promulgated in 2000 the incinerators that were able to meet those strict new standards installed controls, and others unable to meet the limits were forced to shut down. There are currently fewer data points available for EPA to evaluate, because of the difficulty that incinerators already have had in complying with the existing limits. This small number of compliant incinerators is being used to set new, ratcheted down limits which will squeeze sources already struggling to comply. Under §129(a)(5) of the CAA, EPA does not have authority to set floor limits for new rules based on what has been achieved by sources that are achieving those levels in order to comply with existing standards. This "MACT on MACT" situation underscores the need for representative data, collected from a wide range of sources, and calculated with adequate consideration of achievability. The sources used for testing for the limits in the proposed revisions were cherry-picked by EPA because they were already running the equipment that the other sources may have to install. This was thus not representative of the entire industry, only the sources already utilizing more advanced equipment.

CO CEMS & CO Limits. EPA points out that existing energy recovery units require CO CEMS, and has requested comment on whether other units should be required to use CO CEMS. EPA notes that since CO CEMS data is not available, that they are basing CO limits on a 24 hour block average which is applicable to new energy recovery units, as well as existing energy recovery units. However, Table 7 in subpart DDDD shows compliance per M10 with a 3 run average. CO on a 24 hour block average basis with CO CEMS for new units at a 3 ppm does not address start-up/ shutdown periods where levels will be higher. No data was collected or used to demonstrate the levels achieved by the best performers during those vital periods. CIBO would suggest a 30 day rolling average to gain more accurate sample data, as is done in the DDDDD proposal and/or make data not applicable at <50% of the load as in subpart JJJJJJ. 75 FR 31948.

Dioxin Limits. In regard to the proposed dioxin limits, EPA has again been overly broad in setting the limits. It is unnecessary to record both total mass and TEQ when recording data for dioxin. CIBO disagrees with the proposed rule's method of setting the TEQ limits.

Opacity/COMS. EPA is not obligated to implement a opacity limit, as § 129 of the CAA does not necessarily require that. In the proposed rule the opacity limit is based on the opacity/ PM ratio for the best performing unit, multiplied by each of the MACT floor PM limits, and is calculated for each subcategory. EPA has requested comments on the approach and appropriateness of setting opacity limits for this source category. There have been many past white papers and comments elaborating on the inappropriate reliance on opacity as a indicator of PM emissions at various levels, including in cases with a high enough level of PM that opacity could actually be detected. This is a situation in which EPA is dealing in the hypothetical, when calculating opacities in single digits, as PM levels are not high enough for actual readings. This is a unnecessary addition to the regulations which increases costs for no tangible benefit and it should be abandoned. § 129 does not require the regulation of items which can only be hypothetically measured. This amounts to an arbitrary regulation when opacity is measured below detection levels and when it does not correlate with PM at those low levels. 75 FR 31956.

If EPA retains the proposed opacity limit in the final rule, then it must develop a more appropriate way to set it. It is not possible to read more than 5% opacity with Method 9. COMS accuracy is not adequate for very low opacity limits, and there are many contributors to measurement uncertainty for opacity measurements even where the applicable limits are below 10% opacity. M9 stipulates that opacity readings are required to be recorded to the nearest 5%, and in order to be certified must not have an error which exceeds 15% opacity on any one reading and an average error of not more than 7.5% in each category. These methods, which are currently proposed by EPA, are obviously not compatible with a 1% or 2% opacity limit. Again, opacity is not required to be specifically limited by § 129(a)(4) of the CAA; it should only be limited "when appropriate." Since a floor determination indicates 1-2% opacity, it is not appropriate to impose such a limit, and EPA has the authority to not impose it.

The opacity limit proposed is on a 1-hour basis with a 1% limit. EPA states that other source categories with COMS requirements mandate one hour block averages, which is the basis for the proposal for CISWI units. However, this is not the DDDDD proposal, which has a daily block average of 10%. EPA states their intention to apply limits at all times, including start-up/ shutdown period, yet they impose a one-hour opacity limit that is not viable to achieve with energy recover units during those periods, and it is at odds with the DDDDD approach. This

limit needs to be changed to a daily block average basis, and the opacity limit increased to match DDDDD at 10%.

Current regulation 40 CFR 60.2165(b), which is retained, requires a bag leak detection system to be installed if an energy recovery unit uses a fabric filter to comply. Table 6 requires a COMS unless the unit is equipped with a wet scrubber. Requiring a COMS when a fabric filter is used and a bag leak detection system is installed is unnecessary and redundant. Per CCCC Table 6 and DDDD Table 7, PM CEMS is required for units burning >250 MMBtu/hr, and COMS is required unless the unit is equipped with a wet scrubber. COMS should not be required if a PM CEMS is installed. EPA's comments relative to relationship of opacity and PM emissions demonstrate that redundancy. 75 FR 31986, 32002.

VIII. Beyond the Floor MACT

EPA seeks comment on any control combinations that would support a beyond-the-floor standard, and indicates that it "may adopt beyond-the-floor options for the final rule if any that are identified are determined to be reasonable." 75 FR 31956. CIBO members know of no combinations of controls for boilers by which those units could reduce their emissions beyond the proposed floors. In the event, however, that EPA determines that such combinations are possible, and develops a beyond-the-floor MACT, EPA will need to provide another opportunity for notice and comment rulemaking so sources can determine whether such standards are achievable. Any newly proposed beyond the floor standards would not be "logical outgrowths" of EPA's proposed rule.[11]

IX. Operating Limits

CIBO has the following concerns:

The requirement to use site specific minimum voltage and amperage operating limits for ESPs is redundant when COMS are used. The requirement should only be applied in those cases where wet scrubbers are used and opacity monitoring is not applicable. 75 FR 31974, 31990.

For ACI use, imposing a minimum sorbent flow rate based on the initial performance test does not allow for modulation of injection rate with operating rate or charge rate. Modulation is needed for optimum performance and to allow the use of Hg CEMS (where installed) with feedback control. 75 FR 31974, 31990.

For SNCR, requiring minimum reagent flow rate during performance testing, as an ongoing operating limit, does not recognize the need to modulate feed rate for optimum NOx control and minimum slip. Performance testing requirements need to allow for modulation over firing rate range or charge rate range, and to allow flow modulation based on NOx CEMS feedback signal. 75 FR 31974-75, 31990.

[11] *See Envtl. Integrity Project v. EPA*, 425 F.3d 992, 996 (D.C. Cir. 2005); *Shell Oil Co. v. EPA*, 950 F.2d 741, 750-51 (D.C.Cir.1991)

Petitioning the Administrator for specific operating limits for cases not using wet scrubber, ACI, SNCR, or ESP is overly burdensome when typical conventional equipment is used. Paragraph (a) should note that in cases where (b) applies, that petitioning for operating limits relative to PM emissions controls is not required since COMS will be used. Spray dry scrubbing or other typical common emissions controls should have minimal required operating parameters noted in the rule. 75 FR 31975, 31990-91.

Averaging Times. There is a need for longer averaging times for parameters and emissions given that 24 hours is not sufficient for CO, especially for boilers- a 30 day rolling average is recommended.

To determine compliance with operating limits, except for BLD, 3-hour rolling average values are used. This is the same averaging time as in the current CCCC, where limits did not apply during SSM periods. It is impossible for 3-hour rolling averages to meet values set during steady state performance testing during startup/shutdown (SS) conditions. Would the response to this concern be that solid waste materials should not be fed until under steady state conditions and that the CCCC limits do not apply to the unit during those times? Or, would EPA say that the unit needs to meet DDDDD limits during SS periods when waste is not fired? This approach appears unworkable as it is proposed for some units. CIBO recommends that SSM periods be handled with a work practice approach, so that emission limits can be reasonably established using normal operating conditions. 75 FR 31976, 31992.

An annual opacity performance test should not be required where COMS are installed (energy recovery units unless with wet scrubber) 75 FR 31976, 31992.

An annual opacity performance test should not be required where PM CEMS are installed (energy recovery units >250 MMBtu/hr). 75 FR 31976, 31992.

Requiring flow sensor calibration semi-annually is too frequent and not justified.

Recalibrations should be done no more frequently than normal unit overhaul frequency since electronic flow sensors have minimal drift and do not require frequent recalibration. Furthermore, it may not be possible to remove some devices from service for calibration without adversely affecting operation. 75 FR 31977, 31993. The reasons for and importance of this are described in CIBO Boiler MACT comments. Attachment 1.

It is extremely onerous and not justified to have to check pressure tap pluggage daily. Gauge calibration with manometer should be more flexible given that the requirements do not reflect common practice. 75 FR 31977, 31993. The reasons for and importance of this are described in CIBO Boiler MACT comments. Attachment 1.

The typical industrial application of pH meter calibration is daily or weekly. Thus, to require this on at least 2 points every 8 hours of process operation is extremely frequent and not justified. Also, auto calibration requires about $30,000 in capital. 75 FR 31977, 31993. The reasons for and importance of this are described in CIBO Boiler MACT comments. Attachment 1.

Emissions Test Frequency. EPA proposes at §63.2710(b) that all units conduct performance tests for PM, HCl, fugitive emissions, and opacity on an annual basis. EPA further requires for

energy recovery units that annual performance tests be conducted for PM, HCl, cadmium, lead, mercury, dioxins/furans (D/Fs), opacity, fugitive emissions, NOx, and SO2 (unless a CEMS is used for either PM, HCl, Hg, NOx and/or SO2). Thereafter, EPA proposes to reduce the frequency to three years if there have been three tests in a row that have results of less than 75 percent of the emission standard.

This frequency of testing is unreasonable and out of character with other MACT and NSPS standards and other state performance testing requirements. The Hazardous Waste Combustor MACT (Subpart EEE), for example requires a Comprehensive Performance Test (CPT) only once every 5 years (and, for some units, a confirmatory test for D/Fs in between CPTs). Many MACT standards and NSPS standards only require one initial performance test unless there is a physical change to the control device. In Tennessee for example, Eastman has for years performed particulate matter performance tests on coal-fired boilers on a 4 year frequency, and this only applies to boilers over 250 mmBtu/hr rated capacity.

Taking the Eastman plant in Tennessee as an example, they have three coal-fired boilers that may be subject to CISWI. This would mean they would be conducting stack tests at the facility once every four months for the first three years of compliance, and this is just for this one regulation. This is clearly an unreasonable requirement.

We recognize EPA has included a provision to skip to a three year frequency, but a source must pass three tests in a row with at least a 25 percent margin. Given the very stringent limits EPA has proposed, very few units are likely to qualify for this provision, so we are not sure of its value.

We fail to see the justification for annual testing. While we understand EPA has already promulgated this requirement for the original relatively narrow set of CISWI sources, it is now expanding it to potentially hundreds of units and adding several pollutants to the list. The testing for D/Fs in particularly costly and takes two test days to accomplish. We estimate that one of these comprehensive performance tests for all the pollutants would cost about $60,000. The continuous parametric monitoring requirements proposed in required by the proposed rule provide ample assurance the control equipment are not deteriorating and are operated properly.

X. Monitoring

PM CEMS. A PM CEMS is required for energy recovery units >250 MMBtu/hr, and also required for units <= 250 MMBtu/hr without a wet scrubber with compliance on a 24 hour block average basis. 75 FR 31948. EPA requests comment on requiring a PM CEMS on energy recovery units of 100MMBtu/hr heat input or greater. CIBO opposes this requirement due to both the unreasonable cost and impracticality. 75 FR 31962.

However, CIBO supports EPA statements regarding use of PM CEMS where use of a PM CEMS results in discontinuing annual PM compliance testing, PM CEMS is considered a substitute for opacity testing or opacity monitoring, and use of a PM CEMS discontinues monitoring of minimum wet scrubber DP/HP/amperage. The proposed rule allows continuous compliance with

the particulate matter emissions limit to be demonstrated using a particulate matter continuous emissions monitoring system according to the procedures in § 60.2165(n). 75 FR 31976.

CEMS General. CEMS general data requirements include valid data for a minimum of 85% hours/day, 90% hours/quarter, and 95% hours/year if the affected facility is operating and combusting solid waste. EPA is seeking comment on requiring valid emissions data at all times and approaches to provide that data, such as redundant CEMS, prescribed missing data procedures, or parametric monitoring. The general valid data requirements are more than adequate and requiring valid data at all times has not been shown by EPA to be necessary or justified. 75 FR 31964.

Other CEMS and Monitoring Systems. EPA has proposed the optional use of NOx, SO2, HCl, multi-metals, Hg, CEMS, and integrated sorbent trap Hg monitoring because CEMS data is not available. EPA concluded that use of a 24 hour block average was appropriate to address potential changes in emissions that cannot be accounted for with short term stack test data. EPA has not demonstrated how these 24 hour block averages are adequate to also cover inherent variability involved with startup and shutdown periods, which can be extensive for energy recovery units. 75 FR 31962.

Operating Limits for Air Pollution Control Devices. A source should not have to petition to establish operating parameters for fabric filters, electrostatic precipitators (ESPs), activated carbon injection, selective noncatalytic reduction (SNCR), duct sorbent injection, or spray dryer absorbers.

§60.2680 requires a source to petition the Administrator for specific operating limits if you use an air pollution control device other than a wet scrubber. However, in the Proposed Rule §60.2675(d), (e), and (f), EPA proposes operating limits for fabric filters, ESPs, activated carbon injection, and SNCR. Therefore, no petition should be required in these cases.

Also, since spray dryer absorbers or duct sorbent injection are likely control technologies for coal-fired boilers, EPA should determine appropriate operating parameters and include them in the final rule.

Data Availability Standards. Minimum data availability standards should be established for CO CEMS and COMS similar to what is proposed for other CEMS. In proposed §60.2735, EPA establishes minimum data availability standards for SO2, NOx, and PM CEMS. Similar provisions are needed for CO CEMS and for continuous opacity monitoring systems.

EPA has proposed no minimum data availability standards for CPMS as it has for CEMS. The HON (40 CFR 63 Subpart G), for example, only defines a deviation (excursion) as an operating day where less than 75 percent of the parametric data is captured. It would be capricious of EPA to set a monitoring requirement that cannot possibly be complied with 100 percent of the time. EPA should revise the rule to allow for reasonable amounts of missing data.

Charge Rate. A charge rate is not a necessary or practical operating limit for an energy recovery unit. §60.2675(a)(1) would require any unit using a wet scrubber to comply with the emission

limitations to establish maximum charge rate as an operating limit. The limit is set at 110 percent of the charge rate during the performance test. Up until now, this provision only applied to incinerators. While EPA has included energy recovery units in the Proposed Rule, it needs to re-think this provision. There is no need for maximum charge rate of fossil fuel for a steam generating unit such as a boiler. This is not part of the compliance requirements for a solid-fuel boiler burning hazardous waste and subject to 40 CFR 63 Subpart EEE (Hazardous Waste Combustor MACT). EPA should clarify that only the maximum charge rate of solid waste in needed as an operating limit.

Setting of Operating Limits. Setting operating limits solely on data gathered during performance tests is impractical. EPA should allow use of supplemental information to set operating limits. §60.2675 of the Proposed Rule requires that operating parameters (including minimum pressure drop and liquid flow-rate for wet scrubbers, minimum voltage and secondary power or total power input for electrostatic precipitators, minimum wet scrubber pH, minimum sorbent for dry scrubbers, minimum carbon injection rate) limits be set exclusively (using a preset fraction of the level demonstrated during the test) on operating levels for the parameters measured during the most recent performance test.

It is inappropriate, and in many cases not technically feasible, to use operating conditions during a performance test, which are typically conducted at or near the unit's maximum firing rate, to establish a minimum requirement for all possible load ranges.

With many pollution control technologies, this approach to establishing operating limits would result in needless over-consumption of sorbents at great cost to the facility with little or no commensurate reductions in emissions. As an example, the sorbent injection rate of activated carbon for the control of mercury varies with the volume of flue gas generated during combustion. To establish a minimum sorbent injection rate at or near the unit's maximum continuous rating (MCR) would result in nearly double the sorbent injection rate during turndown to 50% load. Because institutional, commercial and industrial boilers vary loads widely based on site conditions, business conditions, season and time of day, this would result in unjustified expense to the facility with no benefit to the environment or to human health.

Other pollution control technologies cannot practically maintain operating conditions established at or near full load during turndown conditions. For example, a Spray Dryer Absorber (SDA) slurry injection rate is limited by the ability of the flue gas to evaporate the liquid portion of the slurry. At or near full load, with high flue gas flow rates and high flue gas temperatures, the flow rate of slurry will be relatively high. If this were established as a site-specific minimum sorbent injection rate, the unit would inject more slurry than the flue gas could accommodate at low loads. One CIBO member with solid-fuel fired boilers equipped with SDA's has experienced catastrophic failures due to operation where more slurry was injected than the flue gas could evaporate. This operating mode caused a total shutdown of the unit that lasted several days and imposed considerable economic hardship.

Other MACT standards recognize that it is not always possible to establish these operating ranges solely on performance test data. The HON (40 CFR 63 Subpart G) for example has the following relevant provision:

> If a performance test is required by this subpart for a control device, the range shall be based on the parameter values during the performance test and may be supplemented by engineering assessments and/or manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of permitted parameter values.

40 CFR 63.152(b)(2)(ii)(A). This type of provision allows each source to use the performance test data to then extrapolate operating limits based on equipment specific considerations. This is done in an operating plan that is submitted to the air permitting authority for review. A similar provision is needed in the final rule to accommodate situations such as those we have described above. Similar issues arise with use of other types of emissions control equipment as well, such as wet scrubbers of different types.

Feed Stream Analysis Plan. A compliance option using a feed stream analysis plan should be added to the proposed rule. The proposed rule provides the following methods for compliance demonstration with the feed dependent pollutants (cadmium, lead, mercury, sulfur dioxide, and hydrogen chloride): 1) Annual performance tests (with an option to skip to three years) and control technology continuous parametric monitoring systems; or 2) An option to use CEMS for mercury, HCl, or SO2 in lieu of testing and CPMS.

Now that the Proposed CISWI Rule is being expanded to include energy recovery units (boilers) which co-fire solid waste with fossil fuels, there is a need to provide other options. It is possible that an energy recovery unit may be able to comply with a CISWI emission standard without installing an air pollution control device or technology to reduce the pollutant concentration in the boiler effluent. Rather, such a unit may be able to comply by employing feed controls. As can be seen by observation of the available coal data, if a source were to rely on periodic performance tests, it would always run the risk of testing during a period of relatively high pollutant concentration in the coal, particularly if EPA has not properly accounted for the fuel variability when setting the standard. Also, while EPA has provided the CEMS option, a source may prefer a feed stream analysis option rather than incurring the expense of a CEMS or uncertainty with the current CEMS technology in a particular application.

EPA should include a compliance option that allows a source to develop a feed stream analysis plan and obtain the approval of its permitting authority. Such a scheme should allow for a 12-month moving average to account for the long-term fluctuations in the fuel supplies.

Here, a source would develop a feed stream sampling plan customized for its specific wastes and fuel types. For example, a source could sample (using standard ASTM sampling methods) and analyze each shipment of coal for heating value, chlorine and/or mercury content, and store that data in a spreadsheet along with the quantity of coal in the shipment (e.g. number of cars). The source can then calculate the weighted average lb/mmBtu feed rate of the pollutant fed to a given boiler (or set of boilers that are served by a common coal feed system) on a rolling average basis. On a monthly basis, a compliance determination that the average feed rate is less than the allowable feed rate would be made. For a unit not relying on the system control efficiency, that allowable feed rate would be equal to the emission standard. For a unit that does rely on system control efficiency, the source should be allowed to establish an allowable feed rate based on a

successful performance test by extrapolating from the actual feed rate and actual emission rate measured during the test.

This approach would follow closely with the compliance program used to comply with the HWC MACT (40 CFR 63 Subpart EEE). In the HWC MACT, each source develops and implements a feed stream Analysis Plan to adequately characterize the materials to be incinerated and then track the feed rates of parameters such as chlorine, metals, and ash to ensure they stay below the allowable feed rates established from a Comprehensive Performance Test. It should be particularly noted that Subpart EEE specifies up to an annual rolling average for mercury for liquid fuel boilers (see 40 CFR 63.1209(l)(1)(ii)).

XI. Interrelationship Between CISWI and Boiler Definitions

It is very important for a CISWI unit to be able to move between regulations based on CAA § 129 when burning, and § 112 when not burning solid waste. Switching between fuels is a common occurrence among CISWI units, many of which only burn solid waste part-time. Having the appropriate regulations for the unit based on the fuel helps the unit be more cost efficient, and ensures that the relevant environmental concerns are being addressed. The preferred approach would be to allow units to select whether to be regulated by CISWI or Boiler MACT based on the materials being burned at any given time. EPA has taken this approach in the Hazardous Waste Combustor MACT (see 40 CFR 63.1206(b)(1)(ii)). It is a reasonable approach which has work well with HWC units and is needed in the CISWI final rule. For those units, requirements for incinerators under Subpart EEE apply except when hazardous waste is not in the combustion chamber. The unit then must comply with application requirements under § 112. 40 CFR § 63.1206(b)(1)(ii)). With this established procedure, EPA should likewise allow units that burn solid waste part-time to switch modes of operation between Boiler MACT and CISWI.

Another important scenario that EPA needs to account for in the rule is to permit sources to discontinue reliance on materials and thereby remain boilers or be re-categorized as boilers. Where a unit has in the past burned materials that EPA now or in the future determines to be solid waste, the unit must be permitted to be categorized as a §112 boiler if it discontinues using the materials as fuel. Because any time in the future EPA could make a determination that a material is a waste and not a fuel, a source needs to determine whether compliance with section §129 standards is feasible. If the source decides it is infeasible, then there is no legal barrier -- nor is there a legal reason for EPA to erect one -- to the source ceasing use of that fuel material, and complying with §112 standards.

As units switch from solid waste to other fuels, forbidding them from switching to regulation under Boiler MACT unfairly punishes them, and discourages switching to cleaner fuels. There would be no environmental benefit from requiring them to continue to comply with §129 rather than §112. For example, a unit currently operates coal-fired boilers that periodically run in an operating mode where a wastewater treatment sludge is co-fired with the coal. During this mode of operation, NOx emissions drop significantly. This should be regulated in accordance to the potential for which emissions would be released, and can be easily documented by the facilities based on which mode of operation they are in.

In the proposal, EPA recognizes that energy recovery units such as boilers differ fundamentally from incinerators and that "differences can result in emission profiles for energy recovery units that are different from incinerators but similar to boilers." 75 FR 31951. EPA recognizes that if a unit stops burning solid waste, it would no longer be subject to §129. 75 FR 31942. This reflects the statutory scheme. Congress expressly made §112 and §129 mutually exclusive, keeping the source categories separate and ensuring that only one set of emission standards applies to the source at one time. Therefore, the only question is the frequency with which a source switches from solid waste to other fuels. The final rule should ensure that sources may use alternative fuels as available, and comply with the corresponding standard.

When this occurs, and a unit switches from solid waste to another fuel, the applicability definitions of both § 112 and § 129 of the CAA should be interpreted to ensure that the unit would be classified as an existing (not new) source under the regulations. This will avoid unfair punishment for a unit making such a switch, and help to encourage the burning of cleaner fuels.

Allowing for this flexibility in the selection of regulations would be able to work with no major problems in practice. The unit's permit would have simply have two sets of standards which would be applicable at different times based on the fuel being burned. This would be easily be monitored by tracking solid waste feed rates and units would readily be able to show compliance with the applicable standard. In terms of other regulatory provisions of the regulations, such as certified technicians and monitoring requirements, units should follow the regulation of the fuel which they burn the majority of the time. This would help to minimize the confusion of following two separate regulations, while ensuring that units are still adequately regulated.

Allowing for maximum fuel diversity is important, including alternate and opportunity fuels. EPA is proposing a definition of a CISWI unit, however CIBO believes it to be inappropriate to apply RCRA hazardous waste approaches to non-hazardous materials, because the non-hazardous materials do not present the inherent risks associated with hazardous materials. Energy recovery from non-hazardous materials is in the overall best interest of the US and any resulting air emissions will be well controlled under § 112 standards. CIBO has filed more expansive comments on this topic in response to the Solid Waste Definition Rule and hereby incorporates those comments by reference. *See* Attachment 4 to these comments. This is especially important if EPA intends to finalize provisions that require sources regulated under §112 to conduct an energy assessment, which includes identifying ways to increase plant energy efficiency.

EPA has simultaneously proposed this rule, standards for boilers, area sources and the solid waste definition. However, based on the final rule determining what is or is not a solid waste, sources will likely adjust their plan for use of alternative fuels that may be redefined as wastes in the final rule.

CIBO members are concerned that the true composition of the source categories for floor setting in the standards rules will not be known until the solid waste definition is finalized. At that point, CIBO members view it as an unavoidable outcome that EPA will need to recalculate floors for the air emission standards rules. If that should happen, then the compliance deadlines for those rules, and the effectiveness date for this rule, will be in question. EPA should make clear in the final rule what those dates will be and how it expects the rules to interrelate from a

compliance perspective. Facilities need to know when a material they currently burn as a fuel must be discontinued if they decide that the hurdle to showing it is a fuel rather than a waste is too high despite its fuel value. That date should be the compliance date of the air emissions standard rule for the source.

A provision should be added that allows a facility to elect to either (1) comply with CISWI at all times or (2) comply with CISWI while burning solid waste but comply with otherwise applicable standards under §112 while not burning solid waste. For example, a CIBO member operates coal-fired boilers that periodically run in an operating mode where a wastewater treatment sludge is co-fired with the coal. During this mode of operation, NOx emissions drop significantly. §129 requires EPA to set emission standards for sulfur dioxide and NOx under CISWI and such standards are not required under the Boiler and Process Heater MACT. Depending on the stringency of the CISWI NOx emission standard, it may not be possible to comply with the NOx standard while operating in the coal-only mode without installing emission controls that are not otherwise authorized under the Clean Air Act. There will likely be other situations where burning solid waste results in lower emissions than burning 100 percent fuel and facilities should not be penalized for these circumstances. Facilities can easily document which mode of operation they are in (by tracking solid waste feed rates) and readily show compliance with the applicable standard.

XII. Laboratory Analysis Unit Exemption

By proposing to eliminate the exemption for laboratory analysis units in Section §60.2020 of Subpart CCCC and Section §60.2555 of Subpart DDDD, EPA may be inadvertently increasing the applicability of these standards by a large number of units. If laboratory analysis units are to be regulated as CISWI units, EPA has underestimated the number of CISWI units due to flaws in the data collection activities and has therefore grossly underestimated the economic impact of the proposed emission standards. 75 FR 31948, 31974, 31990**.**

Eliminating the exemption is problematic and unnecessary. EPA describes laboratory analysis units as those "…that burn samples of materials for the purpose of chemical or physical analysis." 12 The preamble states these units "…may be CISWI units under this proposed rule."13 Further EPA states, "These six types of units would be regulated under the revised proposed CISWI standards if they burn solid waste at a commercial or industrial facility." Id The existing description uses the term, "materials," whereas the preamble uses the term, "solid waste." It is uncertain in this context if EPA considers a material combusted in a laboratory analysis unit as a solid waste. CIBO believes subjecting a laboratory analysis unit to the suite of CISWI requirements is problematic and ludicrous whether or not EPA means that the combustion of a material implies it is solid waste, as discussed below.

A number of laboratory methods involve combustion of some sort in order to generate analytical results (ash analyses, flame ionization detection, bomb calorimetry, atomic absorption

[12] §60.2020(o) [Subpart CCCC] and §60.2555(o) [Subpart DDDD],
[13] 75 FR 31959

spectroscopy, total organic carbon, etc.), and the use of these technologies is certainly not restricted to commercial and industrial establishments. Indeed, these devices are used extensively in educational and governmental locations. If EPA is intending to regulate such devices, it would seem inappropriate to only be concerned about those located at commercial and industrial establishments, which CIBO maintains is inappropriately applied usage of the statutory language of Section 129 ("any" solid waste).

For example, a number of EPA regulations require ash analysis. The standard method used is ASTM-482 in which a muffler furnace or microwave oven is employed to combust the sample in order to generate ash results. The sample size may be as small as 5 grams, and the combustion chamber in the device may be no larger than 100 in3 (about the size of a large box of facial tissue). In addition, these types of units are also commonly used in research activities and in manufacturing operations where product quality demands an ash analysis (combustion of product-grade material to obtain quality data for customers), and which use the same ASTM-482 method to generate the same type of data but for a different reason. Since it is physically impossible to comply with many CISWI requirements for most, if not all, of these units (lack of stacks, very small vents that cannot accommodate stack sampling equipment, etc.), the use of the device at commercial and industrial establishments would most likely cease. Since the analyses would still be required by many EPA regulations, it seems the only alternative for generating compliance data would be to use university and governmental laboratories. This result would not be workable for many facilities that are not near such institutions and need sample results quickly.

Data collection flaws. EPA has underestimated the number of these devices because the 2008 CAA Section 114 ICR did not make it clear that these units were included in the scope of the survey. In using the existing description of a laboratory analysis unit, CIBO believes there are a large number of these devices located in virtually every facility or research lab that analyzes samples, and it is likely respondents did not include them in the response to the 2008 ICR since they had no idea they may have been within scope. Since EPA stated in the "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category" that there are only 179 existing CISWI's, CIBO believes that EPA's data base does not adequately consider the universe of these units and, therefore, EPA must not finalize this rule without reconsidering the impact on the industry.

Lack of sampling ability and other CISWI requirements. Laboratory analysis units could not accommodate sampling equipment. Indeed, most, if not all, would not have stacks. It would seem ludicrous to employ test methods to sample devices that, themselves are required by test methods. In essence, EPA is proposing requirements that in many cases have no test methods to accommodate the operations of these units.

There are a number of other CISWI requirements that would be unworkable for these units or useless. CISWI operator certification requirements would seem useless, especially since the primary activity is operating a piece of analytical equipment, as opposed to operating a CISWI. Performance tests would likely be impossible due to the size of the devices and virtually non-existent emissions that could not be measured.

EPA admits eliminating most of the units. In the Preamble to the proposal (75 FR 31956) with reference to the beyond-the-floor discussion, it is particularly troubling that EPA fully expects most of these units to cease operation if the rule is promulgated as proposed. EPA states, "We have determined that most facilities with units in the incinerators, small remote incinerators, or burn-off ovens subcategories will choose to cease operations once the proposed MACT floor limits are promulgated and that all units in these three subcategories will cease combusting waste if beyond-the-floor levels are adopted."14 How lab analyses will be conducted is apparently not of interest to EPA, even when they require the analyses.

Samples are not solid waste. The analysis of samples has a definite purpose, completely separate from disposal of sample material. The samples, themselves, as well as the analytical procedure, have a value or use, and the results of the analysis provide a useful function. The samples and their subsequent analysis do not constitute discard because there is a definite use involved. A number of analytical methods involve thermal destruction of the sample to generate the analytical result (ash analysis, flame ionization detection, bomb calorimetry, atomic absorption spectroscopy, total organic carbon, to name a few). These actions are part of analytical methods, some of them prescribed by EPA in SW-846 and elsewhere.
Samples or any sample residues from subjecting samples to analytical methods is not waste until the material is discarded. Often, samples and sample residue, such as ash from a combustion method, is retained until the source material the sample came from is managed.

EPA recognized the value of excluding samples long ago under Subtitle C (46 FR 47426; September 25, 1981 exclusion for samples) when they promulgated the exclusion in 40 CFR 261.4(d). Later, EPA also added exclusions for treatability samples and treatability studies [40 CFR 261.4(e) and (f)]. Of note in the preamble to the sample exclusion with reference to storage requirements, EPA states (46 FR 47426, third column), "… samples are excluded from the storage requirements until the decision is made to discard the sample." It would seem obvious that if a sample is not being discarded during storage that it would not be discarded while it is being analyzed either.

It is imperative that samples be excluded from regulation as solid waste, by either excluding the samples themselves, clarifying that analytical procedures which involve combustion do not involve discard, or by using some other mechanism.

Summary of requested changes for laboratory analysis units. EPA should clarify that these types of units are not CISWI untits. EPA should include language in the recently proposed Definition of Solid Waste rule that combustion in such devices is not considered discard or that samples are not solid waste.

XIII. Electronic Reporting Tool (ERT)

EPA is requiring submission of data via the Electronic Reporting Tool (ERT). 75 FR 31949. Notwithstanding EPA's assertions to the contrary, data submitted through the ERT is error-prone and imposes additional burdens on reporting sources because the ERT bypasses all data quality control. For the information collection process for the Boiler MACT suite of rules, EPA

[14] 75 FR 31956

required sources to use the ERT. Sources had requested in the ICR proposal stage that EPA not utilize the ERT, which was going through Beta testing, and informed EPA that the ERT had serious flaws including difficulty of use, content problems and inaccessibility. EPA decided to use it for data collection for these rules. The concerns proved correct, however, as sources were compelled to use the ERT, which is a difficult and time-consuming tool for submission of test data. The ERT data compiled was riddled with mistaken entries, incorrect and missing data, and the ERT had generally faulty output. Then the problem was compounded when EPA relied on the inaccurate data, leading to multiple calculation and other inaccuracies.

Using the ERT doubles the burden on sources that take the time to enter accurate source data, only to see it distorted. They then must spend hours finding the data error and conferring with EPA personnel to fix the problem. Only then are they able to consider EPA's rule proposal and its impact on their sources. In part due to the ERT and resulting data problems, regulated sources sought an extension of the comment period. See *Comment Extension Request, especially Description of the Development of the Boiler MACT Database.* Attachment 2.

In the past, sources did compliance tests for the state, and the state approved the data. The state effectively conducted quality control on the data. The ERT bypasses the state, creating data quality issues. Using the ERT means that data is transmitted without any QC, and that results in multiple data errors. The ERT does not permit the easy identification or correction of errors. Reporting needs to be accomplished by whatever format permits the source to trace the same data throughout the process to ensure its integrity. This had been accomplished in the past by using the hard copy submitted to the State and a human being looking at data to QC it. If there was a problem, this could be identified and resolved in the early stage, before the faulty data was applied to formulas.

CIBO urges EPA to adopt a reporting methodology that ensures the data is quality controlled, and errors can be traced easily to their origins. The ERT needs to be improved before it is required for data submission for compliance demonstration. Inaccuracies may be more tolerable during the rule-writing process, but once the rules are in place, the stakes are much higher, as faulty ERT output can create compliance issues for sources. EPA may prefer the administrative ease of the ERT, but that should not outweigh the need for regulated sources to have assurances of accurate data and compliance status.

XIV. Air Pollution Control Device Inspection

Air pollution control device inspection must be no more than 12 months following the previous inspection. While the proposed rule does not specifically state this to be an internal inspection, it can be interpreted that way, and as such, there is a need for flexibility in scheduling relative to typical shutdowns for inspection, overhaul and maintenance for the specific equipment involved, since longer operating times between scheduled shutdowns could be necessary for some units. 75 FR 31977, 31979, 31992-93, 31995.

XV. SSM (Start up, Shut down, Malfunction)

The Rule applies emission limits at all times, including during startup, shutdown, and malfunction (SSM) periods. 75 FR 31949. SSM periods are exempt from the CISWI Rule now in place. *See, e.g.* 40 CFR 60.43b(g). EPA proposed to eliminate the exemption, based on *Sierra Club v. EPA*, 551 F. 3d1019 (D.C. Cir 2008), which vacated the general exemption from emission standards during SSM periods for standards promulgated under §112. *Sierra Club v. EPA* is inapplicable to CISWI standards, which are NSPS standards promulgated under §111 and §129. EPA agrees that the case does not govern these rules. 75 FR 51375, 51394.

EPA asserts that CISWI unit compliance during startup and shutdown periods will not be a problem because:

> "…most units use natural gas or clean distillate oil to start the unit and add waste once the unit has reached combustion temperatures. Emissions from burning natural gas or distillate fuel oil would generally be significantly lower than from burning solid wastes. Emissions during periods of shutdown are also generally significantly lower than emissions during normal operations because the materials in the incinerator will be almost fully combusted before shutdown occurs." 75 FR 31964."

EPA asserts that emissions during malfunctions need not be accounted for in setting floors, because they are not a "distinct operating mode." 75 FR 31964. With regard to each of these operating conditions, EPA has failed to consider enough data to adequately characterize emissions variability. The standards were set based on 3-run stack test data obtained under the best of operating conditions (and typically only one operating condition), with no long-term CEMS data and no adjustment for fuel variability. Unless EPA collects and analyzes data to account for variability during SSM periods, it is arbitrary to apply emission limits developed based on best operating conditions to *all* boiler operating conditions.

Regarding operator training, the rule should include response to malfunctions, not just operation in a way to prevent malfunctions, as malfunctions do and will occur and operators must be prepared to handle them safely.

A. EPA Asserts without Support that CEMs Data Includes SSM Periods .

To support its conclusion that the proposed emission standards are achievable even if applied during all operational periods, including during SSM events, EPA asserts that startup and shutdown emissions replicate normal operation emissions. These conclusions are not supported by the record. EPA relied on continuous emission monitoring (CEMs) data obtained from best performing units, which EPA claims included periods of startup and shutdown. It is unclear whether this CEMs data actually warrants these conclusions. First, it does not appear that any of the units considered in the data collection were in startup or shutdown during the 30-day period of testing that EPA looked at. If that is the case, then the CEMs data gives no bearing on

whether units can satisfy emissions limits over a 30-day period if all startup and shutdown events are included.

Another concern is that EPA used 3-run stack test data, and not 30-day data, to set the proposed emissions floors. EPA uses test run data collected through the ICR phase II testing process– which reflect normal, often steady state, operating conditions –to set proposed floors.

B. Requiring Emissions Controls during SSM is Technically Infeasible

The decision by EPA to eliminate omission of SSM emissions records is not only short sighted but technically unjustified. A series of previous emission control programs over the last twenty-five years has resulted in the installation of several systems to achieve specific emission reductions through targeted technologies, but most are designed for steady state or normal operations.

The first of these was implemented under the CAA revision of 1990 that required units larger than 25 MWe to reduce sulfur emissions below 1.2 lb/MMbtu and achieve at least a 90% reduction. One of the few methods of doing this that could survive severe abrasive characteristics present in some units was dry limestone injection. This process is dependent on injection of sized limestone into the furnace/boiler, calcinations of the limestone, and subsequent absorption of sulfur present in the flue gas. This process begins to occur at a useful rate at about 860 deg. F and is functional up to about 2200 deg. F. (Unfortunately at about 1640 deg. F thermal NOx generation normally inhibits operation above that temperature.) For a boiler to achieve the lower useful temperature of 860 deg. F, it must be heated up to that level, generally using natural gas or fuel oil. This thermal change to the materials that boilers are fabricated with, is limited by impacts of thermal stresses placed on both the generating tubes and drum materials, by the manufacturers to a temperature increase of 100 degrees F per hour. Thus, to take a unit from 'cold' to the functional temperature that limestone becomes effective for SO2 removal, takes a minimum of about eight to ten hours. Application of normal steady state limits based on a temperature of 1600 degrees F makes no sense. Due to the high volume of combustion air involved during startup conditions, units falling outside of the optimum band for absorption also, so application of the limits during these periods is short sighted, as it is technically unfeasible to attain them.

A similar situation exists with respect to NOx. Many facilities were swept into further NOx reduction under the NOx Budget Program in the late 1990's. To meet these requirements, most installed a Selective Non-Catalytic Removal system, which injects ammonia or urea into the combustion gas stream and results in much of the NOx present there becoming a solid and mixing into the ash residue from combustion. This process occurs at a meaningful level at temperatures above 1200 deg. F up to about 1650 deg. F. The same 'heat-up' limits apply for cold plant startup, as well as the effectiveness of the impacts as listed above.

A second 1990 requirement resulted in baghouse installation instead of electrostatic precipitators for any new installations. Unfortunately, for many of these units the baghouses were unable to withstand the gas stream temperature when they were heated up to operating temperature with

gas or fuel oil burners, as the bags in them were limited to temperatures less than 350 deg. F. but greater than 150 deg. to avoid water formation/plugs in the ash and air stream. The high end could not be maintained with limited combustion air heater flow until the unit temperature approached about 800 deg. F during the heat up, while the lower end was present until achieving at least 300 deg. during the heat up. A baghouse bypass was installed for that purpose, although not used at any other time. Currently some bag vendors have developed replacements that can withstand a higher temperature and are more resistant to problem situations, but not all of them.

All of the above are functional in reverse during a shutdown. Other types of emissions removal [e.g. SCR] also require specific thermal inlet temperatures to function that cannot be maintained during either startup, shutdown, or during specific malfunctions.

Lastly, many CEM units are calibrated to operate at specific stack temperatures associated with normal operations. During thermal cycles of the unit, it is doubtful that any of the CEMs maintain required accuracy much less record actual emissions. It is likely that the only trustworthy data is opacity during SSM as most of the other instruments may provide an output, but nothing in the current regimen of testing assures its accuracy.

C. Startup and Shutdown Periods are Best Accounted for with Work Practice Standards.

ICI boilers require an extended period of startup during which most, if not all, equipment in the boiler and pollution control systems are not operating in their normal condition. Consequently, pollutant emission concentrations and emission rates can exceed those experienced during normal operation. It is very common in the boiler industry for certain control devices to be out of operation during periods of startup due to the nature of the equipment. During such periods it is likely that emissions will exceed the standards proposed and would never be able to recover to meet the average limitations. (See below for a more expanded discussion with respect to a few specific technologies). EPA should develop work practice standards under CAA §111(h) to address startup and shutdown periods for CISWI units.

This extended startup period, typically several hours, is required due to equipment integrity concerns, limitations of the technologies, or safety concerns:

> Equipment Integrity – For example, a Fabric Filter (FF) cannot be put into service until the flue gas temperature is above the acid dewpoint. This requires that all heat transfer surfaces, ducts and flues from the combustion zone to the FF inlet be warmed up from ambient temperatures to above dewpoint temperature (which varies by fuel type and fuel constituents, but is typically in excess of 140oF / 60oC and can be up to 280 F / 138C). It takes a considerable amount of time, typically several hours for larger units, to warm up this considerable mass of refractory and steel: waterwall tubes, superheater tubes, reheater tubes, economizer tubes, casings, turning vanes, air preheaters, ducts and inlet plenums. During this warmup period, the FF cannot be put into service without risking catastrophic failure of the bags and intensive corrosion damage to the FF. This

limits a unit's ability to control particulate matter and mercury during the several hours of startup.

Limitations of the Technology – For example, units equipped with a Spray Dryer Absorber (SDA) for acid gas removal are limited in the amount of reagent slurry that can be injected into the flue gas during startup. The slurry feedrate is limited due to the nature of the technology by the amount of moisture the flue gas can evaporate. This in turn requires that a minimum temperature be achieved by the flue gas before the slurry feedrate can be initiated, and imposes a lengthy period of time during which the slurry feedrate is significantly limited until all the upstream heat transfer surface and ductwork has been warmed up. As such, SDA cannot remove Hydrogen Chloride in significant quantities for several hours after the unit is first fired.

Safety Concerns – For example, reductions in the amount of time required to warm the boiler system up could be realized by increasing the ramp-rate of adding fuel to the unit. In theory, a boiler could be brought from first flame to full load in a matter of minutes, but decreasing the warm-up period from what the OEM recommends risks severe metallurgical stresses due to rapid changes in temperature and wide variances in temperatures across boiler and duct parts. Immediate failures could occur if inconsistent heating caused tears or ruptures in support steel or heat transfer surfaces, posing considerable risk to personnel in the plant as well as potential off-site impacts. Failure rates would also increase due to the considerable stresses introduced by rapid heating and cooling cycles, yielding failures at unpredictable times (steady state operation or future startups or shutdowns). For this reason, OEM recommendations for startup times are closely followed across industry.

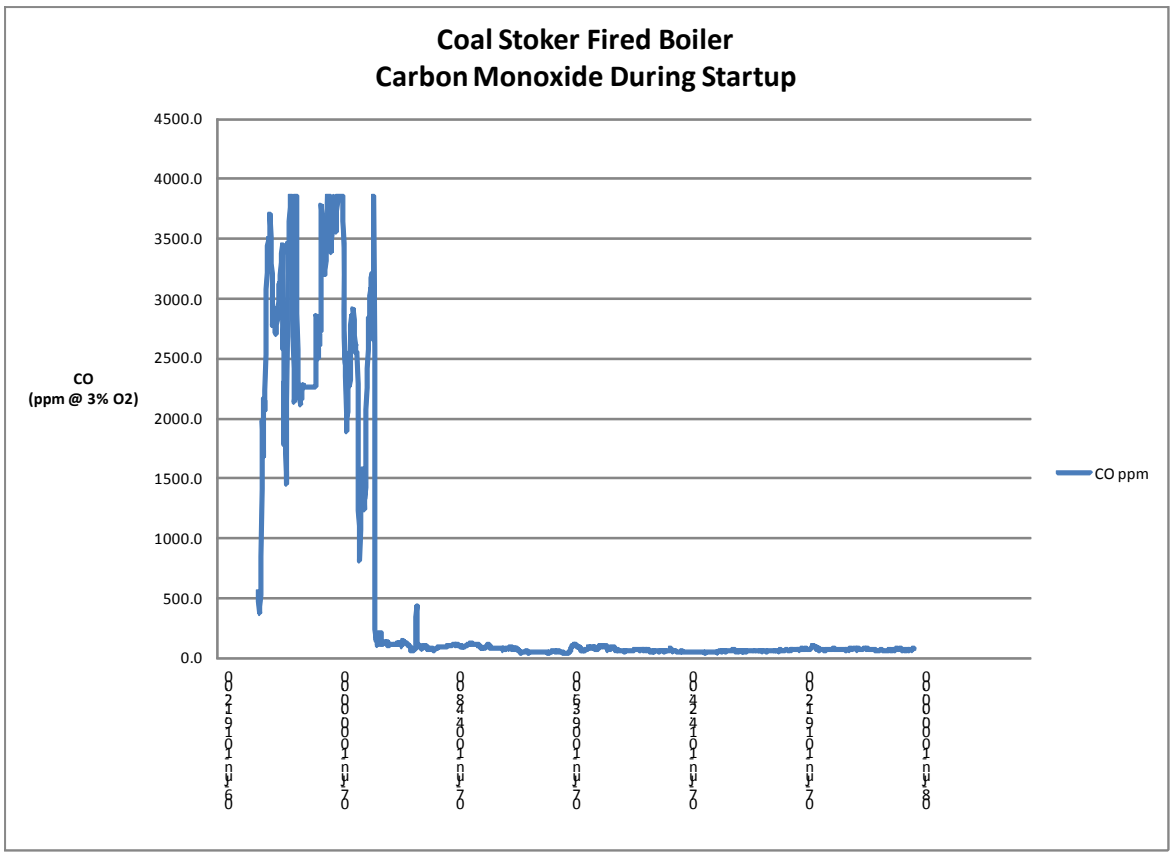
EPA makes a mistaken assumption that startups and shutdowns are "predictable and routine." 75 FR at 31964. Industrial facilities, unlike electric utilities, typically operate a large number of smaller units of varying ages instead of operating a small number of very large units. When normal equipment failure rates (e.g., tube leaks) are multiplied across a large number of units, the total number of unit failures can be significantly larger at industrial facilities. One member company operates a facility with over a dozen boilers, which average more than two unplanned outages per unit above and beyond each unit's planned outage in a any given year. It is not uncommon for unplanned outages to occur in clusters, such as when a given component (e.g., an economizer) might suffer a failure due to corrosion or erosion. Repairs may fix the failure at identified vulnerable areas nearby, but the root cause of the failure could be occurring in multiple areas that are not easily identified, resulting in additional failures in a short timeframe.

Startup and shutdown periods vary in duration and intensity, a fact that can significantly impact actual emission profiles. Additionally, because unplanned outages are a reality in the operation of any boiler, industrial or utility, and because unplanned outages are by their nature unpredictable, unplanned shutdowns can and will cluster together. For example, if a unit firing eastern bituminous coal equipped with a Spray Dryer Absorber for acid gas control were to have two unplanned outages in the month following startup from a planned shutdown, the calculation of a 30-day average fails to prevent a deviation from the HCl standard:

	Eastern Bituminous Coal		
	Chlorine, ppm	1,000	
	Coal HHV, Btu/lb	12,500	
Day	24h HCl Emission	30d Avg	Notes
1	0.080		Uncontrolled, due to startup from planned shutdown
2	0.018		
3	0.018		
4	0.018		
5	0.018		
6	0.018		
7	0.018		
8	0.018		
9	0.018		
10	0.080		Uncontrolled, due to startup from unplanned outage
11	0.018		
12	0.018		
13	0.018		
14	0.018		
15	0.018		
16	0.018		
17	0.018		
18	0.018		
19	0.018		
20	0.080		Uncontrolled, due to startup from unplanned outage
21	0.018		
22	0.018		
23	0.018		
24	0.018		
25	0.018		
26	0.018		
27	0.018		
28	0.018		
29	0.018		
30	0.018	0.024	30d average > Emission Standard

Such a scenario would result in a unit being out of compliance because EPA inappropriately failed to craft a compliance protocol to address the fact that emissions performance during startups and shutdowns is necessarily not equivalent to emissions performance during steady-state operation.

Extended averaging periods are similarly inadequate to provide a reasonable method to demonstrate compliance with the CO standard, due to the inherent variability of CO in solid fuel boilers across the load range, but especially upon startup. The figure below shows CO data from a coal stoker fired boiler that monitors CO via CEMS. It is readily apparent that CO emissions during normal startup conditions can be as two orders of magnitude above the proposed standard of 50 ppm for stoker boilers.



The table below demonstrates the impact of the startup of this unit on the calculation of a 30-day average:

Date	CO Daily Avg ppm @ 3% O2	CO 30d Avg ppm @ 3% O2	Below Proposed MACT Standard for Stoker Blrs? (< 50 ppm @ 3% O2)
6/6/2010	3519.2		
6/7/2010	330.5		
6/8/2010	56.7		
6/9/2010	60.7		
6/10/2010	60.4		
6/11/2010	60.3		
6/12/2010	61.0		
6/13/2010	55.7		
6/14/2010	50.0		
6/15/2010	45.9		
6/16/2010	44.5		
6/17/2010	43.6		
6/18/2010	40.8		
6/19/2010	39.9		
6/20/2010	39.5		
6/21/2010	44.0		
6/22/2010	48.3		
6/23/2010	45.0		
6/24/2010	48.4		
6/25/2010	45.3		
6/26/2010	49.4		
6/27/2010	53.4		
6/28/2010	53.3		
6/29/2010	48.9		
6/30/2010	49.3		
7/1/2010	49.7		
7/2/2010	46.2		
7/3/2010	37.4		
7/4/2010	43.3		
7/5/2010	**50.6**	**174.0**	**NO**
7/6/2010	**47.6**	**58.3**	**NO**
7/7/2010	47.0	48.9	YES
7/8/2010	52.2	48.7	YES
7/9/2010	44.8	48.2	YES
7/10/2010	42.9	47.6	YES
7/11/2010	40.1	46.9	YES
7/12/2010	38.1	46.2	YES
7/13/2010	36.2	45.5	YES
7/14/2010	39.2	45.2	YES
7/15/2010	45.1	45.1	YES
7/16/2010	50.2	45.3	YES
7/17/2010	40.8	45.2	YES

This data set illustrates the impact of a typical unit startup on a calculated 30 day average and the problem with requiring a unit to comply with a steady-state emission standard during startups and shutdowns. Had this unit been subject to the standard proposed in this rule, the source would have been out of compliance due to the two calendar days that saw startup activities,

despite the fact that the source was operated near or below the proposed standard for CO the following 40 days.

EPA should instead provide additional provisions to ensure emissions are minimized during startups and shutdowns without unreasonably requiring sources to attempt to comply with steady-state emission standards. EPA should add provisions to require sources to develop and adhere to operating practices specific to the unit's design, fuel type, and OEM recommendations that will ensure emissions minimization without forcing owner/operators to choose between putting their equipment and personnel at risk versus failing to comply with this rule. Such an operating practice should be crafted to be flexible, given the wide variety of boiler sizes, types, vintages, and fuels fired, and should be developed by the source based on OEM recommendations. General guidelines could include:

- Sequencing of equipment startups, per OEM recommendations;
- Startup time durations, per OEM recommendations, and
- Provisions to clearly define what constitutes "online" versus "startup". This could be crafted to mean a percentage of the unit's maximum continuous rating, or steam temperature/pressure, etc.

D. The Rule Fails to Account for Malfunction Periods in Floor Setting.

It is also a concern that compliance with the emissions standards during malfunction events will be difficult to gauge since emissions testing during such events is near impossible given the sporadic and unpredictable nature of malfunctions.

The proposed rule could have the effect of forcing units to choose between safety and compliance with emissions requirements. For some affected units, malfunctions by their very nature create unsafe conditions which can lead to excessive combustible mixtures in a furnace that can result in explosions, equipment damage and personnel hazards.

EPA states in the proposed rule that if a source fails to comply with the applicable standard due to a malfunction, EPA "would determine an appropriate response." 75 FR 31964. Malfunctions occur due to component failure and have nothing to do with "poor maintenance or careless operation" as defined in 40 C.F.R. 60.2. Congress acknowledged that malfunctions cannot be prevented, and gave EPA authority to set alternate work practice standards, ensuring that sources would still be subject to standards during these periods. EPA also acknowledges that malfunctions cannot be prevented, even by top performers, and therefore defines malfunction in the regulations. Now, however, EPA unreasonably proposes to require all sources to comply with standards established for steady-state operation during periods of malfunction. This approach inappropriately fails to include provisions that take into account the unpredictable nature of malfunctions, and that malfunctions occur to all units including top performers and that appropriate responses to malfunctions must be planned for and training provided to operators to take appropriate safe action. EPA should write in §111(h) standard or include other provision to accommodate the unpredictable and unavoidable malfunctions that both Congress and EPA acknowledged would occur.

XVI. Emissions Averaging Compliance Alternative

EPA included emissions averaging as a compliance option in the proposed Boiler Rule, and this should be a compliance option for CISWI units as well. This provision will be even more important if EPA adopts the Alternative Approach in this rule to defining secondary materials that are non-hazardous solid waste. That approach will result in many more boilers being redefined as CISWI units(from roughly 40 to 400 boilers for example according to EPA) and there will be more opportunities to apply emissions averaging, as facilities will be more likely to have more than one unit regulated under CISWI.

A. EPA Should Adopt an Emissions Averaging Compliance Alternative for CISWI Units.

In the Boiler Rule, EPA is considering a provision for emissions averaging with respect to the proposed emissions limitations for industrial, commercial and institutional boilers and process heaters. *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Proposed Rule*, 75 FR 32006, 32034 (Jun. 4, 2010) ("Boiler Rule"). Use of emissions averaging would allow owners and operators of an affected source to demonstrate that the source complies with the proposed emission limits by averaging the emissions from an individual affected unit that is emitting above the proposed emission limits with other affected units at the same facility that are emitting below the proposed emission limits. *Id*. EPA further acknowledges that "emissions averaging represents an equivalent, more flexible and less costly alternative to controlling certain emission points to MACT levels" and its application "would not lessen the stringency of the MACT floor limits and would provide flexibility in compliance, cost and energy savings to owners and operators." *Id*.

In the Boiler Rule, EPA has proposed that owners and operators of existing – but not new – affected sources be permitted to demonstrate compliance with the proposed emissions limitations by emissions averaging for units at the affected source that are within a single subcategory. *Id*. Under this proposal, emissions averaging could only be used between boilers and process heaters in the same subcategory at a particular affected source. *Id*.

B. Averaging Should be Allowed Across All Subcategories/Fuels with Emission Limits for the Pollutant to be Averaged.

As proposed in the Boiler Rule, emission averaging is explained as allowing averaging only within a subcategory (75 FR 32024) although it is not clear from the proposed rule language if this is what EPA intended. S*ee* § 63.7522(a), 75 FR 32053. *See also* Equation 6, 75 FR 32055. EPA provides no justification for restricting averaging to a given subcategory nor is it rational to impose such a restriction. If EPA applies CIBO's recommendation elsewhere in the comments

to develop additional subcategories of energy recovery units based on combustor design and fuel type, the ability to emissions average across subcategories becomes more critical.

Some affected units involve multiple boilers operating in different subcategories (e.g. stokers and pulverized coal). These boilers may be located in separate powerhouses. The goal of emissions averaging is to allow facilities to over-control some emissions points while under-controlling others, thus achieving the required reductions in the most cost-effective manner possible. This could be best achieved by EPA removing the restriction (or clarifying its intent) to permit averaging for all affected units, regardless of whether the boilers emit through separate or "common stacks." The rule should allow for averaging across all units regardless of category of pollutants to be averaged so long as emissions from a single unit can be quantified with testing either in the breeching or in the stack when other units aren't operating.

Allowing averaging across subcategories within the rule is consistent with the four averaging criteria EPA described in the Boiler Rule preamble:

(1) No averaging between different types of pollutants,
(2) No averaging between sources that are not part of the same affected source,
(3) No averaging between individual sources within a single major source if the individual sources are not subject to the same NESHAP, and
(4) No averaging between existing sources and new sources.

75 FR 32035. These criteria for emissions averaging could be adapted to the CISWI Rule as well.

Emissions averaging generally allows a facility to avoid otherwise cost-prohibitive compliance options by over-controlling some other emission unit in a more cost-effective combination. It also has corresponding environmental benefits, by creating an incentive to burn more natural gas or renewable fuels such as biomass as a strategy to average out emissions from a coal-fired unit. As EPA explained in the Boiler Rule, emissions averaging does not result in any higher total HAP emissions than those permitted under the Rule, and therefore there is no additional risk to human health or the environment.

The legal precursor to introducing emissions averaging is *Chevron U.S.A., Inc. v. NRDC*, 467 U.S. 837 (1984). In *Chevron*, the Supreme Court held that EPA regulations allowing states to treat all of the pollution-emitting devices within the same industrial grouping as though they were encased within a single "bubble" were based on a reasonable construction by EPA. This case opened the door to more specific emissions averaging efforts, such as those implemented in the 1994 Hazardous Organic NESHAP, 59 FR 19425 (April 22, 1994)(HON Rule). Several rules have followed the HON Rule in authorizing emissions averaging, and the D.C. Circuit has never invalidated the approach. The proposed emissions averaging provisions in the Boiler Rule are directly based on the emissions averaging provisions in the HON.

In the HON Rule, EPA thoroughly examined the legal basis for emissions averaging, and explored the degree of averaging permitted under §112(d) of the Clean Air Act. At the end of its review, EPA concluded that the Clean Air Act "does not define source category, nor does it impose precise limits on the Administrator's discretion to define source." *Id*. EPA further acknowledged that the Clean Air Act does not limit how standards are to be set for a category or subcategory beyond requiring that it be applicable to all sources in a category, be written as a numerical limit wherever feasible, and be at least as stringent as the floor. *Id*.

In promulgating the HON emissions averaging rules, on which the Boiler Rule relies, EPA thus concluded that "the relevant statutory language is broad enough to permit the Administrator to allow sources to meet the MACT through the use of emissions averaging provided the standard applies to every source in the category, averaging does not cross source boundaries, and the standard is no less stringent than the floor." *Id*. Allowing emissions averaging across subcategories within the Boiler Rule is consistent with the parameters established in the HON rule, and reiterated in the Boiler Rule preamble. *See* 75 FR 32035. Namely, allowing averaging across subcategories will not result in averaging between (a) different types of pollutants, (b) sources that are not part of the same affected source, (c) individual sources within a single major source if the individual sources are not subject to the same NESHAP, and (d) existing sources and new sources. *Id*.

There is precedent in MACT standards for allowing averaging across different types of units of a single source. For example, the HON rule allows process vents, storage vessels, transfer racks, and wastewater streams to all be included in an emission average across an affected source. 40 CFR Subpart G. EPA reasoned that averaging needed to be allowed across all emission points (except equipment leaks) in order to provide as much flexibility as possible while maintaining an enforceable emission limitation. 59 FR 19425. Similar mechanisms have been adopted in other MACT standards. *See, e.g.* Petroleum Refinery NESHAP, 60 FR 43244, 43254 (Aug. 18, 1995)(allowing wide range of emission sources to be averaged, noting that "EPA has the flexibility to allow trading within a facility that includes units in different source categories"); Boat Manufacturing NESHAP, 66 FR 44218, 44232 (Aug. 22, 2001).

As in the HON, the compliance methodology can easily accommodate subcategories with different emission limits for a given pollutant. This is done basically by calculating a weighted average allowable mass emission and a weighted average actual mass emission each month using heat inputs or steam production for each unit.

C. EPA Should not Include a 10% Discount Factor as it did in the Boiler Rule.

In the Boiler Rule, EPA proposed a restriction on emissions averaging that requires facilities using that option to meet a standard that is 10% stricter than the otherwise applicable limits. 75 FR 32035. EPA should not include this 10% penalty for using emissions averaging because it is

arbitrary, unnecessary for environmental protection and reduces the flexibility that averaging provides. In the Boiler Rule, EPA asserts that its inclusion further ensures the allowable emissions are at least as stringent as the MACT floor limits without using averaging. However, EPA offers no demonstration of this in the proposal. Given the accuracy of heat input weighted emission calculations, there is no uncertainty that the average emission rates will be any less stringent than when not using averaging. Because EPA has already determined that the standards in the rule achieve the maximum emission reduction achievable for health and environmental protection, to require an additional 10% reduction of emissions has no basis in the environmental underpinnings of the rule. Because emissions averaging is a compliance alternative, the 10% discount factor would constitute a beyond-the-floor requirement. Although the 10% discount may be perceived as a fair trade-off for the flexibility of emissions averaging, it still lacks a legal basis and creates a disincentive for sources to use this compliance method. Where, as here, proposed emission limits are very tight, sources will not be able to ensure an additional 10% reduction in emissions below the limits and imposing this penalty effectively would deprive many sources of the availability of the emissions averaging compliance alternative.

XVII. Technical Corrections

The following technical corrections that should be addressed in the Proposed Rule:

- The first paragraph of § 60.2020 omitted subparagraph (n) and should read "This subpart exempts the types of units described in paragraphs (a), (c) through (i), (m) and (n) of this section . . ." 75 FR 31974.

- Section 60.225(c) removes the definition of "Malfunction." 75 FR 31983. However, this term is still used in the following sections: §§ 60.2210(k) and 60.2770(k). 75 FR 31999.

- The definition for "minimum voltage or amperage" is unclear and incorrect. CIBO proposes to delete the words "measured from the pressure drop and liquid flow rate monitors" 75 FR 31983, 31999.