

**Standards of Performance for  
New Stationary Sources and Emission Guidelines for Existing Sources:  
Commercial and Industrial Solid Waste Incineration Units; Proposed Rules**  
80 Fed. Reg. 3018 (Jan. 21, 2015)  
(2015 CISWI Proposed Reconsideration Rule)

**EPA-HQ-OAR-2003-0119**

Comments of  
Council of Industrial Boiler Owners (CIBO) and  
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## **I. INTRODUCTION**

The Council of Industrial Boiler Owners (“CIBO”) and American Chemistry Council (“ACC”) appreciate the opportunity to comment on Environmental Protection Agency’s (“EPA”) proposed reconsideration of the standards of performance for new stationary sources and emission guidelines for existing sources for commercial and industrial solid waste incineration units 80 FR 3018 (Jan. 21, 2015). (“2015 CISWI Proposed Reconsideration Rule”).

ACC represents the leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to make innovative products and services that make people’s lives better, healthier and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care<sup>®</sup> common sense advocacy designed to address major public policy issues, and health and environmental research product testing. The business of chemistry is a \$812 billion enterprise and a key element of the nation’s economy.

CIBO is a trade association of industrial boiler owners, architect-engineers, related equipment manufacturers, and University affiliates 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 about issues affecting industrial boilers, including energy and environmental equipment, technology, operations, policies, laws and regulations.

Commenters’ member companies own and operate many boilers that will be subject to this rule.

## **II. BACKGROUND**

The DC Circuit Court vacated the 2007 standards of performance for CISWI units. EPA issued replacement standards in March 2011. 75 FR 15704 (Mar. 21, 2011) (2011 CISWI Final Rule). EPA reconsidered several provisions of the 2011 CISWI Final Rule. In February 2013, EPA issued the 2013 CISWI Final Reconsideration Rule. 78 FR 9112 (Feb. 7, 2013).

In August 2013, EPA noticed reconsideration of several issues and now proposes additional revisions to the CISWI rules. 80 FR 3018 (January 21, 2015) (2015 CISWI Proposed Reconsideration Rule).

While the reconsideration rulemakings proceeded, parties challenged the 2011 and 2013 CISWI Final Rules in DC Circuit Court. Those challenges are consolidated in *AF&PA v. EPA* (No. 11-1125) and as of March 2015 are briefed and pending oral argument before the Court.

ACC and CIBO submit these comments on the 2015 CISWI Proposed Reconsideration Rule.

### **III. COMMENTS**

EPA granted reconsideration of these four issues and proposes several technical amendments to the CISWI standards:

1. Definition of “CEMS Data During Startup and Shutdown Periods”
2. PM Limit for the Waste-Burning Kiln Subcategory
3. Fuel Variability Factor (FVF) for Coal-Burning Energy Recovery Units (ERUs)
4. Definition of Kiln

Comment is provided here on these two reconsideration issues and on several other issues:

1. Definition of “CEMS Data During Startup and Shutdown Periods” and
2. Use of a FVF for the coal-burning ERU subcategory.

#### **A. DEFINITION OF “CEMS DATA DURING STARTUP AND SHUTDOWN PERIODS”**

The 2013 CISWI Final Reconsideration Rule revised the definition of “CEMS Data During Startup and Shutdown Periods” by defining the end of startup and the beginning of shutdown as the introduction and cessation of waste fed to the units, respectively. Commenters sought reconsideration of this definition on the basis that it undermines the purpose of extending the startup period from 4 to 48 hours because waste is often introduced as the unit transitions to steady state operations.

EPA seeks comment on whether the definition should be revised to extend the startup period to include the period of time before steady state operations when some sources are transitioning to

waste combustion from the startup fuel. 80 FR 3020-21. EPA also requests that stakeholders suggest provisions that would ensure adequate application of the continuous emissions monitoring (“CEMS”) data during startup and shutdown definition, such as maximum allowable time limits after introduction of waste. *Id.* EPA also requests suggestions for ways to ensure adequate application of CEMS data during startup and shutdown definition, such as maximum allowable time limits after introduction of waste. *Id.*

ACC and CIBO support the removal of the 1 and 4 hour time periods. Although paragraph (1) of the proposed definition does not remove the prescriptive hourly timeframes in the CISWI 2013 final reconsideration rule all together as ACC requested in its 2012 Comments on the Proposed Reconsideration Rule, the 48 hour and 24 hour timeframes in paragraph (1) of the proposed definition provide a workable middle ground. *See* ACC 2012 Comments on Proposed Reconsideration Rule, EPA-HQ-OAR-2003-0119-2606 at 26–28.

ACC and CIBO agree with EPA’s decision to remove the 4-hour and 1-hour time limits in the definition for several reasons. First, depending on the nature of the shutdown and what kind of maintenance work might be done during that time, a startup time of four hours might be insufficient to deal with computational issues for CO measurements. Second, the time required for startup and shutdown is specific to the design of the unit and the type of fuel burned—there is no standard length of time for startup and shutdown. Third, there can be difficulty in lighting pilots and obtaining a stable main flame on a burner during the initial light-off period in which the time period to troubleshoot burner management issues can be highly variable and lengthy. Fourth, stopping the feeding of waste might occur quite quickly during a unit shutdown, but ramping down of the temperature while on fuel and transitioning through a high oxygen content zone can take longer than one hour, or it may take longer than one hour to reach that transition zone of high oxygen content during shutdown.

EPA determined the CISWI limits and conducted its variability analyses using test data obtained when units were operating under normal, steady-state conditions. The standards do not reflect emissions limitations achieved during a unit’s startup or shutdown periods (except for the coal ERU subcategory). EPA should recognize that elevated emissions can occur throughout startup, and provide reasonable accommodation consistent with the combustion and air pollution control

technology so that units can start up without violating the standards. All combustion-based systems must go through a startup period during which equipment is brought from an inactive condition to normal, steady-state operating conditions. Startup may begin from a cold condition that exists after extended maintenance or from a “warm” condition such as after a brief unscheduled shutdown.

During startup, corrected emissions concentrations, the compliance metric established in the numerical CISWI emission standards, may exceed those occurring during normal, steady-state operation because 1) stack oxygen levels approach ambient levels, inflating O<sub>2</sub> correction factors even though mass emission rates are low; 2) the combustor has not attained optimal temperature, turbulence, and residence time conditions – key factors of good combustion control – and; 3) air pollution control equipment has not achieved necessary minimum temperature and/or other operating conditions necessary for effective steady-state performance on which the standards are based. While elevated emissions do occur during startups it is important to note that both the magnitude and period of elevated emissions will be actively minimized as required by the “general duty” provisions to minimize emissions at all times including startups and shutdowns. Additionally, operators of units that are providing energy or making a product are economically motivated to minimize the duration of any startups.

Operating practices employing startup burners using natural gas, distillate oil or other clean fuels bring combustor, air pollution control, and energy recovery systems on line expeditiously, speeding the startup process and reducing emissions that would otherwise occur; however, these operating practices cannot completely negate the effect that startup has on emissions. Startup or auxiliary burners are not designed or intended to achieve or maintain operating load conditions. For example, burners for biomass ERUs using fluidized bed technology are only designed to preheat the bed and achieve fluidization; the startup must be completed by introducing and burning solid material on the bed. Indeed, units firing solid material on grates or in fluidized beds require more time for the material to fully ignite and achieve the optimal combustion conditions than gaseous or liquid-fired units do. As such, elevated corrected emission concentrations following initial solid material firing is an inherent characteristic of subcategories such as stoker and fluidized bed biomass ERUs.

In some cases, units that are permitted to co-fire solid waste and solid fuels such as clean biomass will be able to achieve normal operating conditions without firing solid waste. In other cases, however, units will have to complete the startup while firing solid waste; startup solely on non-waste fuels is not an option. Reasonable accommodation of this situation in the form of the CEMS startup data period extension as proposed by EPA is therefore warranted.

ACC and CIBO support EPA's decision to apply the definition to all CEMS-measured emission limits, not just CO. This is due to fact that other CEMS will have the same issue with the oxygen correction factor during startup and shutdown, because all of the emission standards (other than opacity) are required to be corrected to 7% oxygen.

## **B. FUEL VARIABILITY FACTOR FOR COAL-BURNING ENERGY RECOVERY UNITS**

EPA's methodology for setting emission limits for coal-burning energy recovery units ("ERUs") in the 2013 CISWI Final Rule was challenged on several grounds. In this proposed rule, EPA seeks comment on whether to establish a fuel variability factor ("FVF") for the ERU solids (coal) subcategory.

For the reasons discussed below, EPA should adjust the floor setting methodology by establishing a FVF for this subcategory. In setting standards EPA must ensure that they are achievable under the worst possible conditions. Without accounting for fuel variability, the limits will not adequately capture the variability of emissions from the best performing units and ensure that top performers are capable of meeting the proposed standards at all times.

In the 2013 CISWI Final Reconsideration Rule, EPA rejected comments calling for the incorporation of an FVF in the emission limit calculations for coal-burning ERUs. One rationalization EPA gave was that EPA had fuel variability data for only one facility within the coal-fired ERU subcategory, so the resulting FVF may not be reflective of the materials being combusted by other sources within the subcategory. However, the CISWI database contains fuel analysis data for many units, although it appears that this information was not used. ACC 2010 Comments on Proposed CISWI Rule, EPA-HQ-OAR-2003-0119-2092 at 22 ("ACC 2010 Comments"). In addition, ACC and CIBO member Eastman Chemical Company ("Eastman") submitted historical coal supply contaminant data in response to EPA's request in the preamble

to the 2011 CISWI Proposed Reconsideration Rule (76 FR 80462) for comments and supporting data on incorporating fuel variability in the emission limit calculations. *See Eastman 2012 Comments on Proposed Reconsideration Rule, EPA-HQ-OAR-2003-0119-2569, Attachment 1 & Encl. Coal Variability Data for Boilers 18-20.*

EPA recognized in the Boiler and Process Heater MACT that it can and must consider variability in the fuel supply when determining the MACT floor and emission standards for fuel-dependent HAPS. 2011 Revised Boiler MACT Floor Memo, EPA-HQ-OAR-2002-0058-3273. 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 includes 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 maximum achievable control technology (“MACT”) floor standards. CIBO 2010 Comments on Proposed CISWI Rule, EPA-HQ-OAR-2003-0119-1834 at 7–8 (“CIBO 2010 Comments”).

EPA should analyze the fuel analysis data and obtain additional fuel data from top performers to ensure that the effect of fuel/feed variability on emissions is captured. This is important, not only for ERUs, but for all subcategories of sources, since there are many unique materials combusted in incinerators. Using a limited number of incinerator units to establish the MACT floor in no way is representative of units combusting other totally different materials. EPA states in the preamble that “the composition of the materials combusted is highly variable and is a key factor in the profile of emissions from incinerators.” 75 FR 31951. Therefore, the variability in emissions from the top performing incinerators should be examined and should be taken into account when setting standards.

EPA has recognized the impact of fuel characteristics on variability from units under the Boiler MACT rule by incorporating a fuel variability factor in the calculation of the emission limits under that rule. EPA should likewise incorporate a fuel/feed pollutant content variability adjustment in the CISWI rule. CIBO 2012 Comments on CISWI Proposed Reconsideration Rule EPA-HQ-OAR-2003-0119-2605 at 13.



EPA should use the data gathering and FVF methodology in this rule as EPA did in the Boiler MACT rule. ACC and CIBO support Eastman's comments on this issue.

### **C. NO<sub>x</sub> EMISSION LIMITS**

In this proposed rule, EPA seeks comment on whether to re-evaluate the NO<sub>x</sub> emission limit by using additional CEMS data. 80 FR 3022.

Eastman submitted data to EPA showing that NO<sub>x</sub> emission limits established for the best performing unit in the coal-fired ERU subcategory do not reflect that unit's actual performance accurately because the performance data and analysis reflect only periods of waste combustion. That unit, and the other coal-fired ERUs at the Eastman facility operate for extended periods of time in non-waste burning mode. As a remedy, Eastman suggested that EPA use data from both waste-burning and non-waste burning periods for the best-performing unit to establish MACT floors to more accurately reflect actual operating conditions for the unit. Eastman also provided EPA with additional longer-term NO<sub>x</sub> CEMS data for the best-performing unit (reflecting coal-only and waste combustion periods of operation), which could be used to provide a larger data set on which to base the NO<sub>x</sub> emission limit calculations.

ACC and CIBO urge EPA to re-evaluate the NO<sub>x</sub> emission limit by using additional CEMS data (reflecting coal-only and waste combustion periods of operation) provided for the best performing unit. Without reevaluation of the limit, any other similarly situated units will likewise face an inappropriate compliance risk. The best performing unit is Eastman's Boiler 18—the only unit for which EPA has NO<sub>x</sub> emission data in the CISWI database. Eastman Supplemental Submittal to Petition for Reconsideration, Amendment, and Administrative Stay of the 2013 CISWI Final Reconsideration Rule, EPA-HQ-OAR-2003-0119-2709, Appendix C-1 at 10. At EPA's request, Eastman did not submit data in 2009 from periods when Boiler 18 was burning coal in 2009. *Id.* at 10–11. Consequently, EPA set the MACT floor based only on emissions when the top performing unit is burning waste. EPA now has CEMS data for the periods in which this unit burns coal. ACC and CIBO urge EPA to re-evaluate the NO<sub>x</sub> emission limit and fully account for this additional data in the NO<sub>x</sub> standard. Otherwise, the top performing units will not be able comply with the limits “every day under all operating

conditions.” *Mossville Environmental Action Now v. EPA*, 370 F.3d 1232, 1242 (D.C. Cir. 2004).

#### **D. AFFIRMATIVE DEFENSE**

Invoking the DC Circuit decision *NRDC v. EPA*, 749 F.3d 1055 (D.C. Cir. 2014), in which the court invalidated the affirmative defense in the Portland Cement MACT rule, EPA proposes to remove the affirmative defense in this rule. This proposal is contrary to law and not a rational response to the DC Circuit decision in *NRDC*.

ACC and CIBO oppose removing the affirmative defense, where the final rule otherwise provides sources no means of demonstrating compliance during malfunction periods. As the rule now stands, sources experiencing malfunctions must meet numeric limits that were developed based on emissions during normal operating periods. The Clean Air Act requires EPA to establish technology-based standards that properly account for malfunction periods and that apply during malfunction periods. EPA’s failure to establish achievable standards in the final CISWI rule that apply during malfunction events is contrary to the CAA and arbitrary and capricious. EPA should find that setting numeric standards is not feasible or practicable and on that basis set work practice standards. This issue is pending before the DC Circuit Court in *US Sugar Corp. v. EPA* (No. 11-1108), *ACC v. EPA* (No. 11-1141) and *AF&PA v. EPA* (No. 11-1125). Until that issue is resolved by the DC Circuit Court, EPA should not remove the affirmative defense.

*NRDC* does not compel EPA’s proposed action here to remove the affirmative defense in this rule. The DC Circuit in that case invalidated the affirmative defense in the context of the Portland Cement MACT rule because, “[b]y its terms, Section 304(a) clearly vests authority over private suits in the *courts*, not EPA. As the language of the statute makes clear, the courts determine, on a case-by-case basis, whether civil penalties are “appropriate.” *NRDC v. EPA* at 1063. The *NRDC* Court decided the issue before it – whether EPA has authority to establish the affirmative defense – without addressing the implications of its decision on the emission standards in that rule. EPA cannot simply directly apply the *NRDC* ruling to the CISWI rule

without addressing its implications on the emission limits in the rule, which were set without including malfunction emissions.

Without the benefit of the affirmative defense, and because sources are indisputably incapable of complying during malfunctions with the numeric emission limits in the rule, sources would be totally dependent on enforcement discretion for compliance with the rules during malfunction periods. This is illegal. The DC Circuit has made clear that such an approach improperly shifts the question of what is technologically achievable “to the enforcement stage, an approach not contemplated” by the Clean Air Act. *Portland Cement Ass’n v. Ruckelshaus*, 486 F.2d 375, 398 n.91 (D.C. Cir. 1973).

EPA does not even propose anything to attempt to rectify the situation, such as, for example, the interim relief of non-enforcement discretion. EPA does not propose to suspend the effect of the emission limits as applied to malfunction periods, pending a judicial outcome of the underlying dispute. EPA also does not explain why the numeric standards remain legal in the absence of the affirmative defense, where the inclusion of that defense was central to EPA’s conclusion that technology-based standards need not reflect malfunction periods.

EPA’s proposal to remove the malfunction provision, including its faulty claim of legal authority and absence of any discussion on which sources could provide meaningful comment, should not be finalized. Instead, EPA should announce that it is exercising administrative enforcement discretion for malfunctions to address the immediate concerns of regulated sources and await the outcome of the multiple related substantive matters now pending in the courts.

#### **E. TECHNICAL CORRECTIONS & CLARIFICATIONS**

EPA explains in the proposed rule that it intends to continue to regulate units that are subject to the 2000 CISWI NSPS as “new” units under that standard until those units are covered by a state or federal plan that implements the February 2013 CISWI Emission Guidelines. 80 FR 3023. EPA received questions about this after it finalized the 2013 CISWI Final Reconsideration Rule. The language in the February 7, 2013 NSPS at 40 C.F.R. § 60.2015 and the title to Table 1 to 40

C.F.R. Part 60, Subpart CCCC made this issue unclear. EPA proposes new clarifying text in 40 C.F.R. § 60.2015(a) and 40 C.F.R. § 60.2105(b) to resolve this issue (in italics below).

**§ 60.2015 What is a new incineration unit?**

(a) A new incineration unit is an incineration unit that meets any of the criteria specified in paragraph (a)(1) through (a)(2) of this section.

(1) A CISWI unit that commenced construction after June 4, 2010.

(2) A CISWI unit that commenced reconstruction or modification after August 7, 2013.

(3) *Incinerators and air curtain incinerators, as defined in this subpart, that commenced construction after November 30, 1999, but no later than June 4, 2010, or that commenced reconstruction or modification on or after June 1, 2001, but no later than August 7, 2013, are considered new incineration units and remain subject to the applicable requirements of this subpart until the units become subject to the requirements of an approved state plan or federal plan that implements subpart DDDD of this part (Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units).*

**§ 60.2105 What emission limitations must I meet and by when?**

(b) An incinerator unit that commenced construction after November 30, 1999, but no later than June 4, 2010, or that commenced reconstruction or modification on or after June 1, 2001 but no later than August 7, 2013, must meet the more stringent emission limit for the respective pollutant in table 1 of this subpart *for units in the incinerator subcategory and §60.2250 of this subpart for air curtain incinerators until the units become subject to the requirements of an approved state plan or federal plan that implements of subpart DDDD (Emission Guidelines and Compliance).*

ACC and CIBO support this clarifying text because it will ensure that these incinerators will not be improperly regulated simultaneously under both rules.