



*Representing the Interests of America's Industrial Energy Users since 1978*

**COMMENTS OF THE COUNCIL OF INDUSTRIAL BOILER OWNERS**  
**on**  
**EPA Proposed Reconsidered Rule**  
***National Emission Standards for Hazardous Air Pollutants for Area Sources:***  
***Industrial, Commercial, and Institutional Boilers***

**EPA-HQ-OAR-2006-0790**  
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**TABLE OF CONTENTS**

		<u>Page</u>
<u>INTRODUCTION</u> .....		1
<u>PART ONE: TIMING FOR COMPLIANCE AND COMMENTS</u> .....		1
I.	THE MARCH 21, 2012 COMPLIANCE DEADLINE SHOULD BE STAYED .....	1
II.	SOURCES SHOULD BE GIVEN THREE YEARS FOR INITIAL COMPLIANCE .....	2
A.	EPA Should Harmonize Compliance Dates for All Requirements .....	3
B.	Fuel vs. Waste Issue Creates Uncertainty That is Not Yet Resolved .....	3
III.	THE PERIOD PROVIDED FOR COMMENT WAS ARBITRARILY SHORT .....	4
<u>PART TWO: SPECIFIC COMMENTS</u> .....		5
I.	EMISSION LIMITS .....	5
A.	Final PM Limits for New Oil-Fired Boilers .....	5
B.	Generally Available Control Technology (GACT) Standards for Biomass and Oil-fired Area Source Boilers .....	6
C.	Work Practice Standards .....	6
1.	EPA Has the Authority to Promulgate Work Practice Standards In Lieu of Numerical Emission Limits .....	6
2.	EPA Should Extend the Work Practice Standards to Include New Biomass and Oil-fired Boilers With a Heat Input Capacity of Less than 30 MMBtu/hr .....	7
D.	Monitoring Requirements .....	7
1.	O <sub>2</sub> Monitoring Requirements .....	7
2.	30-day averages .....	10
3.	Additional flexibility is needed for other operating parameters .....	10

4.	Title V permit review cycle and emission testing requirements .....	10
II.	SUBCATEGORIES AND EXEMPTIONS .....	11
A.	Existing v. new source status.....	11
B.	Exemption for temporary boilers.....	12
C.	Exemption from Title V for Minor and Synthetic Minor Sources .....	13
D.	Small source exemption from tune-up work practice standards.....	14
E.	The Subcategory for Seasonal Boilers is Appropriate but the Definition Should be Adjusted and a Limited Use Subcategory Should Also be Added.....	14
III.	ENERGY ASSESSMENT .....	15
A.	Amendment to Scope .....	16
B.	If EPA imposes an energy assessment, it should include the proposed change to the maximum time of the assessment.....	17
C.	EPA should clarify application of the energy assessment output percentages .....	18
D.	If EPA imposes an energy assessment, it should adopt the proposed change to not require submission to EPA but additional measures are needed to protect CBI .....	18
IV.	EMISSIONS AVERAGING .....	21
A.	Emissions averaging for area sources.....	21
B.	10% Discount Factor .....	21
V.	NATURAL GAS CURTAILMENT .....	22
VI.	Process heater exemption .....	25
VII.	STARTUP SHUTDOWN MALFUNCTION .....	25
A.	Startup Shutdown .....	26
B.	Malfunction affirmative defense .....	28

## **INTRODUCTION**

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.

EPA has solicited comments several times on Area Source standards under the Clean Air Act (CAA) § 112. CIBO has submitted comments on legal and practical issues raised by this rule and hereby incorporates by reference its prior comments on the June 2010 Proposed Rule<sup>1</sup> and Petition for Reconsideration.<sup>2</sup>

EPA issued the Area Source rule in conjunction with three other interrelated rules, and has maintained the rules on the same notice and comment calendar.<sup>3</sup> For ease of discussion, the four interrelated rules will be referred to as the “Boiler MACT rules.”

## **PART ONE: TIMING FOR COMPLIANCE AND COMMENTS**

### **I. THE MARCH 21, 2012 COMPLIANCE DEADLINE SHOULD BE STAYED**

Under the Final rule now in effect, existing area sources must complete their initial tune-up by March 21, 2012 in order to comply with the rule. 76 Fed. Reg. 15564. EPA anticipates staying the effective date of the rule now in effect, so that the initial tune-up will not be required by March 21, 2012. 76 Fed. Reg. 80535. EPA will accomplish this through a separate notice in the Federal Register.

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<sup>1</sup> See CIBO Comments on Proposed Rule EPA-HQ-OAR-2006-0790-1783.

<sup>2</sup> See CIBO Petition for Reconsideration on Final Area Source Rule, Appendix A.

<sup>3</sup> National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, 76 Fed. Reg. 80,598 (Dec. 23, 2011) (to be codified at 40 C.F.R. pt. 63) (Boiler Rule); National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers, 76 Fed. Reg. 80,532 (Dec. 23, 2011) (to be codified at 40 C.F.R. pt. 63) (Area Source Rule); Commercial and Industrial Solid Waste Incineration Units: Reconsideration and Proposed Amendments; Non-Hazardous Secondary Materials That Are Solid Waste, 76 Fed. Reg. 80,452 (Dec. 23, 2011) (to be codified at 40 C.F.R. pt. 241) (CISWI and NHSM Rule).

CIBO strongly supports staying the effect of the rule as early as possible and eliminating the March 21, 2012 tune-up requirement. The Final Area Source rule was published on March 21, 2011 and required compliance one year later, on March 21, 2012. Beginning in 2011, many sources sought from regulators a case-by-case extension of that deadline to avoid noncompliance. Although to our knowledge EPA has not granted case-by-case extensions, EPA has given its assurance that it will address the matter globally so that sources will not risk noncompliance. CIBO supports the stay of that deadline as soon as possible.<sup>4</sup>

As explained more fully below, the original tune-up requirement could not have been completed within one year of the rule's promulgation by most area source facilities, and the one-year deadline was therefore irrational. Many area sources are on the verge of not being able to meet that deadline for scheduling or fuel versus waste reasons identified below and will either shut down or face non-compliance actions despite the fact EPA has proposed moving the deadline for valid reasons. There are also likely thousands of small sources that are not aware of the rule and its applicability to their units.

## **II. SOURCES SHOULD BE GIVEN THREE YEARS FOR INITIAL COMPLIANCE**

Under the March 2011 Area Source rule now in effect, EPA allowed one year for initial compliance for existing sources, requiring them to conduct a tune-up by March 21, 2012. 76 Fed. Reg. 15564. In the Proposed Reconsideration Rule, EPA proposes to allow two years for initial compliance, requiring the tune-up by March 21, 2013. 76 Fed. Reg. 80535. EPA also seeks comment on whether three years is more appropriate, requiring the tune-up by around March 2014. 76 Fed. Reg. 80535.

The timing of initial compliance should be resolved in favor of providing sources with ample time to meet the requirements of the tune-up. The tune-up on its face requires a significant amount of lead time. It includes, for example, stack testing for CO and O<sub>2</sub> per 40 CFR 63.11223(b)(5). EPA estimated that there are 183,000 existing area source boilers (76 Fed. Reg. 15579, Table 4). Affected sources will have to develop procedures and train personnel or engage contractors for the tune-ups required by this rule. Sites will be required to set up recordkeeping practices and compliance assurance procedures to meet the requirements of this rule. For many facilities, one year is not enough time to complete the initial tune-up and associated compliance activities, especially where a facility has multiple area sources on site.

Although most facilities are unable to meet the March 2012 tune-up deadline under the March 2011 final rule, any facility which does in fact meet the deadline should be considered to have

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<sup>4</sup> CIBO members have heard that EPA is considering issuing a non-enforcement assurance letter rather than issuing a stay of the tune-up deadline. CIBO strongly urges EPA to instead issue the stay of the tune-up deadline as soon as possible. Many companies have environmental compliance policies that will not allow a generally issued non-enforcement assurance letter to relieve a duty to comply with valid, in effect regulatory provision. An enforcement discretion letter from EPA does not relieve facilities from citizen suits or non-compliance actions by permitting agencies. These facilities may have to shut down if conducting a tune-up by the deadline is not possible for reasons explained elsewhere in these comments.

met the first tune-up requirement under the reconsidered rule, and subsequent tune-ups should be deferred to align with the frequency established by the new rule.

#### **A. EPA Should Harmonize Compliance Dates for All Requirements**

We support EPA's proposal to extend the initial compliance period past one year. EPA should extend the deadline for the initial tune-up to 3 years from promulgation of the March 2011 final rule in order to allow companies adequate time to complete the initial tune-ups and also to harmonize rule compliance dates for existing sources. EPA did not provide an opportunity to comment on the early initial tune-up deadline as it was not raised in the proposed rule nor did the Agency provide adequate justification in the March 2011 final rule for shortening the compliance time for units required to conduct a tune-up. As EPA has noted, there are companies (especially those with many boilers or boilers that operate only on certain schedules) that will not be able to meet the one year compliance time. 76 Fed. Reg. 80535.

#### **B. Fuel vs. Waste Issue Creates Uncertainty That is Not Yet Resolved**

In addition, due to the uncertainty surrounding the fuel versus waste issue and the proposed revisions to the solid waste definition rule, area sources need the additional time to determine if they are burning solid waste and if they will be covered under the area source boiler rule or the CISWI rule. As EPA has proposed revisions to the non-hazardous secondary materials rule, many sources are not yet sure how their secondary materials will be classified. For example, in some cases a material is being burned that a facility believes should qualify as a fuel but the final NHSM reconsideration rule to be promulgated after March 2012 could lead to an opposite determination (concluding the NHSM is a solid waste). Some facilities will prefer to operate to comply under the GACT rule rather than the CISWI rule, and therefore the facility will need at least another 12 months after a determination is complete to utilize an alternate fuel to meet the Area Source Rule tune-up requirements.

The proposed amended §63.11223(b)(5), which is applicable to both initial and continuous compliance demonstrations for work practices, requires that the tune-up be conducted "while burning the type of fuel that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up." The facility also has to state in its Notification of Compliance Status that "No secondary materials that are solid waste were combusted in any affected unit." [§63.11225(a)(4)(iv)]. Each of these leads to a timing concern that supports the three-year compliance timeline for the initial tune-up requirement.

Because resolving the fuel versus waste issue will effectively amend the work practice standard by revising the scope of its applicability, EPA would have authority to set the compliance deadline at three years after the effective date of the final reconsideration rule. Because of the substantial number of affected units and in light of the ongoing uncertainty on the waste/fuel issue, there is ample justification for setting the deadline at this point. Therefore, we request that EPA set the compliance deadline for completing the work practice requirements on the date three years after the effective date of the final reconsideration rule.

In addition, initial compliance should run from promulgation of the Final Reconsideration Rule, not from the March 21, 2011 promulgation date of the initial final rule. Issuance of the Final

Reconsideration Rule will end a period of intense uncertainty for sources regarding what would be their final regulatory requirements. Particularly for facilities with multiple major and area sources, the potential impact of multiple iterations of the four interrelated boiler MACT rules as initially proposed, then finalized, then proposed as reconsidered, has changed over two years since EPA's initial proposals. These facilities should be guaranteed enough time to meet the final regulatory requirements and should not suffer any risk of noncompliance.

### **III. THE PERIOD PROVIDED FOR COMMENT WAS ARBITRARILY SHORT**

Under basic principles of due process and administrative law, EPA has an obligation to provide the public with a reasonable opportunity to comment on proposed rules. Specifically, Congress requires EPA to give the public "a reasonable period . . . of at least 30 days" in which to comment on "any regulation" promulgated under the CAA.<sup>5</sup> By the clear terms of the CAA, Congress indicates that 30 days is the minimum time necessary to give the public a reasonable opportunity to evaluate a proposed rule and provide adequate feedback to the Agency. Thus, a comment period meeting the statutory 30-day minimum would be reasonable for a single, ordinary proposed rule. Here, EPA has violated the clear terms of the CAA and deprived sources of a means to adequately protect their interests and rights in the administrative and judicial processes by providing 60 days of comment for four complex interrelated rules.

Under reconsideration, the rules are no less complex than when they were first proposed in June 2010. A 60-day comment period is particularly inadequate given their complexity, breadth of applicability, and economic impact. EPA has added data on reconsideration for 300 additional sources that must be reviewed and sources face the pressures of sorting complex data and developing thorough comments that address very technical issues. Although EPA released the signed rule proposals almost one month<sup>6</sup> prior to their publication in the Federal Register, it did not provide the majority of the supporting documentation for the proposed rules until publication on December 23, 2011, just two days before the holidays, effectively shortening the comment period.

The four proposed rules under reconsideration make for an enormously broad and costly proposal, which would have a significant economic impact across numerous and diverse sectors of the US economy, with the boiler MACT rule alone imposing capital costs of more than \$5 billion and affecting nearly 200,000 sources, according to EPA. 76 Fed. Reg. 80622. This economic impact alone, which CIBO estimates to be over \$14,<sup>7</sup> requires a comment period sufficient to ensure thorough consideration of the proposed rules. CIBO joined with 26 other entities and trade associations, representing tens of thousands of affected sources, to ask EPA to extend the comment period by 30 days and explaining in detail why the extra 30 days was needed and justified.<sup>8</sup> On February 14, 2011, just seven days before the comments were due, EPA denied the request.

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<sup>5</sup> 42 U.S.C. § 7607(h) (2006).

<sup>6</sup> EPA posted a version of the rules on its website on December 2, 2011.

<sup>7</sup> How Costs Were Determined for CIBO Boiler MACT Study, January 2012, Appendix B.

<sup>8</sup> See January 18, 2012 letter of 27 organizations to EPA, Appendix C.

Sources have done the best under the circumstances to develop thoughtful comments on their concerns and the specific requests for comment EPA made in the four rules, and where necessary or appropriate, and where time permitted, to compile data to support its positions.

## **PART TWO: SPECIFIC COMMENTS**

### **I. EMISSION LIMITS**

#### **A. Final PM Limits for New Oil-Fired Boilers**

In the Final Area Source Rule, EPA promulgated a GACT-based PM emission limit for new oil-fired boilers. 76 Fed. Reg. 15,574. (2011 Final Rule) PM is used as a surrogate for individual urban metal HAP at oil-fired boilers. EPA concluded in the 2012 Reconsidered Area Source Rule that this approach is appropriate and proposed no amendments to the PM emission limits. 76 Fed. Reg. 80,537.

*For the purposes of regulating PM from new boilers, we concluded that the GACT standards should consist of numeric emission limits for units with heat input capacities greater than 10 million Btu per hour or greater because these new units will be subject to the new source performance standard (NSPS) emission limits for PM, and the NSPS will require PM emissions testing. For units with capacity less than 10 million Btu per hour, GACT does not include a numerical emission limit because of technical limitations of testing PM emissions from boilers with small diameter stacks. 76 Fed. Reg. 80,537.*

Overall, EPA's decision to set GACT emission limits instead of MACT is appropriate. EPA set numeric emission limits for new oil-fired units with heat input capacities 10 mmBtu/hr or greater because those units will already have to comply with the new source performance standard (NSPS) emission limits for PM, which requires PM testing. 76 Fed. Reg. 80,537. EPA's decision to set numeric GACT emission limits for larger new units that will already have to comply with NSPS is appropriate. This approach is justified as EPA has as recently as 2009 reviewed and promulgated standards for the small industrial boiler NSPS and determined that a PM limit of 0.030 lb/MMBtu is appropriate for new small boilers. *See* 74 Fed. Reg. 5091.

However, the NSPS provides an exemption from the PM limit for units burning low-sulfur fuel at § 60.43c (e)(4):

“an owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under §60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO<sub>2</sub> emissions is not subject to the PM limit in this section.”

Therefore, EPA should include an alternate compliance approach of using low-sulfur fuel for consistency with recently reviewed NSPS requirements for oil-fired units.

EPA also relied on its authority under CAA § 112(h), and established work practice standards in lieu of numeric emission limits for those sources with heat input capacities less than 10 mmBtu/hr. 76 Fed. Reg. 80,537. As discussed in the “*Work Practice Standards*” section below, EPA has authority to prescribe work practice standards in lieu of emission limitations in circumstances where it is not feasible to enforce such a standard. EPA’s decision to establish work practice standards here is appropriate because compliance with numerical emission limits is not practicable due to technological and economic limitations.

**B. Generally Available Control Technology (GACT) Standards for Biomass and Oil-fired Area Source Boilers.**

In the 2010 Proposed Area Source Rule, EPA based the standards for biomass and oil-fired sources on maximum achievable control technology (MACT). 75 Fed. Reg. 31,896 (2010 Proposed Rule). EPA revised the standards for these sources in the Final Area Source Rule and instead imposed GACT because “MACT-based regulations” were “unnecessary to meet the requirements of CAA §112(c)(6). 76 Fed. Reg. 15,574, 15,566 (2011 Final Rule). In the 2012 Reconsidered Area Source Rule, EPA made no changes to these standards, but is soliciting comments on whether the final standards for biomass and oil-fired boilers should be based on GACT instead of MACT standards. 76 Fed. Reg. 80,537. (2012 Reconsidered Area Source Rule).

As CIBO stated in its comments on the Proposed Rule, §112(d)(5) of the CAA provides EPA with the authority to set standards for area sources using GACT rather than MACT.

**C. Work Practice Standards**

**1. EPA Has the Authority to Promulgate Work Practice Standards In Lieu of Numerical Emission Limits.**

In the Final Area Source Rule, EPA relied on its authority under CAA § 112(h) to impose a work practice standard in lieu of numerical emission limits for certain sources with a designed heat input capacity of less than 10 mm Btu per hour. 76 Fed. Reg. 15,602. (2011 Final Rule). EPA suggested no changes to these standards as part of the 2012 Reconsidered Area Source Rule. 76 Fed. Reg. 80,537. (2012 Reconsidered Area Source Rule). Work practice standards are appropriate for the sources, because the actual emissions at many of the sources are not significant and the installation of emission controls is not cost effective.

Section 112(h) authorizes the Administrator to promulgate “a design, equipment, work practice, or operational standard, or combination thereof” that is consistent with the provisions of CAA §112(d) or (f) of the Clean Air Act, where in the judgment of the Administrator, it is not feasible “to prescribe or enforce an emission standard for control of a hazardous air pollutant or pollutants.” 42 USC § 7412(h). Section 112(h)(2)(B) defines “not feasible” as “the application of measurement technology to a particular class of sources is not practicable due to technological and economic limitations.” 42 USC § 7412(h). The costs associated with testing and monitoring certain boilers would be excessive. The costs would be excessive due to the fact that (1) standard reference methods are not applicable for sampling certain small diameter stacks, and (2)

the installation of sampling ports on certain small boilers would interfere with the functionality of exhaust systems.<sup>9</sup>

**2. EPA Should Extend the Work Practice Standards to Include New Biomass and Oil-fired Boilers With a Heat Input Capacity of Less than 30 MMBtu/hr.**

In the Proposed Reconsidered Rule, EPA retained the tune-up requirement as management practice standard for new biomass and oil-fired boilers with a designed heat input capacity of less than 10 mm Btu per hour. 76 Fed. Reg. 15,602. (2011 Final Rule). 76 Fed. Reg. 80,537. (2012 Reconsidered Area Source Rule).

CIBO supports EPA's decision to use work practice standards for biomass and oil-fired boilers. Numerical emission limits for PM and mercury are not necessary for existing biomass and oil fired area sources. Their emissions are not significant and the emission controls required for biomass and oil fired boilers would not be cost effective. While CIBO agrees with EPA's approach with regard to these units, EPA's decision to require numerical emission limits for PM for new boilers with heat input capacity greater than 10 MMBtu/hr is arbitrary. CIBO proposes that EPA extend the work practices standard to units with a designed heat input capacity of less than 30 MMBtu/hr.

Many units with heat input capacities between 10 and 30 MMBtu/hr experience similar issues and costs that would have a "significant adverse economic impact" on facilities. The cost analysis prepared by EPA was limited to "small units" and EPA did not, but should have, performed a similar cost analysis for subsets of units with heat input capacities greater than 10 MMBtu/hr to determine if further application of work practice standards is justified. EPA has imposed work practice standards for units less than 30 MMBtu/hr under the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc. The same rationale applies equally to this subset of boilers for purposes of MACT standards, because many units less than 30 MMBtu/hr do not have the controls in place to test for emissions. Installing those controls would be prohibitively expensive and would not be justified by the benefits.

**D. Monitoring Requirements**

**1. O<sub>2</sub> Monitoring Requirements**

In the Final Area Source Rule, EPA required continuous oxygen monitoring for boilers subject to CO numeric emission limits. 76 Fed. Reg. 15,562. (2011 Final Rule). EPA finalized this approach as an alternative to requiring the use of CO CEMS. In the 2012 Reconsidered Area Source Rule, EPA is proposing to (1) amend the oxygen monitoring requirements "to allow for the use of continuous oxygen trim analyzer systems"; and (2) remove the requirement that the oxygen monitor be located at the outlet of the boiler, "so that it can be located either within the

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<sup>9</sup> See EPA's discussion in the 2011 Final Rule, 76 Fed. Reg. 15,568.

combustion zone or at the outlet as a flue gas oxygen monitor.” 76 Fed. Reg. 80,536. (2012 Reconsidered Area Source Rule)

As set forth in comments on the CIBO’s Petition for Reconsideration of the Final Area Source Rule, EPA’s proposed oxygen monitoring requirements are appropriate. This approach is technically sound, adds flexibility and is less costly and burdensome than the continuous oxygen monitoring requirements utilizing CEMS.

Many existing boilers already utilize oxygen analyzers for indication, alarm, and O<sub>2</sub> trim control, where the fuel/air ratio is automatically controlled for optimum combustion conditions. The sensing location for existing O<sub>2</sub> monitors is typically in the optimum location to sense gas composition as reliably as possible, because sensing of oxygen in these cases maintains proper excess air levels and helps prevent unsafe operating conditions. For units equipped with existing O<sub>2</sub> sensors and O<sub>2</sub> trim control systems, flue gas composition is already used for combustion tuning and control characterization. Therefore, if O<sub>2</sub> monitoring is desired for continuous compliance under the Area Source rule, sensing O<sub>2</sub> at the current location prior to the stack would be logical and proper from a technical perspective. The O<sub>2</sub> analyzers utilized for these existing purposes are not compliance CEMS meeting PS-3 requirements relative to positioning or other QA/QC requirements. They are, however, calibrated and maintained to provide reliable and safe service for combustion unit operation.

However, we recommend that the following modifications be made to certain regulatory language, including the definition of “oxygen analyzer system” and certain associated system operation definitions to retain the operability, efficiency, and safety of these systems. These modifications are discussed below

#### **Oxygen analyzer system – oxygen sensing location**

The Oxygen analyzer system is defined in §63.11237 in part as follows:

“Oxygen analyzer system means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler flue gas or firebox. ...”

The optimum location of the sensor or sampling point is dependent on the specific boiler design. In different applications, that location might be at the furnace exit, in the convection pass, at the boiler outlet or at another downstream location. We recommend that this definition be modified as follows to accommodate the boiler-specific location of the sensing point:

*Oxygen analyzer system* means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler flue gas, boiler firebox, or other appropriate intermediate location.

#### **Oxygen analyzer system – oxygen trim system set point**

Section 63.11224(a)(7) states the following:

“(7) You must operate the oxygen analyzer system with the oxygen level set at the minimum percent oxygen by volume that is established as the operating limit for oxygen according to Table 4 to this subpart.”

The above paragraph references Table 4, but we believe the correct reference is Table 6, since this table contains requirements for establishing operating limits, including oxygen as the operating limit for CO (#3 in Table 6).

The wording of §63.11224(a)(7) is more restrictive than the wording of the requirement for “continuous oxygen monitoring” in Table 3, #8, which is as follows:

“8. Continuous Oxygen Monitor ... Maintain the 30-day rolling average oxygen level at or above the lowest 1-hour average oxygen level measured during the most recent CO performance stack test.”

The Table 3 requirement allows operation with the 30-day rolling average oxygen level at or above the lowest 1-hour average oxygen level measured in the most recent performance test, whereas §63.11224(a)(7) requires operation at the minimum oxygen percent established during the prior test. Inherent boiler operating characteristics require operation with higher excess air (higher oxygen) at lower operating rates simply due to their lower fuel and air velocities, degraded mixing of fuel and air as those flow rates decrease, and lower furnace temperatures. Therefore, it is necessary for the actual oxygen trim system set point to vary with load level, with the lowest set point typically occurring at or near full load operation. The Table 3, #8 requirements account for the variability of actual boiler operations; therefore, §63.11224(a)(7) should be revised to account for this variability as well.

In addition, §63.11224(a)(7) should be modified to incorporate a safety component associated with the operation of oxygen trim system. Coal fired boilers subject to the CO limits in this rule may also be equipped to fire other fuels such as natural gas and fuel oil that may be lower emitting and able to operate at lower oxygen levels for improved boiler efficiency. Operators may also need to modify the oxygen set point or trim system to accommodate fuel quality issues. Oxygen trim systems not only provide a means for energy efficiency, but they also are integral to furnace combustion control and furnace safety. Therefore, while this system promotes energy efficiency and use of a 30-day rolling average basis does provide some operating flexibility, use of such systems should also consider safety. We recommend that the paragraph §63.11224(a)(7) be revised as follows:

(7) You must operate the oxygen analyzer system with the oxygen level set at *or above* the minimum percent oxygen by volume that is established as the operating limit for oxygen according to Table 6 to this subpart *when firing the fuel or fuel mixture utilized during the most recent CO performance stack test. Operation of oxygen trim control systems to meet these requirements shall not be done in a manner which compromises furnace safety.*

Finally, EPA is proposing to amend the monitoring requirements in §63.11224(a) to allow sources subject to a carbon monoxide emission limit the option to install, operate and maintain a carbon monoxide and oxygen continuous emission monitoring system (CEMS) (76 Fed. Reg.

80536, Dec. 23, 2011). This will allow facilities to choose between compliance using CO CEMS and compliance using an O<sub>2</sub> CEMS in combination with CO stack testing. We support EPA's decision to allow this flexibility in the CO monitoring requirements and allow facilities that already have CO CEMS to use their existing systems.

## **2. 30-day averages**

CIBO supports the proposed use of 30-day rolling averages for parameter monitoring and compliance with operating limits.

As explained in the preamble, variables outside the operator's control such as fuel content, seasonal factors, fuel, load cycling, and fewer operating hours support the use of longer averaging periods to determine operating compliance. Longer averaging periods will have a "variability of about half of that represented by the results of short term testing." Moreover, with longer averaging periods, problematic control system variability will result in deviations from a 30-day average on a comparable rate as those for a shorter term average. 76 Fed. Reg. 80,536.

CIBO further notes that utilizing 30-day rolling averages for all the data used to comply with the standards in this rule greatly reduces considerable administrative burden and risk of error. Further efficiencies will be realized and potential errors will be reduced by this 30-day rolling average standardization.

## **3. Additional flexibility is needed for other operating parameters**

In Table 6, EPA only allows for operating parameter limit variation due to boiler load fraction to be applied to activated carbon injection rates. However, variations with load and other operating conditions also occur for the other operating parameters- wet scrubber pressure drop and liquid flow rate, ESP secondary power. Flue gas flow rate and characteristics vary over load and with other operating variables such as fuel quality, to the extent that the single hourly average value determined during the high load steady state performance test will not apply to other conditions if overall performance is optimized. EPA should provide an allowance for any operating parameters to vary with unit load fraction as applicable to the operating parameter and specific affected source, and recognize that those operating parameters do not necessarily vary in a linear relationship with load, e.g., pressure drop typically varies with the (flow)<sup>2</sup>.

## **4. Title V permit review cycle and emission testing requirements**

CIBO's Petition for Reconsideration sought consistency in testing requirements for this rule and 5-year Title V permit review cycle. EPA did not coordinate these provisions in the Proposed Reconsidered Rule. EPA did revise 40 CFR 63.11220 to clarify that performance testing will be triennial for all sources. 76 Fed. Reg. 80,539. While CIBO supports testing at this lower frequency of three years, triennial testing remains overly burdensome and EPA should modify the finalized emission testing requirements so that they are consistent with the 5 year air permit review cycle. Annual compliance testing is extremely expensive and the benefits of conducting emission tests more frequently than every 5 years do not justify the costs. In addition, as noted in CIBO's Petition for Reconsideration, there is likely to be a shortage of testing and laboratory resources under the current emission testing schedule.

CIBO appreciates the change clarification in of the triennial frequency of performance testing from annually in the final rule to once every three years in the reconsideration rule. However, requiring a performance test once every five years, as is required in many air permit renewals, will still accomplish the same assurance of compliance at a reduced cost to the regulated source.

A significant amount of testing will be required by sources to determine the compliance status with respect to the rule and to evaluate and select available control strategies. Capital projects to install necessary control equipment cannot proceed until the testing and evaluation is complete. Due to the high number of sources affected by the rule that have the same concerns, it is likely that availability of stack testing personnel and laboratory facilities to conduct tests will be limited, adding to the time required to complete this essential first step. As outlined below, annual frequent compliance testing requiring multiple test runs for purposes of compliance will further reduce the availability of testing and laboratory resources.

EPA acknowledges that the cost of testing small boilers and process heaters is prohibitive. While the cost of emissions testing larger units is less prohibitive, EPA must consider these costs when establishing the frequency of testing.

The benefits of testing more frequently than every 5 years do not justify the costs. HAP emissions change only when operating parameters change (e.g., firing rate, maximum contaminant input limits for chloride and mercury, type of fuel, combustion efficiency, oxygen content, etc.) or when design changes occur. Absent these changes to an affected source, operating parameters established by implementation of Area Source Rule are more than sufficient to ensure that emissions will not significantly change over time.

Other regulations support a 5-year testing cycle. For example, 40 CFR §75 requires low mass emissions units to establish NO<sub>x</sub> emissions curves based on testing conducted every 5 years. Several states require that testing be conducted upon each 5-year Title V permit renewal. All affected major sources subject to Boiler MACT are required to have Title V Permits. The Title V permitting program provides the appropriate vehicle to implement a 5-year test requirement.

## **II. SUBCATEGORIES AND EXEMPTIONS**

### **A. Existing v. new source status**

Regardless of the fuel capability identified in an initial notification, the distinction between a new source and an existing source should only be made based upon a source's capability to burn a particular fuel as of the effective date of the rule. Many facilities have boilers that can burn either gas or liquid. Because the price of gas is currently lower than the price of most liquid fuels, they likely are currently firing gas during normal operation, with liquid being fired only during periods of curtailment. Therefore, many of these facilities did not submit an initial notification for the area source rule, since gaseous fuel fired boilers that only burn liquid during periods of curtailment are not covered by the area source rule. In the future, the price of liquid fuel may be lower than the price of gaseous fuel, and facilities may want to preferentially burn liquid fuel over gas fuel. A change in the fuel from the initial notification should not in and of

itself, reclassify a source as a new source for purposes of 40 CFR 63 Subpart JJJJJ. This interpretation is comparable to the fuel switching provisions in the NSPS and PSD regulations.

This is important because many boilers which have capability to burn fuel oil, for instance, as back-up for natural gas, may not have filed the initial notice of applicability. EPA has provided guidance stating that if a source fails to file an initial notification and then plans to burn oil in the future; it would be considered to be a new source.

This guidance appears to be contrary to the regulatory text which states at 63.11194 (c):

An affected source is a new source if you commenced construction or reconstruction of the affected source after June 4, 2010 and you meet the applicability criteria at the time you commence construction.

If a source already has oil or alternate fuel capability, then that source would not be commencing construction or making a modification the source.

The text of the rule also states at 63.11194 (d):

A boiler is a new affected source if you commenced fuel switching from natural gas to solid fossil fuel, biomass, or liquid fuel after June 4, 2010.

CIBO suggests that the following sentence be added to the text of 63.11194(d) after the above sentence to clarify that to become a new source you must modify that source to be capable of accommodating the new fuel, so that new sources are not created simply by failing to submit an initial notification or a notice of fuel switching, for a unit that is already capable of accommodating that fuel:

*Notwithstanding these definitions, a source that submits notification to fuel switch, but which was capable of accommodating the new fuel on or before June 4, 2010 shall not become a new affected unit.*

## **B. Exemption for temporary boilers**

The Clean Air Act provisions reporting definition source categories provides EPA ample legal authority to exempt temporary boilers from coverage under Subpart JJJJJ. 76 Fed. Reg. 80535. For the reasons stated below, which EPA acknowledges, it is a reasonable exercise of discretion.

Because temporary boilers do not meet the §112(c)(3) threshold area source listing criteria, EPA lacks authority to regulate these sources under this rule. EPA is otherwise justified in exempting temporary boilers because as EPA notes, they are insignificant sources of emissions and were not included in EPA's analysis of the source category. Given that these units are not permanent fixed units and are typically not fully integrated with site control systems, it would be impractical to require compliance under the Area Source rule. Furthermore, temporary boilers are generally owned and operated by rental companies, not facilities regulated under the CAA, and boilers that are small tend to have lower hourly emissions rates.

### C. Exemption from Title V for Minor and Synthetic Minor Sources

In the 2010 Proposed Area Source Rule, EPA proposed to exempt from Title V permitting, certain area source categories except for those “synthetic area sources” that “became area sources by virtue of installing add-on controls.” 75 Fed. Reg. 31,913. (2010 Proposed Rule). EPA included in the 2010 Proposed Area Source Rule a thorough discussion of the justification for exempting certain area sources from Title V permitting. See 75 Fed. Reg. 31,910-913. (2010 Proposed Rule). While many area sources subject to the proposed rule were exempted from Title V permitting, EPA concluded that the synthetic sources that are large facilities should have to comply with Title V EPA “because their uncontrolled emissions would far exceed the major source threshold.” 75 Fed. Reg. 31,913. (2010 Proposed Rule).

In the Final Area Source Rule, EPA expanded the exemption from Title V permitting to all area sources subject to the rule. 76 Fed. Reg. 15,578. (2011 Final Rule). EPA justified its decision because it determined that it lacked sufficient information to “distinguish the sources which have applied controls to boilers in order to become area sources from other synthetic and natural area sources.” 76 Fed. Reg. 15,578. (2011 Final Rule). Therefore, EPA determined its rationale in the 2010 Proposed Rule for exempting some sources from Title V permitting was relevant to all sources under the rule.

Sierra Club challenged this outcome in its Petition for Reconsideration. *See* Earthjustice Petition for Reconsideration of the Area Source Boilers Rule, dated (May 20, 2011). EPA notes that petition “disputes [EPA’s] conclusion that title V permitting is unnecessarily burdensome; discusses the benefits of permitting, including compliance benefits; contests [EPA’s] estimation of the costs of permitting; and challenges [EPA’s] determination to extend the proposed exemption from title V permitting to include synthetic area sources.” 76 Fed. Reg. 80,538.

The Area Source Rule covers 187,000 boilers at 92,000 facilities, most of these are very small boilers at very diverse facilities. 76 Fed. Reg. 80538. For the reasons set forth by EPA, area sources should not be required to obtain Title V permits. That would not result in improvements to environmental protection proportionate to the significant burden on area source facilities. See 75 Fed. Reg. 31,910-913.

EPA’s decision to expand the Title V exemption to synthetic minor sources is fully supported by the record. As EPA concluded in the Final Area Source Rule, it lacks sufficient information to differentially treat the sources which have applied controls to boilers in order to become area sources<sup>10</sup> from other synthetic and natural area sources.

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<sup>10</sup> 76 FR 80538. “In the preamble to the proposed area source NESHAP, we estimated that at least 48 synthetic area sources reduced their emissions to below the major source threshold by installing air pollution control devices. (75 FR 31911, June 4, 2010.)”

#### **D. Small source exemption from tune-up work practice standards**

EPA rejected a request to exempt very small (between 2 and 10 MM Btu/hr) oil-fired units. However, EPA has proposed to change the frequency for tune-ups (following the initial tune-up) for oil-fired boilers that are equal to or less than 5 MMBtu/hr to a tune-up once every 5 years (76 FR 80536, Dec. 23, 2011). For new units, EPA has proposed to remove the requirement for the initial tune-up, considering that new units will likely be tuned during the initial startup process as part of commissioning. For facilities with a large number of small oil-fired units, completion of tune-ups on a biennial basis can quickly become a logistics issue, due to the need to schedule periods where the boilers can be shutdown and tuned without undue disruption to the operation of the facility. For area source boilers, we believe that a tune-up every 5 years is appropriate, as emissions from these boilers are small, and allowing a reduced tuning frequency will reduce the cost of the rule. Therefore, we support these changes, as they minimize burden on small sources with minimal emissions impact.

EPA should promulgate a de minimis exemption, not merely a work practice standard, for small boilers and process heaters of up to 10 MMBtu/hr or less. *Alabama Power Co. v. Costle*, 636 F.2d 323, 400 (D.C. Cir. 1979), clearly establishes EPA's authority to fashion de minimis and administrative necessity exemptions. In addition to the logistical issues involved with shutting down multiple small units in a facility at the same time, there is the considerable cost involved with performing the tune-ups. This significant cost produces only minimal corresponding reductions in HAP emissions. Tune-ups required under the current final and proposed rules will have only a limited effect on the HAP emissions from these small units. At least one CIBO member facility has estimated the cost of performing biennial tune-ups at \$20,000 per ton and quintennial tune-ups at \$8,000 per ton. The tune-up requirement results in a disproportionate expense in a very small portion of industry-wide HAP emissions.

#### **E. The Subcategory for Seasonal Boilers is Appropriate but the Definition Should be Adjusted and a Limited Use Subcategory Should Also be Added**

EPA is proposing to create a new subcategory for seasonally operated boilers. For these seasonally operated boilers, EPA is proposing to require a tune-up every five years (following the initial tune-up). Seasonally operated boilers would be defined as follows:

*“Seasonal boiler means a boiler that undergoes a shutdown for a period of at least 7 consecutive months (or 210 consecutive days) due to seasonal market conditions. This definition only applies to boilers that would otherwise be included in the biomass subcategory or the oil subcategory.”*

We support the addition of a seasonal boiler subcategory. These boilers are used in seasonal agricultural operations or for comfort heat and typically operate only about 100 days per year, so the number of hours actually operated over a 5-year period is much less than a boiler in normal operation. Therefore, a 5-year tune-up frequency for these units is appropriate and is comparable to the tune-up frequency required for units that operate continuously.

However, this subcategory should also cover units that only operate during short periods of high electricity demand in the summer and for semi-annual capacity testing requirements. Because of the semi-annual testing required by the electric utility, the units will not meet the proposed criterion of being completely shut down for 7 consecutive months, but would otherwise be considered seasonal units and their limited operation is consistent with EPA's intent when developing this subcategory. Therefore, EPA should revise the definition of seasonal boiler to allow intermittent operational testing (e.g., up to 15 days) during the 7 month period. This would allow biomass or oil units at area sources that have availability requirements to ensure that the unit is available on short notice.

In addition, EPA should also include a limited use subcategory in the area source rule for the same reasons they determined a seasonal boiler subcategory was appropriate. EPA should establish work practices as the appropriate compliance approach for a limited use subcategory, and establish the following definition for limited use unit:

*Limited-use boiler means any boiler that burns any amount of solid, liquid, or gaseous fuels, has a rated capacity of greater than 10 MMBtu per hour heat input, and has a federally enforceable limit of no more than 876 hours per year of operation or 10% capacity factor.*

A capacity utilization factor of 10 percent was chosen for the 2004 boiler MACT final rule as the best means of defining a limited use unit.<sup>11</sup> The 2011 boiler MACT rule also includes a subcategory for limited use units that is currently based on operation at less than 10% of the potential annual operating hours.<sup>12</sup> EPA has taken a capacity factor approach in the recently finalized MATS rule, establishing a subcategory for limited use liquid-fired units with an 8 percent capacity factor (limited-use liquid oil-fired subcategory means an oil-fired electric utility steam generating unit with an annual capacity factor of less than 8 percent of its maximum or nameplate heat input, whichever is greater, averaged over a 24-month block contiguous period).<sup>13</sup>

### **III. ENERGY ASSESSMENT**

In the 2011 Final Area Source Rule, EPA grounded its authority to require sources to conduct an energy assessment in CAA §112: “the energy assessment will generate emission reductions through the reduction in fuel use beyond those required by the floor” and that “the requirement to perform the energy audit is, of course, a requirement that can be enforced and thus a standard.” 76 Fed. Reg. 15,568.

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<sup>11</sup> See National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters; Final Rule, 69 Fed. Reg. at 55223.

<sup>12</sup> See 40 CFR 63.7500(c)

<sup>13</sup> See 40 CFR 63.10000 and 63.10042.

CIBO challenged that basis of authority in prior comments on these rules and reasserts those positions here.<sup>14</sup> In short, an energy assessment does not purport to limit emissions or impose more stringent standards than the MACT floor and is, therefore, not a beyond-the-floor standard consistent with the text of the Clean Air Act. Furthermore, even if efficiency measures identified in the energy assessment were actually implemented, the reduced demand for the output of a regulated source is not an “emission control” technology to limit emissions from the regulated source. CAA § 112(c)(2); 42 U.S.C. § 7412(d)(3). In addition, by defining the energy assessment as a control, with the goal of reducing energy use, EPA illegally attempts to reduce demand for the product of the regulated source, in this case, the boiler. The scope of the assessment is illegally broad, and the amendments to the scope provided in the Proposed Reconsidered rule do not cure the illegality. The energy assessment lacks a relationship to HAP reduction, and EPA provides no record basis demonstrating such a relationship. The rule irrationally assumes cost savings from projects that may (or may not) be identified or ever implemented by sources. Here, even as EPA proposes to not require sources to submit the energy assessment report to EPA under §112, EPA asserts “the authority to obtain the energy assessment as authorized by CAA section 114,” 76 Fed. Reg. 80,540.

#### **A. Amendment to Scope**

As CIBO has noted in earlier comments, the scope of the energy assessment is illegally broad. As proposed in the Reconsidered Rule, it remains as such, requiring sources to consider, inter alia, the “operating characteristics of the facility, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints . . .;” “major systems consuming energy;” “available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage . . .;” and to identify “major energy conservation measures. . . .” 76 Fed. Reg. 80,549; see also 75 Fed. Reg. 31,932. EPA’s authority under §112 is limited to setting emission limits for the affected combustion unit and does not extend to non-§ 112 sources, or generally to the entire “facility.” What EPA requires goes far beyond its §112 authority.

In addition, EPA makes clear in the Reconsidered Rule that the definition of “energy use system” is a non-exclusive list of examples of systems that a source may be required to include in its energy assessment. This is borne out by the regulatory text and EPA emphasizes the open-endedness of this requirement in response to a comment, stating that the definition of “energy use system” is “intended only to list examples of potential systems that may use the energy generated by affected boilers and process heaters.” 76 Fed. Reg. 80,537 (though incorrectly stated since process heaters are not subject to this rule). Therefore, as broadly as “energy use system” is already defined, as applied to specific sites, the assessment requirement could be even broader.

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<sup>14</sup> CIBO comments on Proposed Rule: National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers, 75 Fed. Reg. 31,896, EPA-HQ-OAR-2006-0790 (Aug. 20, 2010).

The Reconsidered Rule amendment to the scope of the energy assessment does not cure its illegality, and is arbitrary. In the Preamble, EPA asserts that it revised the requirement to address comments that the scope of the energy assessment was too broad. However, EPA pared back the scope of the energy assessment in one minor respect, which does not cure the problem. The assessment as re-proposed in the Reconsideration Rule remains illegally broad. The Reconsidered Rule did not propose to modify the term “energy use system(s)”; therefore, it still includes without limitation, process heating and cooling, in addition to boiler systems, machine drives, HVAC, and lighting. 76 Fed. Reg. 15,600. Further, the proposed amendment creates a division among affected sources that arbitrarily imposes a greater burden on facilities with peripheral power demand supplied by electricity generated onsite than on facilities that rely more heavily on purchased power.

The Reconsidered Rule continues to define energy assessment to include “energy use system(s).” 76 Fed. Reg. 80,547. EPA now proposes to cover only “energy conservation measures that are within the facility’s control.” 76 Fed. Reg. 80,549.

EPA proposes to amend this definition because, as EPA explains, this will “account for the fact that some boilers provide steam and/or hot-water to off-site customers over whom they have no control.” 76 Fed. Reg. 80,540. EPA excludes these particular energy use systems because EPA concludes they are inconsistent with its intent to cover systems that are directly related to the emissions of the regulated boiler. CIBO agrees that energy use systems located off-site should not be covered by this rule, nor should any other energy using systems because EPA’s §112 authority is limited to emission sources of HAPs.

Energy use systems located off-site and systems that run on purchased power should never have been covered by the rule, because the source category and emission source is the boiler only. Although EPA appears to concur that scope is a concern, in fact, EPA selectively addresses the comments, focusing only on the systems located off-site and that utilize purchased power. EPA provides a cursory and insufficient dismissal of the fundamental concern that requiring reporting of information regarding any energy systems is beyond the scope of the agency’s §112 authority.

While the scope of the covered energy use systems should certainly be narrowed, EPA’s proposed exclusion of energy use systems that run on purchased electricity creates an arbitrary distinction among efficiency measures at a facility based on the source of electricity. There is no logic to requiring sources that depend more heavily on electricity generated onsite to collect and report more information than sources that purchase electricity. EPA’s logic – the sole basis of this regulatory requirement – is that reduced energy demand = less fuel used = lower emissions from the combustion source. It matters little whether the electricity is produced by a utility or by an industrial boiler, if EPA rationally applies its reasoning to regulatory requirements. As EPA has made clear, the goal is “to reduce the facility energy demand which would result in reduced fuel use.” 76 Fed. Reg. 15,573; 75 Fed. Reg. 31,907. While CIBO supports EPA’s proposal to narrow the scope of the energy assessment, the current definition of energy assessment remains over-broad and lacks record support and legal authority.

**B. If EPA imposes an energy assessment, it should include the proposed change to the maximum time of the assessment.**

In the Reconsidered Area Source Rule, EPA clarified that the time to conduct the energy assessment may be extended “at the discretion of the owner or operator of the affected source.” 76 Fed. Reg. 80,547. CIBO supports this approach regarding the timing to conduct energy assessments.

In the Final Area Source Rule, EPA included stated maximum time language in the definition of energy assessment, which could have implied that a deviation or a potential violation would occur if the energy assessment effort exceeded the listed time limits. 76 Fed. Reg. 15,600 (§ 63.11237). CIBO supports EPA’s new approach because it clarifies that actual times for conducting the assessment may exceed stated maximum times depending on site-specific conditions. Clearly defining terms is critical so that deviations or enforcement actions are not applicable to the elapsed times expended on energy assessments.

**C. EPA should clarify application of the energy assessment output percentages.**

If EPA continues with its broad scope of coverage for energy assessment energy use system(s), further clarification is required to limit the scope of effort relative to the percent of affected boiler(s) energy output for different size facilities. Specifically, it is unclear how the percentages in the energy assessment definition are to be applied. We believe that EPA’s intentions are to limit the scope of assessment based on energy use by discrete segments of a facility, and not by a total aggregation of all individual energy using elements of a facility, because the latter would be disjointed and unwieldy at best. The applicable discrete segments of a facility could vary significantly depending on the site and its complexity. However, we believe the following addition to the energy assessment definition in §63.11237 would help resolve current problems and allow for more streamlined assessments:

“...(4) The on-site energy use systems serving as the basis for the percent of affected boiler(s) energy output in (1), (2), and (3) above may be segmented by production area or energy use area as most logical and applicable to the specific facility being assessed (e.g., product X manufacturing area; product Y drying area; Building Z).”

**D. If EPA imposes an energy assessment, it should adopt the proposed change to not require submission to EPA but additional measures are needed to protect CBI.**

In the Reconsidered Rule, EPA proposes to remove the requirement that sources submit their energy assessments upon a request from EPA. 76 Fed. Reg. 80,540. EPA recognizes that at least some of the data from energy assessments are confidential business information. EPA’s Response to Public Comments on EPA’s National Emission Standards for Hazardous Air Pollutants for Area Source Industrial Commercial Institutional Boilers and Process Heaters - Volume 1 (Response to Comment Excerpt Number 48). CIBO supports protecting CBI to the fullest extent allowed. As CIBO stated in its Petition for Reconsideration of the Final Area Source Rule, EPA should provide CBI protection for area sources as it does for major sources. Submission of energy assessments is not required under the final Boiler rule. CBI is equally an issue for companies operating area source boilers as it is for major source boilers and process heaters. As such, a similar approach in both rules is justified.

EPA noted in the Proposed Reconsideration Rule that even without requiring submission of the energy assessment under this rule, EPA “has the authority to obtain the energy assessment as authorized by CAA section 114, including the provisions for protecting CBI.” 76 Fed. Reg. 80,540. EPA does have broad authority under §114 of the CAA to request information from sources. However, EPA cannot circumvent the procedural requirements that apply to information requests by bootstrapping an information request to an unrelated rule. Here, EPA is exercising its authority under §112. *See, e.g.*, 76 Fed. Reg. 80,533-34. As EPA acknowledges, § 112 directs the agency “to develop NESHAP for area sources and which require existing and new major sources to control emissions of HAP using MACT based standards.” *Id.* An energy assessment is not an emission standard; therefore, if EPA would like to collect this information for policy purposes or to inform other rulemaking efforts, it must comply with the procedural requirements to issue a §114 request.

To issue a valid §114 request, EPA must comply with the Paperwork Reduction Act (PRA), which requires that the agency receive approval from the Office of Management and Budget (OMB) before issuing similar §114 requests to ten (10) or more respondents collecting substantially similar information in any 12-month period. 5 C.F.R. § 1320.3(c). The OMB’s approval is in the form of an Information Collection Request (“ICR”), which must go through public notice and comment. Courts have determined that compliance with an information request is not required where “the demand for information or documents is arbitrary and capricious, an abuse of discretion, or otherwise not in accordance with law.” *U.S. v. Pretty Prod., Inc.*, 780 F. Supp. 1488, 1506 n.23 (S.D. Ohio 1991). As CIBO asserted in its comments on the Proposed Rule, much of the analysis of cost-effective efficiency measures will be CBI, and sources should not be required to submit that information to EPA. EPA’s regulations provide that information must be protected from disclosure to protect trade secrets and a business’ right to limit the use or disclosure of information “by others in order that the business may obtain or retain business advantages it derives from its rights in the information.” 40 C.F.R. § 2.201(e). Commercial or financial information involuntarily submitted by a company to EPA is entitled to confidentiality if “disclosure of the information is likely to . . . cause substantial harm to the competitive position of the person from whom the information was obtained.” *Nat’l Parks & Conservation Ass’n v. Morton*, 498 F.2d 765, 770 (D.C. Cir. 1974); *Critical Mass Energy Project v. Nuclear Regulatory Comm’n*, 975 F.2d 871, 879 (D.C. Cir. 1992) (reaffirming the *National Parks* test for determining whether information submitted under compulsion is confidential); *see also* 40 C.F.R. § 2.208(e)(1). Parties claiming confidentiality need only show “competition and a likelihood of substantial competitive injury.” *CNA Fin. Corp. v. Donovan*, 830 F.2d 1132, 1152 (D.C. Cir. 1987).

EPA’s regulations provide that emissions data cannot be protected from disclosure as CBI. 40 C.F.R. § 2.301(e). “Emission data” is “any source of emission of any substance into the air” that is “necessary to determine the identity, amount, frequency. . . of any emission. . . emitted by the source.” 40 C.F.R. § 2.301(a)(2)(i); *see also RSR Corp. v. EPA*, 588 F. Supp. 1251, 1255 (N.D. Tex. 1984).

However, the information collected to comply with the energy assessment requirement is not “emissions data.” 40 C.F.R. § 2.301(e). It is not “necessary” to determine emissions emitted by a source. *Id.* Rather, the energy assessment includes:

- An evaluation of operating characteristics of the facility, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints;
- An inventory of major energy consuming systems;
- A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage;
- A review of the facility's energy management practices and recommendations for improvements;
- A list of major energy conservation measures and their energy savings potential;
- A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

76 Fed. Reg. 80549.

The foregoing information is commercially valuable because its release would potentially provide competitors with a window into the reporter's current operations, operating costs, and expansion plans. For EPA to require the public disclosure of information of this nature (including engineering plans or the costs of energy savings projects), ignores the competitiveness implications of such disclosure. A company that develops a method to significantly reduce its energy costs – whether through improved maintenance practices or new projects - will not want its competitors to be aware of such proprietary information. Similarly, that company would not want to make its competitors aware of any operating constraints that might highlight weaknesses within a facility. If energy assessments are made publically available, competitors that took a minimalist approach in conducting their own energy assessments could benefit from the disclosures of others without incurring the time and expense to independently develop those plans. *See Webb v. Dep't of Health & Human Serv.*, 696 F.2d 101, 103 (D.C. Cir. 1982). As a result, reporters that prepare more comprehensive and detailed energy assessments would suffer irreparable harm. EPA is not authorized under the CAA or its implementing regulations to cause companies such injuries by mandating the disclosure of proprietary information. 42 U.S.C. § 7414(c); 40 C.F.R. § 2.301(b)(i).

The lapse of time would not diminish the sensitivity of disclosing this information. There is no time after which this information could be released that would avoid these potential competitive harms. Given these concerns, it would not be appropriate to impose a time limit on the confidentiality of the energy assessment information.

CIBO objects to requiring sources to submit their energy assessments even if they are afforded CBI status because those protections are not necessarily complete or permanent. Such protections are insufficient because EPA CBI determinations are subject to reevaluation. 40 C.F.R. § 2.205(h). EPA has the discretion to modify prior CBI determinations and conclude that CBI is no longer entitled to confidential treatment because of a change in applicable law or newly discovered or changed facts. *Id.*

For the foregoing reasons, entities should only be required to submit a certification that the energy assessment was conducted.

#### **IV. EMISSIONS AVERAGING**

##### **A. Emissions averaging for area sources**

CIBO opposes EPA's decision not to include emissions averaging as a potential compliance method in the proposed reconsideration area source rule. 76 Fed. Reg. 80,532.

A 30-day averaging period will have significant benefits. EPA has previously noted that the Small Business Administration Panel "recommended that EPA carefully weigh the potential burden of compliance requirements and consider for small entities options such as, emission averaging within facility. . . ." 75 Fed. Reg. 31,919. EPA has further acknowledged in the context of the major source standards, 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." 75 Fed. Reg. 32,034. The same rationale applies equally to area sources.

Furthermore, if EPA were to include emissions averaging as a compliance method, CIBO urges it not to apply a 10 percent reduction on emissions limits. In the final Boiler Rule, EPA includes a restriction on emissions averaging that requires facilities using that option to meet a standard that is 10% stricter than the otherwise applicable limits. 76 Fed. Reg. 15,670. 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.

##### **B. 10% Discount Factor**

CIBO opposes EPA's decision to retain the 10% discount imposed on sources that decide to average their emissions data to comply with standards. 76 Fed. Reg. 80,633.

The restriction is arbitrary and capricious. 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 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, some sources will not be able to ensure an additional 10% reduction in emissions below the limits and imposing this penalty effectively would deprive them of the availability of the emissions averaging compliance alternative.

## V. NATURAL GAS CURTAILMENT

CIBO commented on EPA's earlier definition of natural gas curtailment and explained its legal and factual deficiencies. In response to comments and in the Proposed Reconsidered rule, EPA did not address the critical compliance obstacle that this definition creates.

EPA's Proposed Reconsideration makes these amendments to the definition in the Final March 2011 Rule of period of natural gas curtailment:

Period of gas curtailment or supply interruption means a period of time during which the supply of ~~natural gas~~ gaseous fuel to an affected facility is halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures may qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.

76 Fed. Reg. 80535 (redline edits added). EPA's revisions on reconsideration do not address the significant concerns raised by sources. This definition continues to present a major compliance concern for industry because the term "halted" is too restrictive and may be interpreted to interfere with existing contractual obligations. The bottom line for sources is that under this narrow definition of curtailment, ordinary gas supply circumstances will result in Gas 1 sources being re-defined out of the Gas 1 category, if they make sensible market-based decisions regarding fuel availability and pricing impacts.

This definition is apparently written to protect firms whose supply is downstream of a Local Distribution Company (LDC). Users downstream of a LDC can indeed have their supply restricted or halted when the needs of users exceed the LDC's available supply. In such a scenario, residential users, hospitals and others would be given priority and an industrial company would be shut off. In that simple case, the industrial source must burn its alternate fuel. However, most curtailments are not that simple, and instead reflect complex supply and demand circumstances that EPA does not account for in its simplistic approach to curtailments.

The proposed definition does not address the range of gas supply arrangements and would likely create confusion and eliminate routine cost-effective use of gas purchase contract arrangements. Such impacts would extend beyond EPA authority and implicate state and FERC regulatory authority. The range of gas supply arrangements can include purchase from an LDC under state jurisdiction or purchase from a gas supplier that transports the supply on an interstate/intrastate gas pipeline system under FERC jurisdiction. Purchased transportation can be firm (a consumer contracts for a specific amount of transport capacity) or interruptible (a consumer can be interrupted by the transporting entity at the transporting entity's will), or a combination of firm and interruptible. Because a site must pay a cost for firm transportation whether the gas is

actually purchased or not, many large natural gas consumers utilize contracts that incorporate a combination of firm and interruptible supply contracts to optimize transportation costs in light of variation in natural gas demand.

Normally, with purchase of firm transportation, the risk of curtailment limits a firm's delivery amount to the firm transport capacity purchased (or the firm's daily nomination, whichever is less). Curtailment typically occurs when demand is unusually high, for example, with very cold weather.

Firm transport customers are normally only subject to curtailment to less than their firm capacity when the transporter suffers a force majeure situation (e.g., a compressor station failure, pipe failure), or the supply is significantly disrupted (e.g. a major hurricane in the Gulf of Mexico).

In the case of interstate/intrastate gas transportation contracts, there are provisions under which a customer hypothetically could buy natural gas in excess of its contractual firm transportation amount during a curtailment. However, penalties in pipeline tariff agreements, regulated by FERC, can be significant and are intended to make the a violation of curtailment so painful as effectively to prohibit a consumer from attempting to defy the curtailment order. As examples, one interstate pipeline tariff cites a \$15 per Dekatherm penalty on top of Henry Hub prices, effectively quadrupling the cost of natural gas and another interruptible user reports an even higher \$30 per Dekatherm penalty. The penalties of unauthorized natural gas usage during a curtailment are imposed to ensure pipeline system integrity and are not considered a unit cost increase for the price of natural gas. In contrast, for firms purchasing gas from a LDC there is little or no ability to buy supply as customers are required to honor the curtailment order. If they do not, the customer is subject to huge penalties for amounts taken above the contract quantity and pipeline system integrity can be compromised.

For interruptible service, or for that portion of a supply contract that is interruptible, transportation of natural gas on both interstate/intrastate pipelines and local distribution systems would be "halted" or "restricted" under Operational Flow Order (OFO) conditions (or pre-OFO conditions). Because many large consumers of natural gas utilize contracts that combine firm and interruptible transportation, an OFO represents an unpredictable constraint on a firm's ability to operate its plant at optimal levels. For those firms whose natural gas supply contracts consist entirely of firm delivery, this would be an infrequent event such as a Force Majeure. Many small manufacturing sites such as those subject to GACT also operate under purely interruptible service contracts. Frequency of curtailment under an OFO varies but on system's that are supply/capacity limited curtailment may run from zero to multiple events per year based on actual overall supply/distribution capacity versus actual overall demand.

In certain regions of the country, firm service contracts are no longer available and interruptible service is the only option for small manufacturing sites. When disparity between overall supply and overall demand threatens the integrity of the pipeline supply system, interruptible supply contracts are curtailed generally by Operational Flow Orders (or similar contractual requirements

by another name) issued to users under their supply contract terms. These orders do not generally involve physically blocking the supply pipeline<sup>15</sup>, but rather an evaluation after the fact of possible non-contractually compliant use during the curtailment period and the institution of a fine or penalty that can be assessed as high as 10 or so times the contract gas sales price. Payment of a penalty due to unauthorized natural gas usage during an OFO is not considered an increase in the cost or unit price of natural gas or a surcharge due to market supply/demand fluctuations. The contracts and user requirements are to protect the physical integrity of the system and allow its operation in compliance with FERC or state regulations.

Example contract language from actual contracts for supply reinforce these points and should be helpful in understanding curtailment scenarios.<sup>16</sup>

The current definition could be interpreted to mean that if a company contracts for interruptible natural gas supply, where the interruption could either mean the supply is halted by the utility/FERC regulated pipeline or the facility must switch fuels to avoid contractual fines, the use of backup liquid fuel during periods of high residential/critical infrastructure demand would not constitute curtailment unless the utility/FERC regulated pipeline actually physically halts the entire supply of gas to the facility.

Most LDC's/FERC regulated pipelines do not have automatic shutoff capability, but rather they rely on customers taking appropriate action to reduce gas use when needed for meeting high demand or for system integrity requirements. Therefore, due to the inclusion of the word "halted" in the current definition, we are concerned that the only conditions that would meet the definition are those where the gas supply to the facility is completely stopped beyond the control of the facility. Contracts for interruptible service and the inaccessibility of firm service in some regions leave a user only a limited choice – "either use backup liquid fuel during periods of natural gas curtailment, manufacturing operations cease or violate contractual restrictions under strict penalties".

If the definition of curtailment is not revised to include contractual orders whose supply is halted or restricted due to an OFO (Operational Flow Order), interruptible supply users have but no option other than to cease operations during periods of gas curtailment and suffer the economic

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<sup>15</sup> More drastic response such as blocking service lines generally is not considered unless more drastic curtailment situations warrant. This is not typical practice in the experience of many small manufacturers. In limited supply areas, Operational Flow Order restrictions and curtailment may happen multiple times a year for interruptible supply users. In some regions even this level of curtailment is infrequent.

<sup>16</sup> Examples of gas supply contract language: Curtailment "- a critical period in which natural gas transportation service provider issues an Operational Flow Order (OFO). The OFO is required to prevent physical damage to or to maintain the integrity and safe operations of the provider's natural gas pipeline system. ***If a penalty for ignoring an OFO is assessed***.... The payment or increase in cost or unit price of natural gas for unauthorized gas usage during an OFO shall under no circumstances be considered as giving the buyer the right to violate OFOs nor shall such payment be considered a substitute for any other supply remedy available. This increase in cost or unit price of natural gas is not considered a surcharge." Moreover, helpful websites include:

<http://www.ferc.gov/industries/gas/gen-info.asp> - FERC website on natural gas regulations

<http://www.ingaa.org/cms/143.aspx> - Link explaining how natural gas pipelines are regulated.

consequences. If that is EPA's intent, the extremely high cost to manufacturers from this result has not been assessed. Such a cost impact would have severe effects on the US economy, with its harshest effects falling on smaller manufacturers.

We request that EPA clarify that the Agency does not intend to restrict the ability of natural gas consumers to obtain the most appropriate gas purchasing arrangement for their purposes, while at the same time complying with FERC or State regulations. In addition, EPA should clarify that EPA will allow use of backup liquid fuel firing under those situations where the supply of natural gas is restricted to affected facilities under a purchase contract arrangement.

The revised text does not account for the many contractual arrangements possible, and the definition should be amended so that it does not restrict the ability of natural gas-fired units to obtain the most appropriate gas purchasing contract arrangement for their purposes. In addition, EPA should revise the text to allow use of backup liquid fuel firing under situations where the supply of natural gas is restricted to affected facilities under a purchase contract arrangement to the extent that a very high cost or penalty would be involved for continued natural gas use at pre-restriction levels.

We suggest the following revisions to the definition in the Proposed Reconsideration Rule:

“Period of gas curtailment or supply interruption means a period of time during which the supply of gaseous fuel to an affected facility is halted or restricted for reasons beyond the control of the facility. ~~The act of entering into or due to the terms of~~ a contractual agreement with a supplier of natural gas ~~established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition~~ that allows gas curtailment or supply interruption or due to the terms and conditions of a tariff or supply rate offered by the local utility provider that allows curtailment or supply interruption. Restriction of supply by a natural gas supplier under a contractual order (e.g., operational flow order under an interruptible supply contract) does constitute a period of natural gas curtailment or supply interruption. An increase in the cost or unit price of natural gas due to normal market fluctuations ~~not~~ that does not occur during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures may also qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.”

## **VI. Process heater exemption**

As now indicated in proposed 40 CFR § 63.11193, the Final Area Source Rule applies only to boilers, not process heaters. For the reasons asserted in its Petition for Reconsideration, CIBO supports EPA's decision to revise the “Boiler” definition and add a definition for “Process Heaters” to ensure that they are not included in the boiler source category. 76 Fed. Reg. 80540-80541

## **VII. STARTUP SHUTDOWN MALFUNCTION**

## A. Startup Shutdown

In the Reconsidered Area Source Rule, EPA determined that – consistent with the Agency’s decision in the 2011 Final Area Source Rule - it would maintain a work practice/management practice approach for SSM. 76 Fed. Reg. 80,541. (2012 Reconsidered Rule). CIBO supports this approach and EPA’s rationale for establishing work practice standards during periods of startup and shutdown. See 76 Fed. Reg. 15,576-77. (2011 Final Rule) Furthermore, CIBO contends that additional work practices are not necessary to reduce emissions during SSM periods. For a detailed discussion of the many reasons why EPA is justified to establish work practices during periods of startup and shutdown, please reference the comments CIBO filed on the Proposed Boiler MACT Rule, on August 20, 2010.

In the Reconsidered Area Source Rule, EPA is proposing definitions for “startup” and “shutdown.” 76 Fed. Reg. 80,541. (2012 Reconsidered Rule). EPA is proposing to define “startup” as “the period between the state of no combustion in the boiler to the period where the boiler first achieves 25 percent load (i.e., a cold start).” EPA is proposing to define “shutdown” as “the period that begins when a boiler last operates at 25 percent load and ending with a state of no fuel combustion in the boiler.” 76 Fed. Reg. 80,541. (2012 Reconsidered Rule). EPA notes in the Reconsidered Major Source Rule, that the proposed definitions of “startup” and “shutdown” are intended to ensure that units cannot cycle in and out of startup or shutdown.” 76 Fed. Reg. 80,615. (Reconsidered Boiler MACT Rule) Furthermore, EPA indicates that the definitions should provide “clarity regarding which periods of operation are subject to the work practice standards rather than numeric emission limits and the associated requirements.” 76 Fed. Reg. 80,615. (Reconsidered Boiler MACT Rule) EPA is soliciting comment on the proposed definitions.

The proposed revision attempts to place all boilers into the same basket in specifying a 25% load threshold. This is not technically correct or practical on many fronts. How boilers “behave” is a function of fuel type, furnace and boiler design (combustion method), and operating methodologies. For example, some boilers have a minimum stable operating load that is higher than 25 percent, (e.g., stable operation for a stoker boiler may not be reached until 60 percent load). Additional examples include the fact that:

- Most solid fuel boilers do not reach stable operations until 50% load or higher while some oil and gas burners can function as low as 20% load for long duration.
- In facilities with solid fuel boilers that have significant steam load fluctuations (say between night and day), a boiler in hot standby is required to be ready to take on the added load within a short period of time. This standby boiler is “banked”, which means the bed of fuel is hot and burning slowly, but no steam is being produced. No combustion air is being supplied. All that it then takes to bring the boiler on line is to initiate the input of combustion air to increase the combustion rate. Depending upon conditions, boilers can be in “banked” mode for hours to several days.
- Solid fuel units, particularly older anthracite units, will have a fire on the grate for several days to allow for slow heat-up of the refractory and other critical metal components. The

slow heat up rate is necessary to prevent material damage to the unit. No steam is being produced during the warm-up period.

- Some facilities may have oil fired boilers that are sized correctly for winter heating loads, but are too big summer steam loads. Often, the unit may cycle on and off on the high pressure cutout because the facility steam load is below minimum firing rate for the unit.
- As previously mentioned, some oil boilers have burners that can function reliably down to 20% firing rate and do so for extended periods. In the case of low summer loads as noted above, these units may operate for extended periods between 20% and 25% load.
- Oil fired units in wet layup may use burner heat to generate natural circulation to mix up and circulate boiler water chemicals. No steam is generated during these events. The burner is operated at minimum firing rate which, as noted above, could be below 25%. The time of operation depends upon the size of the boiler and the burner rating at minimum fire.

Considering this, EPA should revise the startup definition to allow facilities to determine the minimum stable operating load on a unit-specific basis and include the minimum stable operating load that defines startup and shutdown and the proper procedures to follow during startup and shutdown in a site-specific plan. Establishment of the minimum stable operating load on a site-specific basis is analogous to setting other boiler and control device operating parameter limits on a site-specific basis.

We believe the following types of concepts could be used as being indicative of a boiler reaching the end of a startup period (the beginning of a startup would occur with first introduction of fuel with combustion in the furnace):

- Boiler firing its primary fuel for a period of time adequate to provide stable and non-interrupted fuel flow, stable and controlled air flows, and adequate operating temperatures to allow proper fuel drying and air preheat as applicable.
- Emissions controls in service with operating parameters such as flow rates and temperatures being controlled and stable.
- Boiler supplying steam to a common header system or energy user(s) at normal operating conditions including pressure, temperature, and above minimum operational output flow rate, as applicable to the unit.

Similarly, we believe the following types of concepts could be used as being indicative of a boiler beginning a shutdown period (the end of a shutdown would occur with the cessation of combustion of any fuel in the furnace):

- Cessation of introduction of the last remaining primary fuel to the furnace, whether or not a supplemental support fuel is being used.

- Cessation of emissions control system sorbent or other reagent injection.
- Lowering the fuel firing rate to the point that automatic control is no longer effective or possible.
- Lowering of operating rates to the point that emissions control systems no longer can be controlled or be effective due to low flow rates, low temperatures, or other issues.
- Lowering boiler output to the point that steam no longer meets operational required conditions of pressure, temperature, or flow.

Boiler owners/operators should establish specific operating conditions and parameters defining startup and shutdown in standard operating procedures for each affected unit so that it is clear when each unit is in either startup or shutdown mode. Procedures should also be used to guide operations purposely through startup or shutdown periods so that protracted periods in startup or shutdown mode beyond that envisioned in the procedures are avoided. Each startup and shutdown should be documented relative to elapsed time and timing of actions prescribed in the procedure so that problems are effectively identified and corrected in a timely manner.

EPA should not include a maximum time in the startup and shutdown definitions. Sources covered by the rule are highly variable and the amount of time needed for startup and shutdown are different depending on the specific unit. EPA has adopted a source-specific approach in other programs, such as Part 75 (40 CFR Part 75 Appendix A 6.5.2.1). If EPA does include definitions for startup and shutdown based on a load threshold, it would be appropriate to institute a source specific approach much like in Part 75.

## **B. Malfunction affirmative defense**

Unlike startup and shutdown periods, EPA determined in the Final Area Source Rule that malfunctions should not have work practice standards and instead provided for an affirmative defense. 76 Fed. Reg. 15,565. In the Reconsidered Rule, EPA is soliciting comment on the affirmative defense provisions in the Final Area Source Rule. 76 Fed. Reg. 80,536. Given that malfunctions are essentially the same as periods of startup and shutdown, work practice standards should also apply.

As CIBO points out in its Petition, EPA recognizes in both the Boiler MACT and Area Source rule, “that it is not feasible to require stack testing – in particular, to complete the multiple required test runs – during periods of startup and shutdown due to physical limitations and the short duration of startup and shutdown periods. Operating in startup and shutdown mode for sufficient time to conduct the required test runs could result in higher emissions than would otherwise occur.” 76 Fed. Reg. 15577, 15642. It is irrational to view malfunctions any different than startup/shutdown periods. As such, EPA should establish work practice standards for malfunctions. The rule is unreasonable as it is and subjects sources to the risk of noncompliance especially given the fact that malfunctions are unavoidable and unpredictable.

In doing so, EPA has inappropriately placed the burden on the source to prove that excess emissions were caused by a malfunction. As CIBO asserted in earlier comments, malfunctions are in all material respects the same as startup and shutdown and therefore clearly meet the CAA

definition for when work practice standards are appropriate. CAA §112(h). EPA should establish a work practice standard that requires pre-determined malfunction plans with practices and procedures for potential malfunctions; require reporting of any malfunctions; address any malfunctions not contemplated and add to the plan and address as appropriate.

Alternatively, if EPA rejects such work practice standards and, instead, includes an affirmative defense for malfunctions, the terms of the defense need to be changed. First, a source should not have to prove it meets every criterion to successfully claim the affirmative defense. Rather, the different criteria should be factored in evaluating whether the excess emissions should be excused.

The proposed criteria in the Reconsideration Rule for establishing an affirmative defense are poorly defined and do not reflect on whether a malfunction actually occurred. For example, the requirement that sources rely on overtime workers to address the malfunction objectively proves nothing. 76 Fed. Reg. 15,598. The personnel onsite at the time of the malfunction event may not be the personnel with the expertise to resolve the malfunction, yet if they do not remain onsite as overtime personnel, under EPA's structure, that source fails to meet one of the indicia of a malfunction. Moreover, the affirmative defense criteria in some cases impose draconian obligations on malfunctioning sources without any regard for their cost-effectiveness. For example, the source must show “[r]epairs were made as expeditiously as possible . . . excess emissions (including any bypass) were minimized to the maximum extent practicable . . . [a]ll possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment and human health.” 76 Fed. Reg. 15,598-599 (emphasis added). This could lead to the EPA or a court imposing extreme MACT regulations on sources during malfunctions. Overall, the provisions impose vague obligations on malfunctioning sources which will lead to inconsistent interpretations in different jurisdictions, and lack precision that is fundamental to an adequate defense in an enforcement proceeding.