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COMMENTS OF THE COUNCIL OF INDUSTRIAL BOILER OWNERS
on
EPA Proposed Rule
*National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial,
Commercial, and Institutional Boilers*
75 Fed. Reg. 31896, EPA-HQ-OAR-2006-0790
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The Council of Industrial Boiler Owners (CIBO) appreciates the opportunity to comment on EPA's June 4, 2010 proposal to set the national emissions standards for hazardous air pollutants for area sources: industrial, commercial and institutional boilers. 75 FR 31896.

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

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

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

As an overriding issue, CIBO believes EPA's current schedule, with promulgation by December 16, 2010 is wholly inadequate for the necessary evaluations, deliberations, and revisions that are needed to this proposed rule. This rule in combination with the three other proposed combustion

¹ National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, 75 FR 32006 (June 4, 2010) (to be codified at 40 CFR pt. 63).

² National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers, 75 FR 31896 (June 4, 2010) (to be codified at 40 CFR pt. 63).

³ Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units, 75 FR 31938 (June 4, 2010) (to be codified at 40 CFR pt. 60).

⁴ Identification of Non-Hazardous Secondary Materials That Are Solid Waste, 75 FR 31844 (June 4, 2010) (to be codified at 40 CFR pt. 241).

rules presents the largest set of rulemakings from an impact and cost perspective that EPA has ever issued. As such, the cost and potential impact on jobs in the U.S. demand a thorough deliberation and thought process so that the most reasonable and defensible rule can be finalized that meets the intentions of the CAA. Requiring EPA to do all of the work required in less than four months puts EPA in an untenable position and the results of having too little time will be a less than optimum regulatory result. Therefore, CIBO recommends that EPA pursue at least six months additional time in preparation for promulgation of final Subpart DDDDD, Subpart JJJJJ, and Subpart CCCC and DDDD rules.

SUMMARY OF RULE

This Proposed Rule will regulate emissions of hazardous air pollutants from existing and new industrial, commercial, and institutional boilers located at area source facilities. The proposed rule regulates under § 112 of the CAA area source facilities that emit or have the potential to emit less than 10 tons per year (tpy) of any single air toxic or less than 25 tpy of any combination of air toxics. The proposed rule would regulate emissions of a number of toxic air pollutants emissions of mercury, particulate matter (PM) (as a surrogate for non-mercury metals), and carbon monoxide (CO) (as a surrogate for organic air toxics).

The rule affects boilers that mainly burn coal and other substances such as oil or biomass to produce steam or hot water, which is used for energy or heat. The majority of the boilers covered by the rule are at commercial and institutional facilities, as opposed to industrial sites. This rule covers boilers that burn coal, oil, biomass, or non-waste materials.

The proposed rule would regulate area source boilers based on what type of fuel they burn, as well as whether they are considered large or small. Existing small boilers would not be required to meet emission limits, but would be required to meet a work practice standard.

There is no difference in the emissions standards for periods of start-up, shutdown, or malfunction. The rule would also require, as a beyond-the-floor standard, that existing area source facilities conduct an energy assessment to identify cost-effective energy conservation measures.

SUMMARY OF COMMENTS

CIBO is supportive of EPA's efforts to protect human health and the environment in accordance with § 112 of the CAA. Unfortunately the Proposed Rule sets standards for area source boilers that are unachievable and overly broad. If promulgated as proposed, this rule would impose crippling costs on small entities with boilers which have limited impacts on the environment. The proposal in some respects oversteps EPA's statutory authority and amounts to arbitrary rulemaking.

In some instances, the proposed standards lack record sufficient to support the regulation. EPA deprives the public of meaningful opportunity to co comment when it puts forward rules based on inadequate or non-existent records.

CIBO has commented on a number of issues on which EPA requested input with the goal of modifying the proposed area source industrial-commercial-institutional (ICI) boiler standards to

make them achievable and feasible. CIBO's comments on the Proposed Boiler MACT Rule are hereby incorporated by reference. *See* Attachment 1.

SPECIFIC COMMENTS

I. Cost Analysis

EPA estimates the GACT rule will have a "total national cost impact...for existing units [of] \$696 million dollars in total annualized costs" and "total annualized costs (new and existing) for installing controls, conducting biennial tune-ups and an energy assessment, and implementing testing and monitoring requirements, is \$1.0 billion." 75 FR 31914-15.

EPA's estimated costs of the rule are significantly lower than the real cost impact on sources. CIBO commissioned URS Corporation to work with its members to estimate the capital costs for installation of additional control technologies on existing boilers. The approach used by CIBO and URS (CIBO/URS) to estimate capital costs differed from EPA's in several respects, as described in CIBO's comments on the Proposed Boiler MACT Rule. Attachment 1 at II.

Although EPA's estimates indicate that the total annualized costs of the proposed Area Source Rule will be \$1 billion, the total capital cost of the rule will be far in excess of that amount for all affected sources for installation of emissions controls required to meet the proposed standards. Major capital investments in add-on control technology will be required for continued operation of the ICI power house and energy base of the country.

CIBO members have sources that will be subject to either MACT or GACT proposed standards or both. The reasoning and estimated costs for controls to meet proposed MACT standards provide information from which GACT-level controls and cost estimates can be extrapolated. CIBO conservatively estimates that the cost to sources to implement GACT will be significantly higher than EPA estimates.

II. EPA Did Not Provide a Reasonable Comment Period for the Four Interrelated Rules

The four interrelated rules raise an unprecedented number of issues for the EPA in determining the appropriate emissions standards for these very large, diverse source categories. Nevertheless, EPA provided only 60 days for regulated sources and other members of the public to analyze and comment on the rules.⁵ Affected sources asked EPA for an additional 90-day period to permit affected sources to quality control data, review the database and analysis, consider EPA's proposed and alternative proposed regulatory options, and develop comments that would demonstrate the significant compliance problems with the standards as proposed. CIBO appreciated EPA's agreement to provide an additional three weeks for comment for three of the four rules (EPA did not extend the comment period for the Solid Waste Definition Rule).

⁵ In fact, EPA originally provided 45 days for comment on the 4 rules. *See* 75 FR 32682 (June 9, 2010)(extending initial 45-day comment period to 60 days).

It is important to be clear, however, that even with the three-week extension of the comment period, the time EPA allotted for comment for four interrelated rules of this complexity, broad application and economic impact failed to constitute the reasonable opportunity for public comment guaranteed by the CAA and the Administrative Procedures Act. 42 U.S.C. § 7607(h) (2006). In their request for comment to EPA, regulated sources made these and other points to EPA (*See* Comment Extension Request and Description of the Development of the Boiler MACT Database (Attachment 2)).

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

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

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

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

EPA adopted a very aggressive timeframe for developing these rules and its database contained countless errors that sources needed to first quality control before analyzing the conclusions EPA reached in reliance on the data. EPA did not make MACT floor memo Excel files available in the docket for the Boiler rule until three weeks into the original 60-day comment period.

The rules would also benefit significantly from the generation of additional emissions information. EPA's MACT Floor tables indicate that eleven of the thirty MACT Floor emission limitations for existing sources were determined using less than five sources due to a lack of available data.⁶ No time was allocated for additional data-gathering.

⁶ *See* Table 2 and Table 3, 75 FR 32022-32023 (June 4, 2010).

III. Floor Setting

As stated in CIBO's comments on the Boiler MACT Proposed Rule, EPA's floor setting method is flawed for several reasons. In addition to those comments, CIBO offers the following additional comments. In establishing the floors under the Proposed Rule, EPA has relied on questionable methods and data and failed to adequately consider variability.

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

A. EPA's Floor Setting Methodology is Flawed.

EPA's process for establishing floors for area sources is flawed considering the agency relied on a small amount of data for numerous boilers and applied MACT methodology in some instances instead of GACT. EPA has used a relatively little data to develop the proposed emission limitations in the Proposed Rule. See NESHAP for Area Sources: Acrylic and Modacrylic Fibers Production, Carbon Black Production, Chemical Manufacturing: Chromium Compounds, Flexible Polyurethane Foam Production and Fabrication, Lead Acid Battery Manufacturing and Wood Preserving. Such little data could not be representative of the thousands of existing boilers and EPA should propose a work practice standard in lieu of numerical emission limitations for CO. This is a much more reasonable approach for area sources.

Furthermore, EPA proposes to impose MACT standards for polycyclic organic matter (POM) and mercury. 75 FR 31896. EPA should amend the rule so that GACT is applied in all cases where it is authorized. Under the CAA, § 112(d)(5) establishes the standard setting methodology for area sources. Section 112(d)(5) provides that

[w]ith respect to categories and subcategories of area sources listed pursuant to [§ 112(c)], the Administrator may, in lieu of the authorities provided in [§ 112(d)] ... elect to promulgate standards or requirements applicable to sources in such categories or subcategories which provide for the use of **generally available control technologies** or management practices by such sources.

42 USC § 7412(d)(5) (emphasis added). This section gives EPA the authority to promulgate GACT standards for area sources rather than MACT standards under § 112(d). While the statute does not define a method for establishing GACT standards, EPA construes this authority as providing more flexibility than the MACT standard setting process. In fact, one important difference is that "[i]n determining GACT for a particular source category, [EPA] consider[s] the costs and economic impacts of available control technologies and management practices on that category." 75 FR 31920. However, for certain area source standards, EPA interprets the CAA to require MACT. See, e.g., 72 FR 53814, 53815-16 (Sept. 20, 2007). Because cost cannot be

considered in determining MACT, area source standards for § 112(c)(6) pollutants are more stringent than they would be if EPA applied GACT.

EPA has failed to provide justification for applying MACT to POM and mercury emissions. Therefore, its approach is unreasonable. CIBO recommends that EPA implement GACT in cases where it is authorized. Such an approach will give EPA the necessary discretion as needed when dealing with small source. Furthermore, EPA should utilize work practice standards in lieu of numerical emission limits when that option is available.

B. EPA's Floor Setting Process Should Account More for Variability.

EPA did not consider variability sufficiently in establishing floors under the Proposed Rule. For example, EPA has coal mercury data for nine boilers, yet only used two boilers in establishing the floor. In establishing the CO standard for oil based units, EPA only relied on data from fifteen boilers with no long term variability data and analysis. This limited data resulted in an inappropriate floor.

Examples of problems with units used to establish the MACT Floor follow:

- Coal Fired Units- Hg Top 12% Performers (2 units)
 - MASaintGobain - EU-523-01- 1958 vintage 207MMBtu/hr PC boiler with baghouse, common stack with 3 gas fired boilers. Only one emission test run at 1E-6 lb/MMBtu is listed in the emission test spreadsheet (unknown if that is the average of three runs, but in any case, there is no intrarun variability possible. No emission test report is provided. 10 coal samples over 2007-08 averaged 38 ppb Hg, giving average equivalent Hg of 3.6 lb/TBtu.
 - WIBlountGeneratingStation - Boiler 8- 1957 vintage pulverized coal fired boiler, 400Mpph steam capacity. This is a NAICS 221 electric utility generating plant and should not be used for establishing area source ICI boiler Hg floor limits. This facility has 3 coal fired boilers that were firing at 540MM, 598MM, and 274MMBtu/hr during emissions testing. There is no conceivable way this is an area source facility.
- Liquid Fired Units- CO Top 12% Performers (15 units)- (investigation of only the top 2 units- inadequate time to investigate other top performers)
 - NJRebtex - Superior Boiler- (top performer)- 1997 vintage 25MMBtu/hr natural gas/No.4 Oil fired firetube boiler. CO data from 2005 emission test- only one run showed 0.05 ppm @ 7% O2 with operation at 5.1% O2 at full load. The other 2 runs listed 0 ppm; EPA only used the single run data point and corrected to 3% O2. No emissions test report provided, so no way to identify the calibration upscale span relative to the ability to read CO at under 1 ppm.

- WAEmeraldKalama - U-17- 1979 vintage 30MMBtu/hr package watertube boiler firing natural gas and distillation bottoms. Single test run data reported for 2006 in lb/hr and converted to 0.151 ppm @3%O2 by EPA. No emission test report provided. However, that run as listed on the emissions data spreadsheet identifies the boiler as burning natural gas only; therefore, that unit is not appropriate for use in setting the liquid fired unit floor.

Note that the above is just a sampling of units that were investigated; it is unknown at this time what other issues might be present with the other top performers. In addition to its lack of data and inappropriate use of data as indicated above, EPA also failed to conduct fuel sampling and analysis for boilers in top 12%. Instead, EPA relied on the 99% upper prediction limit (UPL) only and did not consider additional variability such as that related to highly variable fuel quality. This approach is arbitrary and does not address limits in data and assessment methodology. In setting the coal boiler mercury emission limit, EPA failed to collect any fuel variability data to supplement its analysis. For a discussion of fuel variability, please refer to CIBO's comments on the Boiler MACT Proposed Rule. In addition to those comments, if EPA does not adopt a work practices standard for mercury, it should revisit the floor setting process and take coal mercury content in to account when establishing standards using available data indicative of fuels area source units burn. If EPA is requiring CEMS for compliance, the agency should look at CEMS data when accounting for variability. For a discussion of EPA's flawed statistical approach, please refer to CIBO's comments on the Boiler MACT Proposed Rule.

IV. CO Limits Are Not Achievable and Do Not Account For Emission Increases of Other Pollutants.

EPA has established CO limits that are not achievable, especially for units fired by liquid fuel. This is unreasonable. In enacting § 112(d), Congress established a statutory scheme whereby EPA is supposed to determine what the best performers do to achieve the "maximum degree of reduction in emissions." See CAA § 112(d)(2) and (d)(3). The floor limit, however, cannot be "less stringent than the emission control that is achieved in practice by the best controlled similar source." CAA § 112(d)(3). This requirement incorporates a concept of "reproducibility" by others in the source category or subcategory.

The concept of reproducibility emanates from two places. First, the legislative scheme incorporates it. The whole idea behind the floor setting procedure is to discover what techniques the "best performers" use to achieve low emissions so that the other, higher emitting sources in the category or subcategory can replicate those actions and achieve those same low levels. As EPA noted in the Cement Kiln case, the intent of the standard setting process is to discover the "objective, duplicable control" techniques so that other performers in the source category could emulate those techniques, reduce their emissions, and achieve those levels. See EPA Response Brief, *Cement Kiln* at n. 57.

Second, reproducibility is included in the statute's floor setting provisions. Section 112(d)(3) states that that the floor standards reflect what the "best controlled similar source" does. This reflects the Congressional directive that the best performers must actually be controlling their emissions and their technique must be capable of being reproduced by others in the source

category. Thus, the Agency's floor determination must discover the techniques that the best performers are using to actually "control" emissions, *i.e.*, exercising some degree of management that is duplicable by others. The EPA's analysis, therefore, must determine what is the maximum degree of reduction that the best similar source achieves through methods of control.

EPA has proposed to rely on CO as a surrogate for organic HAP emissions at area sources. This approach is inappropriate because there is a lack of data and EPA has not demonstrated a correlation between HAP emissions and CO levels below 100 ppm when combusting liquid fuels. CIBO recommends that EPA revisit its floor setting methodology and demonstrate that the proposed CO emissions standard is generally achievable by liquid-fired units. Additionally, EPA's overall approach with regard to the use of CO as a surrogate for organic HAP focuses on continued minimization of CO emissions; however, EPA ignores the fact that lowering CO emissions for many units will result in an increase of NOx emissions and a decrease in efficiency.

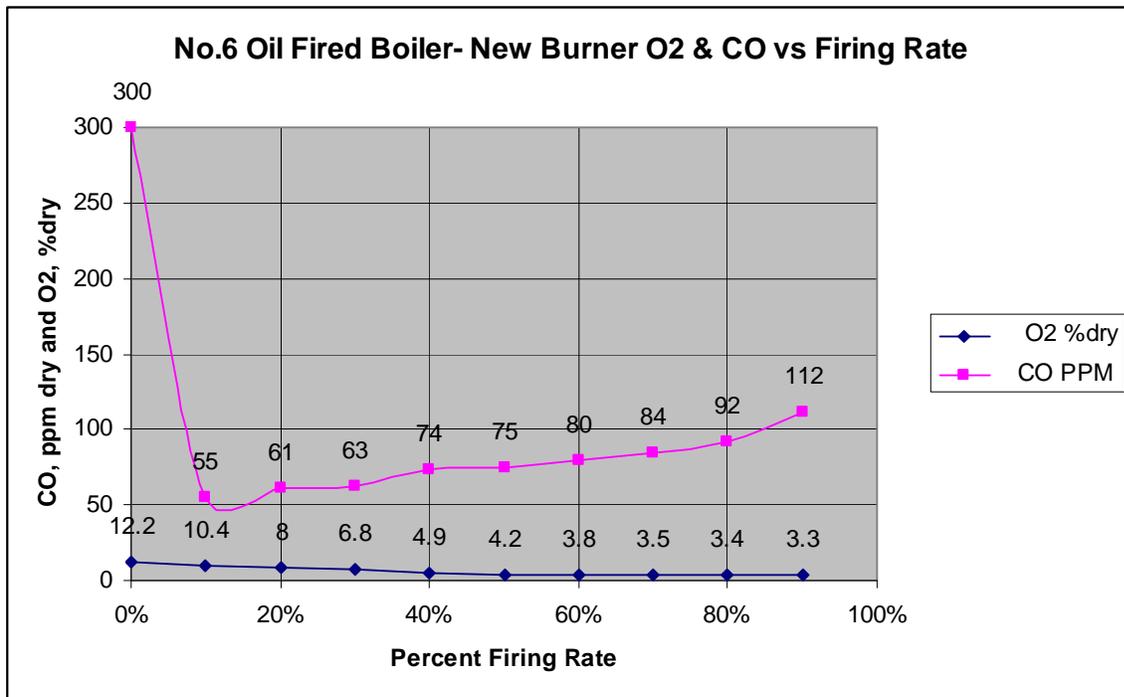
Furthermore, total hydrocarbons (THC) could be used as an alternative standard to CO as a surrogate for non-dioxin organic HAPs. While most hazardous waste incinerator operators will rely on the CO option, some sources may opt to select the THC option as THC CEMS, while more costly, are a workable option. THC levels are often more stable and less reactive to load swings than CO. Since THC is an indicator of non-dioxin organic HAPs (CO is not a HAP whereas much of the THCs are HAPs), there is no reason EPA cannot provide a THC option. Without the THC option, some sources are likely to be faced with a very costly choice: either install a capital intensive CO catalytic reduction system; or remove the most modern and most effective combustion controls for NOx to control CO, and install very expensive post-combustion NOx reduction technologies such as Selective Catalytic Reduction (SCR).

The use of less capital intensive NOx control technologies like Selective Non-Catalytic Reduction (SNCR) on units equipped with SDA's, due to the negative downstream effects of ammonia slip on personnel safety (NH3 release in recycle slurry) and the reliability of downstream components (formation of fouling ammonium salts). Further note that either of these options will significantly increase system draft loss, which will likely require a new ID fan at considerable expense. The enormous capital expense of these options present are not justified, given that such a solution reduces CO but may not actually reduce non-dioxin organic HAPs. This is a classic case of unintended consequences with little commensurate benefit to health or the environment.

V. CO Emissions Vary With Load For Oil Fired Boilers

EPA does not have long term CO CEMS data for oil fired boilers in support of this rule or for the proposed Subpart DDDDD MACT rule. This is a major omission, since liquid fired boilers present additional complexity over load range due to fuel atomization requirements. Lower firing rates decrease velocities through oil atomizers and fuel/atomizing steam or air pressures typically are lower at low firing rates. Fuel atomization as well as fuel/air mixing variations over load contribute to increased CO emissions over the firing rate. Reference the following chart showing O2 and CO measured with a portable analyzer for a watertube boiler retrofit with a new Low NOx Burner installed in 2006 firing low sulfur No. 6 Oil. The key point is the variation in CO over load for a well tuned boiler as well as the considerably higher CO emission rate than

proposed. Recognize there is no reasonable method to reduce CO without negatively impacting unit efficiency (increasing excess air) and even then there is no assurance the proposed limit can ever be reached. In this example, 0% firing rate is for the unit operating at minimum fire condition.



If CO limits are imposed in the final rule for those units which are not required to use CO CEMS, CIBO recommends that the CO limit be based on the average of three test runs using M10 with the boiler operating between 80-100% of rated heat input, with appropriate latitude to account for the diverse population of boilers, burners, atomization systems, and applications. As such, the basis for the standard would also change from the current daily average basis for those units. As proposed, units without CO CEMS would appear to need to conduct a 24 hour M10 emission test in order to determine compliance, which appears at odds with at least 1-hour sampling time for each test run stated in § 63.11212(d).

EPA should re-evaluate its proposed CO limits for liquid-fired units to ensure they represent what is generally achievable by the population of liquid-fired units. If units with low NOx limits are forced to meet CO limits of 2 ppm, an oxidation catalyst could be required, which is a very costly control option and may oxidize CO but not organic HAP, depending on the temperature of the gas stream at the location of the catalyst, which will necessarily vary with boiler firing rate.

VI. New Source Limits

EPA's proposed standards for new sources are not appropriate for many of the same reasons discussed elsewhere in these comments and in CIBO's comments on the Proposed Boiler MACT Rule. EPA has failed to consider fuel variability over time and has not shown that the proposed limits can be achieved in practice over all expected conditions. This is an important omission resulting in the currently unreasonable proposed floors. EPA must consider coal quality

variability and consider geographical limitations of the coal supply in establishing the floors for area sources. These considerations will ensure that EPA does not restrict new boilers to a coal sourced in a specific location. Additionally, EPA relied on a flawed methodology in calculating the CO standard for new sources. Specifically, EPA calculated the new source CO standard to be much higher than the existing source MACT floor, so EPA used the existing unit limit.

VII. Work Practices

EPA has relied on its authority under CAA § 112(h) to impose a work practice standard in lieu of emission limits in certain situations. EPA is proposing tune-ups as the work practice standard for the control of HAP emissions. 75 FR 31901. 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. Under the CAA, a work practice standard can be relied on when "the application of measurement technology to a particular class of sources is not practicable due to technological and economic limitations." 42 USC § 7412(h). EPA determined that a work practice standard is appropriate to limit the emissions of mercury and CO (as a surrogate for POM) for existing area source boilers that have a heat input capacity of less than 10 MMBtu/hr. 75 FR 31906.

CIBO agrees that PM and mercury limits are not necessary for existing biomass and oil fired boilers at area sources. The emissions at these sources are not significant and the emission controls required for biomass and oil fired boilers would not be cost effective. EPA has requested comment whether a higher threshold should be set for requiring work practices instead of numerical emission limitations. While CIBO generally supports work practice standards, EPA's decision to limit work practice standards to units less 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 MMBtu/hr 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. In a similar situation, EPA has imposed work practice standards for units with a designed heat input capacity of less than 30 MMBtu/hr under the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc. EPA could apply the same rationale here considering many units less than 30 MMBtu/hr do not have the controls in place to test for emissions.

VIII. Testing

A. The Proposed Testing Requirements Require Clarification.

CIBO recommends that EPA clarify certain aspects of its proposed testing regime prior to finalizing the Proposed Rule. First, in Table 4 there is no need to require sources to convert CO emissions to lb/MMBtu. 75 FR 31915. While Table 4 states that stack testing applies to new units, existing coal units may have to undergo stack testing in order to show compliance with mercury limits. EPA should amend the text associated with Table 4 to reflect that it applies to new and existing units. EPA should remove the requirement to be 75% of limit to be eligible for reduced stack testing frequency. This requirement is not justified and in order to minimize the

burden on facilities, there needs to be less frequent stack testing. Overall, CIBO supports the reduction of stack testing frequency for CO to between 10 MMBtu/hr and 100 MMBtu/hr. EPA should also allow testing of representative units. If one unit is representative of multiple units (*e.g.*, same size/type/fuel), that unit should be tested.

Beyond stack testing, there are other testing requirements that need clarification. For example, EPA should clarify why the Proposed Rule allows one hour sampling time for PM and two-hour sampling time for mercury while the Proposed Boiler MACT Rule requires four hour sampling time. With regard to Table 5, if CO limits as ppm with O₂ correction, there is no need for flow traverse and conversion to lb/MMBtu in Table 5 unless it is allowed as an alternate limit. EPA should replicate its approach in the Proposed Boiler MACT Rule at Table 3. 75 FR 32023.

The proposed frequency of testing is unreasonable and out of character with other MACT and NSPS standards and other state performance testing requirements. EPA has proposed the most aggressive performance testing requirements we are aware. The Hazardous Waste Combustor MACT (Subpart EEE), for example requires a Comprehensive Performance Test only once every five years. Many MACT standards and NSPS standards only require one initial performance test unless there is a physical change to the control device. Given the very stringent limits EPA has proposed, very few, if any units are likely to qualify for this provision, so we are not sure of its value. CIBO proposes that EPA use a testing frequency that is the standard for other criteria pollutants of once per permit term (*i.e.*, every five years), using the language from major source MACT document section XIX Emissions Testing.

IX. Averaging Times

EPA has established averaging times requirements that cannot be met by a top performing unit over a range of operating conditions. EPA should provide longer averaging times for certain parameters and emissions. Additionally, EPA should adopt a 30-day averaging period for CO as it has done in the Proposed Boiler MACT Rule. *See generally* 75 FR 32006. For a comprehensive discussion of averaging times, please refer to CIBO's comments on the Proposed Boiler MACT Rule.

X. Subcategories

A. CIBO Strongly Supports EPA's Proposal to Create Subcategories.

EPA has proposed three subcategories of boilers located at area sources. 75 FR 31904. CIBO strongly supports EPA's authority to subcategorize boilers based on the physical state of the fuel burned. CIBO agrees with EPA's conclusion that the "different types of boilers have different emission characteristics which may influence the feasibility and effectiveness of emission control." 75 FR 31904. As stated in CIBO's comments on the Proposed Boiler MACT Rule, EPA has authority to establish subcategories. For a discussion of that authority, please refer to CIBO's comments on the Proposed Boiler MACT Rule.

B. CIBO Strongly Supports the Inclusion of Subcategories for CO by Boiler Type.

In the Proposed Boiler MACT Rule, EPA establishes subcategories for units based on CO. CIBO supports such an approach in this Proposed Rule. EPA examined the HAP emissions from a variety of units in the Proposed Boiler MACT Rule and concluded that a "distinguishable difference in performance exists based on unit design type." 75 FR 32017. EPA discussed further that even within basic types of units slightly different designs may "have a larger effect on organic HAP emissions." 75 FR 32017. EPA is proposing to use CO as a surrogate for non-dioxin organic HAP. 75 FR 31899. Therefore, an appropriate amendment to this Proposed Rule would be to recognize different emission standards for the CO surrogate depending on unit design. EPA should recognize the differential capabilities of different units and establish subcategories for coal and biomass boilers based on boiler design.

C. EPA Should Provide a Limited Use Subcategory.

EPA should establish a subcategory for "limited use" units due to their significant differences from steady-state units. Limited use units have a rated heat input greater than 10 MMBtu/hr with an annual average capacity factor of 10% or less. Many of these units operate for short periods of time during the year and as such may experience relatively little startup, shutdown or malfunction (SSM) events. Because limited use units do not operate regularly, their emissions differ from other boilers operating continuously or operating near their design capacity. EPA has recognized that "units operate most efficiently when operated at or near their design capacity." 75 FR 32023-24. Based on their operating schedule, limited use units do not operate at or near their design capacity.

Additionally, the short operating times of limited use units results in difficulties in effectively controlling emissions. As EPA noted in a 2004 response to comments document, based on the operating schedules of limited use units the agency could not identify a control technology for controlling organic HAP emissions. *See* EPA, Response to Public Comments on Proposed Industrial, Commercial, and Institutional Boilers and Process Heaters NESHAP, at 67 (Feb. 25, 2004). Considering these differences based on the operating schedule of limited use units, EPA should establish a subcategory for limited use boilers and process heaters. The subcategory should be defined to include units with a capacity utilization factor of 10%, or by a 1,000 hours operating per year threshold.

Furthermore, EPA should adopt a work practices standard for the limited use subcategory. First, EPA has acknowledged that there is no proven control technology for organic HAP emissions from limited-use units. Second, limited use units, such as emergency and backup boilers, cannot be tested effectively due to their limited operating schedules. This is due to the fact that there is often no time to conduct performance tests on a unit operating in a limited capacity and because most EPA test methods require a unit to operate in a steady state. *See* Proposed 40 CFR § 63.7520(d). Based on existing test methods, limited use units would have to operate for the sole purpose of being subjected to emissions testing. Such a result is counter to the general intent behind the CAA. EPA should therefore use its authority under § 112(h) and adopt a work practices standard for limited use units and not subject the subcategory to emissions monitoring.

D. Definition of Units Designed to Burn Oil Should Be Amended.

The proposed definition of the subcategory of "units designed to burn oil." needs to be clarified. In the Proposed Rule, EPA defines the subcategory of "units designed to burn oil." as follows:

Unit designed to burn oil subcategory includes any boiler or process heater that burns any liquid fuel, but less than 10 percent solid fuel on a heat input basis on an annual average, either alone or in combination with gaseous fuels. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment, gas supply emergencies or for periodic testing of liquid fuel not to exceed a combined total of 48 hours during any calendar year are not included in this definition. 75 FR 32065.

The proposed definition is unreasonable because, as it is currently phrased, gaseous fuel boilers and process heaters could be limited to only 48 combined total hours during a calendar year before they are included in this subcategory. EPA should clarify the "units designed to burn oil" subcategory to apply only to the time the unit is operated on oil for periodic testing of oil firing capability. EPA should impose no time limit on legitimate gas curtailment or gas supply emergencies. Such a change would be reasonable and better reflect EPA's intent for units that burn liquid as evidenced by the "gas-fired boiler" definition in the Proposed Area Source Rule. 75 FR 31931.

In the Proposed Rule, EPA defines gas-fired boiler as "any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year." 75 FR 31931. Notably, EPA imposes the 48 hour limitation only on the "[p]eriodic testing of liquid fuel" and there is no limit on legitimate gas curtailment or gas supply emergencies. Beyond consistency with the Proposed Area Source Rule, this rectification of the definition would be similar to EPA's approach in the stationary SI internal combustion engine (ICE) NSPS, where 50 hours are allowed for non-emergency use. *See* 40 CFR § 60.4243.

E. CIBO Recommends that EPA Expand the Definition of Gaseous Fuel Fired Boilers and Process Heaters to Include Periods of Gas Curtailment when Backup Liquid Fuel Must be Fired.

Federal, state, or local governments and gas suppliers have in the past required a facility to curtail its use of natural gas so that it can be used for home heating or another critical need. The length of the curtailment usually lasts a very short time period during which the facility may either restrict production or switch to a liquid fuel to maintain the same level of production. These occurrences will only be taken in the national interest or for regional or local emergency type situations and only for a short time period. Onsite gas supply emergencies could also occur whereby use of gas fuel is not possible and backup liquid fuel firing is required in order to maintain critical production or services. Periods of backup fuel use would be limited to the time to complete repairs and safely return the gaseous fuel system to service.

CIBO requests that EPA expand the definition of gaseous fuel-fired boilers and process heaters to include gas curtailment required by a government agency (federal, state, local), natural gas supplier, or on-site gaseous fuel system emergencies. During the limited time of curtailment when the facility switches from gas to backup liquid fuel (recommended to be limited to 876 hours per year (10%)), new or reconstructed boiler and process heater affected sources would be exempt from complying with the liquid fuel standards (if they are included in the final rule). The exemption should allow for periodic backup fuel operation and testing in order to prove that it is available and reliable should it be needed; that testing time should be included within the 876-hour limit. In addition, this 10% annual time allowance would also allow for periodic operation on oil to allow turnover of oil in the storage tank to prevent oil degradation that might impact reliability when needed in an emergency. A facility should be able to apply to the permitting authority for an extension of the 876-hour exclusion if curtailments cause the unit to exceed that time limit.

Documentation of time firing backup fuel should be provided to the permitting authority by the affected source as part of the semi-annual reporting requirement. A review of California rules (*i.e.*, Ventura County Rule 74.15; Kern Rule 435.2; Bay Area Rule 9.7; Santa Barbara County Rule 342; Yolo-Solana Rule 2.27; South Coast Rule 1146; and SCAWMD Rule 1109) shows substantial relaxation of requirements in recognition of natural gas curtailments. Each of the California rules provides for less stringent limits when a normally gas-fired unit burns liquids - during a curtailment and while testing to assure operability on liquids in case a curtailment should occur.

If there is a curtailment of natural gas because of national interest, it is important as part of our National Energy Policy that refineries and petrochemical plants be allowed to continue production at the pre- curtailment levels so that there is a sufficient supply of home heating oil, jet fuel, diesel, gasoline, feedstocks, etc. If facilities are forced to limit production, the reduction in supplies may further intensify the problem because of the reduction in supply of products such as home heating oil, diesel, jet fuel, and gasoline. Similar issues exist at other critical manufacturing facilities.

The exemption would enable the facility to operate under the pre- curtailment gaseous fuel compliance requirements and thus be excluded from the liquid fuel requirements. Further, new or reconstructed units would not be required to install pollution control equipment required for liquid fuels which may never be used or only used for a very short time period over many years.

XI. Tune-Up Requirements

EPA has relied on its authority under CAA § 112(h) to impose a work practice standard in lieu of MACT emission limits. EPA is proposing tune-ups as the work practice standard for the control of HAP emissions. 75 FR 31901. While as a general matter CIBO supports EPA's exercise of its § 112(h) authority to impose work practice standards in lieu of emission limits, we recommend the following changes to the proposed tune-up requirements.

A. Tune-ups are Defined to Minimize CO, but That Will Decrease Efficiency and Will Increase Overall Emissions.

In the Proposed Rule, the tune-up requirements are defined in such a way to reduce CO emissions without any consideration of efficiency and costs. 75 FR 31928. Specifically, the Proposed Rule requires units to "minimize total emissions of CO consistent with the manufacturer's specifications." 75 FR 31928. This practice generally requires increasing excess air, flue gas temperature, costs, and even overall HAP emissions while decreasing efficiency by increasing the dry gas loss (higher flue gas flow rates at higher temperature carry more heat out the stack). Additionally, lowering CO emissions for many units will result in an increase of NO_x emissions. CIBO recommends that EPA amend the rule so that tune-ups also consider optimizing efficiency, limiting increases of NO_x, and ensuring safety, not only on minimizing CO. In fact, the "Tune-up" definition (75 FR 31932) correctly states "to optimize the combustion efficiency." CIBO recommends that EPA amend the rule so that tune-ups address optimizing efficiency, limiting increases of NO_x, and ensuring safety, not focusing only on minimizing CO.

Furthermore, EPA should acknowledge that portable combustion analyzers are acceptable for use in tune-ups.

B. Tune-up Scheduling Should be Amended.

EPA has proposed that units conduct tune-ups biennially. If a unit is not operated for a period of time, EPA should provide that tune-ups be relative to elapsed operating time.

C. Tune-ups Should Not Require Outside Certification of Adjustments.

Tune-up is defined in the Proposed Rule as "adjustments made to a boiler in accordance with procedures supplied by the manufacturer (*or an approved specialist*) to optimize the combustion efficiency." 75 FR 31932 (emphasis added). This definition limits the ability of an owner/operator to make adjustments to those that are done in accordance with procedures supplied by manufacturers or approved specialists. EPA should revise this to allow the owner/operator to establish and conduct appropriate procedures independent of this outside certification process. Many facilities have in-house specialists who are well-qualified to conduct optimization adjustments on units. In fact, in-house specialists have site specific information compared to the generic, and possibly in appropriate recommendations a manufacturer might provide. Some steps listed in the 63.11222(b) tune-up procedure may not be directly applicable to some units, therefore, all steps should be noted to be used when appropriate for the specific unit. Generic procedures recommended by manufactures and "approved specialists" will not always result in the appropriate adjustments and EPA should recognize the resources currently available in-house at many facilities.

D. Tune-ups Are Inapplicable for Some Units.

As currently proposed, EPA's tune-up requirements are unworkable for certain units to which they apply. EPA should amend the work practice standards to reflect these discrepancies. Specifically, the tune-up procedures require owners and operators to inspect "the system controlling the air-to-fuel ration, and ensure that it is correctly calibrated and functioning

properly." 75 FR 31928. This requirement is simply inapplicable to units that utilize metered fuel-air control systems with continuous excess air (O₂) control where combustion is optimized continuously. On these units, EPA should recognize that system inspections, equipment calibrations, and operational checks are sufficient to ensure the system is "calibrated and functioning properly." Flexibility is what is needed, and EPA should incorporate in the tune-up requirements room for sources modify procedures as needed to optimize units.

E. Fuel Use Data is Not Necessary.

In addition, 63.11222(b)(6)(iii) requires maintaining an annual report to include the type and amount of fuel used over the 12 months prior to the annual adjustment. There are two issues with this requirement:

- First, this rule stipulates biennial tune-ups for specific affected sources, not annual.
- Second, this implies that fuel metering is required for every boiler subject to tune-up requirements. There is no justification for a requirement to have individual boiler fuel use meters or other data since actual fuel use for a boiler is immaterial for documentation of a tune-up. The only requirement should be for identification of the fuel type used in the boiler over the prior operating period and the fuel type used during the tune-up. If for some reason EPA deems it justified to require the quantity of fuel combusted, it should be adequate to use whatever total site fuel use or subset of boilers fuel quantity data is available, such as from billing records, delivery receipts, tank level drop, common fuel meter, or other available data.

XII. Fuel Analysis

EPA has provided in the Proposed Rule that certain new and existing area source boilers may choose to demonstrate compliance with emission standards on the basis of fuel analysis. 75 FR 31902. For a comprehensive discussion of our recommendations regarding fuel analysis, please refer to CIBO's comments on the Proposed Boiler MACT Rule. In addition to those comments, CIBO offers the following recommendations.

For units complying with the proposed mercury standard, the Proposed Rule requires monthly fuel analysis and maintenance of the annual average at or below a specified limits. 75 FR 31902. The monthly requirement is too burdensome on sources. CIBO recommends EPA amend the Proposed Rule to include quarterly monitoring and no fuel sampling should be required in any period if the unit does not operate during the period. EPA should also not require fuel analysis for single fuel units complying via stack testing. Additionally, the text associated with Table 5 indicates that table applies to new units. 75 FR 31934. CIBO recommends that EPA extend this applicability to existing coal-fired units that use fuel analysis to comply with the proposed mercury standard.

XIII. Fuel Selection

EPA states in the Proposed Rule that "new facilities [have] the option of fuel selection in minimizing their compliance costs." 75 FR 31909. This statement is not accurate. First, specific fuel types are not available at different locations, and new units may need to burn a specific fuel to be viable. Second, EPA cannot arbitrarily set a standard that eliminates a source's ability to burn specific fuels. This may be the exact case when considering biomass units. EPA has established emission standards as stringent as coal for renewable fuels such as biomass. This could discourage the use of renewable fuels. For a comprehensive discussion of these issues, please refer to CIBO's comments on the Proposed Boiler MACT Rule.

XIV. SSM

There are two primary issues with regard to SSM events and the Proposed Rule. First, EPA is proposing that the emissions standards it has established in this rule apply during both normal operations and periods of SSM. Second, EPA has not taken periods of SSM into account when setting the proposed standards. As stated in CIBO's comments on the Proposed Boiler MACT Rule, requiring emission controls during SSM is technically unfeasible and EPA's failure to include periods of SSM when establishing the emission standards is unreasonable. For a comprehensive discussion of these issues, please refer to CIBO's comments on the Proposed Boiler MACT Rule.

XV. Affected Sources and Exemptions

A. The Hot Water Heater Exemption Should be Expanded.

The Proposed Rule does not provide an exemption for hot water heaters. Hot water heaters are exempt from the Proposed Boiler MACT Rule and should also be exempted from the Proposed Rule. The preamble to the Proposed Boiler MACT Rule provides the following rationale for exempting hot water heaters:

The proposed rule would not regulate hot water heaters, as defined in this proposed rule, because such units are not part of the listed source categories. Many industrial facilities have office buildings located onsite which use hot water heaters. Such hot water heaters, by their design and operation, could be considered boilers since hot water heaters meet the definition of a boiler as specified in the proposed rule, because they are enclosed devices that combust fuel for the purpose of recovery energy to heat water. However, hot water heaters are more appropriately described as residential-type boilers, not industrial, commercial, or institutional boilers because their output (*i.e.*, hot water) is intended for personal use rather than for use in an industrial, commercial, or institutional process. Moreover, since hot water heaters generally are small and use natural gas as fuel, their emissions are negligible compared to the emissions from the industrial operations that make such facilities major sources, and compared to boilers that are used for industrial, commercial, or institutional purposes. However, the primary reason that we are excluding hot water heaters is that hot water heaters are not part of the listed source category.

The ASME Code, Section IV- Rules for Construction of Heating Boilers, is applicable to hot water heating boilers and is, in our opinion, the standard that should be used to define a hot water heater consistent with industry standards. The ASME Code, Section IV is applicable to: "(a) steam boilers for operation at pressures not exceeding 15 psi; (b) hot water heating boilers and hot water supply boilers for operating at pressures not exceeding 160 psi and/or temperatures not exceeding 250°F, at or near the boiler outlet."

We recommend EPA specifically exempt hot water heaters from the area source rule and add a definition of hot water heater to read as follows:

Hot water heater means a closed vessel in which water is heated by combustion of liquid fuel and is withdrawn for use external to the vessel at pressures not exceeding 160 pounds per square inch gauge (psig), including the apparatus by which the heat is generated and all controls and devices necessary to prevent water temperatures from exceeding 250°F (121°C) at or near the heater outlet.

This approach would eliminate the need to spend time or effort on units with insignificant emissions.

B. EPA Should Provide an Exemption for Temporary Boilers.

The Proposed Rule does not provide an exemption for temporary boilers. CIBO recommends that EPA include in the final rule an exemption for temporary boilers as provided in the Proposed Boiler MACT Rule. *See* 75 FR 32050. EPA defines "temporary boiler" in the Proposed Boiler MACT Rule to mean

any gaseous or liquid fuel boiler that is designed to, and is capable of, being carried or moved from one location to another. A temporary boiler that remains at a location for more than 180 consecutive days is no longer considered to be a temporary boiler. Any temporary boiler that replaces a temporary boiler at a location and is intended to perform the same or similar function will be included in calculating the consecutive time period.

75 FR 32065. Temporary boilers are generally rented, not owned by the area source. They are used in times of emergency and it is simply not feasible to impose emission standards on such units. EPA should provide the temporary boiler exemption for area sources just as it does for major sources.

C. EPA Should Clarify the Definitions of Biomass and Coal-fired Boilers.

EPA has included vague definitions in the Proposed Rule that create a gap in coverage for certain boilers. EPA should provide clarity so that sources can be confident they are in compliance with the final rule. EPA defines the "biomass subcategory" to include "any boiler that burns any amount of biomass, but no coal, either alone or in combination with liquid fuels or gaseous fuels." 75 FR 31930. The coal subcategory is defined to include "any boiler that burns any coal alone or at least 10% coal on an annual heat input basis in combination with biomass, liquid fuels, or gaseous fuels." 75 FR 31930-31. As drafted, these definitions appear to create a gap in

coverage for boilers that may burn less than 10% coal and more than 90% biomass. EPA should revise the biomass subcategory to allow up to 10% coal firing.

D. EPA Should Include an Exemption for Electric Utility Steam Generating Units.

The Proposed Rule does not provide an exemption for electric utility steam generating units. CIBO recommends that EPA include in the final rule an exemption for electric utility steam generating units similar to that provided in the Proposed Boiler MACT Rule. *See* 75 FR 32050.

E. EPA Should Include an Exemption for Duct Burners on Turbines.

EPA has included in the Proposed Boiler MACT Rule an exemption for "recovery boiler[s]" covered under 40 CFR Part 63, subpart MM. 75 FR 32050. This exemption covers such units as duct burners on turbines. CIBO proposes that EPA include a similar exemption in this Proposed Rule.

XVI. Monitoring

A. The CEMS and COMS Requirements are Burdensome for Area Sources.

The Proposed Rule requires area sources to utilize CEMS and in some circumstances COMS. 75 FR 31903-29. These requirements are extremely burdensome on area sources considering the testing requirements and costs. The requirement for CO CEMS for units less than 100 MMBtu per hour is too onerous. Many units at this size in the industrial and institutional sector do not operate that frequently, therefore the cost of installing CO CEMS is not justified for units with such limited operation. CIBO recommends that EPA remove this requirement and present alternatives to either install CEMS or use stack testing for any units with limits. EPA could also increase the threshold requirement for CO CEMS to 250 MMBtu per hour or provide a limited use exemption such as 10 percent use.

EPA has proposed monitoring of CO limits on a daily average in all cases. EPA should change this requirement so that compliance is done on a 30-day rolling average for CO CEMS. Costs are another issue when considering CEMS for area sources. EPA estimates capital costs of requiring PM CEMS to area source boilers to be \$88,000 per unit and annualized costs of \$33,000 per unit, with a total annual cost of \$4.5 billion. 75 FR 31910. EPA has determined these costs were unreasonable. As stated in CIBO's comments on the Proposed Boiler MACT Rule, EPA should amend the final rule to include parameter monitoring or visible emissions observations instead of CEMS and COMS. If CO CEMS or COMS requirements remain, final rule language should be made clear that use of those is only required "if you have an applicable opacity limit **under this rule**,..." or "if you have an applicable CO limit **under this rule** and your boiler..." so that the requirement is only related to limits imposed under this rule and not related to any other requirements the unit might be subject to.

B. EPA Should Correct the Monitoring Discrepancies in the Proposed Rule.

There are discrepancies in the monitoring discussion in the preamble versus the rule tables. For example, the preamble calls for monitoring for pressure drop and liquid flow rate and "maintain

the daily block averages at or above the minimum operating limits established during the performance test." 75 FR 31902. This requirement however is not included in Table 3. 75 FR 31914. EPA should expand this table should to also include operating limits for boilers that have PM limits and use control devices to comply with those limits. For a comprehensive discussion of operating limits, please refer to CIBO's comments on the Proposed Boiler MACT Rule.

Additionally, EPA has not included requirements for wet scrubbers in Table 3. 75 FR 31914. Some boilers rely on wet scrubbers to comply with the mercury and PM emission limits. Monitoring of pressure drop and liquid flow rate for wet scrubbers should be included in this Table 3. Furthermore, EPA should incorporate the monitoring options for additional devices per Table 7 of the Proposed Boiler MACT Rule (75 FR 32071).

C. EPA's Operating Limits Approach is Unacceptable.

EPA proposes that operating parameters measured during performance tests should constitute minimum site-specific operating requirements subsequent to the performance test. It is inappropriate and in many cases not technically feasible to use operating conditions during a performance test, which are typically conducted at or near the unit's maximum firing rate, to establish a minimum requirement for all possible load ranges. EPA should amend the Proposed Rule to allow for optimum system operations and ratio-type parameters. The following comments detail why the current proposal is unacceptable.

EPA sets minimum required operating parameters at high load conditions, which are applicable to all operating conditions going forward. This approach is unacceptable. EPA's function is not to dictate how a source operates each and every unit, but instead to limit emissions impacts to the environment. It is unreasonable to place many of the hard limits derived from the operating limits approach on a facility long term.

With many pollution control technologies, the proposed approach to establishing and maintaining minimum operating limits would result in needless over-consumption of sorbents at great cost to the facility with little or no commensurate benefit to human health. As an example, the sorbent injection rate of activated carbon for the control of mercury varies with the volume of flue gas generated during combustion. To establish a minimum sorbent injection rate at or near the unit's maximum continuous rating (MCR) would result in nearly double the sorbent injection rate during turndown to 50% load. While such an approach may work for based loaded utility boilers, there are a great diversity of units and operating conditions affected under this rule as compared to utility-type units. Institutional, commercial and industrial boilers vary loads widely based on site conditions, business conditions, season and time of day, this would result in pointless expense to the facility with no benefit to the environment or to human health. Similar issues arise with use of scrubbers relative to load or throughput variations and their impact on operating parameters.

XVII. Energy Assessment

For all existing industrial, institutional and commercial coal, biomass, or oil-fired boilers with heat input capacity of 10 MMBtu/hr or greater located at existing area sources, EPA has proposed as beyond-the-floor control technology for mercury and POM, an "energy assessment,"

described as an "assessment on the boiler and the facility to identify cost-effective energy conservation measures." 75 FR 31920.

EPA proposes to require the affected units covered by this provision to submit documentation that an energy assessment was performed, by qualified personnel, and the cost-effective energy conservations measures were identified. 75 FR 31902. EPA proposes a number of procedures for the energy assessment, including not only visual inspection of the boiler itself (*i.e.*, the regulated source) but also the "facility," and an extensive assessment of the "major energy consuming systems" (*i.e.*, unregulated sources and non-sources at the facility), including a review of "available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage." 75 FR 31932, Table 2. Under EPA's proposal, regulated entities would be required to subject to an examination by a third party, not only the affected source itself, but also other non-covered units at major source location of the covered source. 75 FR 31907. The rule requires the submission of a "comprehensive report" and "facility energy management program."

A. EPA Lacks Authority to Compel an Energy Assessment, Which Covers Units Not Subject to § 112, and Which is Not an Emission Standard.

1. The assessment covers non-emitting units of a source that are not affected sources.

EPA's authority under § 112 is to establish NESHAPs for combustion units at area sources. By its own terms, the rule covers "affected sources" defined as all existing and new ICI boilers and process heaters located at area sources. The "affected source" regulated by this NESHAP is the specified emission unit – boilers– not the area source location of the emission unit. This is consistent with the long-established understanding of the term "affected source" as it relates to the "major source" where the affected source is located. See preamble to rule establishing the General Provisions for all NESHAPs, 59 FR 12408, 12412-13 (March 16, 1994) (*General Provisions*).

Limiting the regulation to the affected source is also consistent with Congress's general statutory scheme, under which EPA is to publish a list of "all categories and subcategories of major sources and area sources" of the listed HAP (§ 112(c)(1)). EPA's published list of source categories groups every conceivable type of industrial process and process unit into a category, each of which is regulated by its own NESHAP, each published as a separate Subpart to 40 CFR Part 63. Therefore, any § 112 source other than the boiler and process heater affected units for this NESHAP is covered separately by another NESHAP. The statutory scheme does not assign duplicative source category regulations for the same unit.

Since 1992, the sources to be regulated relevant to this rule have been "industrial boilers" and "commercial/institutional boilers." 57 FR 31591. In this rule, EPA defines each of these sources. An industrial boiler is "a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity." A commercial/institutional boiler is "a boiler used in commercial establishments or institutional establishments such as medical centers, research centers, institutions of higher education, hotels, and laundries to provide electricity, steam, and/or hot water." 75 FR 31931.

However, EPA's proposal extends well beyond regulation of "sources" and compels regulated entities to investigate, monitor and report activity at facilities unregulated by § 112 or even by the CAA. EPA proposes to require the assessment be made "on the boiler and the facility." 75 FR 31901. "Facility" is a term not defined in the proposed rule, however, by its context it is clear that EPA means the assessment to cover elements are not part of the affected § 112 emission unit – the boiler. This is evident from how EPA formulates the requirement in another section of the proposal:

For owners or operators of existing area source facilities having a boiler with a heat input capacity of 10 MMBtu/h or greater and subject to this rule, we are proposing that you submit to the delegated authority or EPA, as appropriate, documentation that the energy assessment was performed and the cost-effective energy conservation measures identified.

75 FR 31902. EPA views its authority to cover anything at the facility where an affected source is located. The source category, however, is the area source *boiler*, not the facility.

The proposal further requires sources to consider, inter alia, the "operating characteristics of the facility, energy system specifications, operating and maintenance procedures, and unusual operating constraints . . .;" "major energy consuming systems;" "available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage . . .;" and to identify "major energy conservation measures." 75 FR 32014. EPA's authority is limited to setting emission limits for the affected combustion unit and does not extend to non-§ 112 sources, nor to the "facility." What EPA requires goes far beyond its authority.

The practical effect of the proposal is that, under the guise of reducing HAP emissions from boilers, area sources, many of these small entities, will have to conduct broad reviews of building design and operations to seek ways to reduce energy use. The assessment is applicable not to the boiler at the entity, but to the entity itself. The entity is not an "affected source" but rather a facility at which emission sources are located. EPA is not entitled to read into the statute a roving mandate to review any possible unit, system, or opportunity to reduce energy consumption. Weatherization of a building may indeed reduce the demand for heat, but buildings are not subject to § 112.

2. The assessment is not an "emission standard."

Section 112 requires EPA to establish "emission standards" for each listed source category and subcategory (§ 112(c)(2); 42 U.S.C. § 7412(c)(2)). By definition, the identification of energy saving measures is not an emission standard. In addition, were the efficiency measures actually to be undertaken, reduced demand for the output of a regulated source is not an "emission control" technology to limit emissions from the regulated source (§ 112(c)(2); 42 U.S.C. § 7412(d)(3)). If this were so, the text of § 112 would provide no limiting principle for EPA's authority.

EPA finds justification for the energy assessment by defining it as a beyond-the-floor control technology in CAA § 112(d)(2):

Emission standards promulgated...and applicable to new or existing sources...is achievable...through application of measures, processes, methods, systems or techniques including but not limited to measures which...reduce the volume of, or eliminate emissions of, such pollutants through process changes, substitution of materials or other modifications.

75 FR 31907 (citing 42 USC § 7412(d)(2)). EPA posits that "process changes, substitution of materials or other modifications" encompasses "energy assessments." However, when the statute refers to "process changes, substitution of materials or other modifications" it can only be referring to the source "to which such emission standard applies." § 112(d)(2). And it can only apply to methods to achieve the emission standards.

Yet EPA's proposal extends well beyond reduction of emissions by "sources" and seeks to compel regulated entities to investigate, monitor and report activity at units unregulated by the CAA. The proposal requires sources to consider, inter alia, the "operating characteristics of the facility, energy system specifications, operating and maintenance procedures, and unusual operating constraints . . .;" "major energy consuming systems;" "available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage . . .;" and "major energy conservation measures." 75 FR 32014. As defined in the rule, the energy assessment would require "a thorough examination" of a site far beyond the § 112 affected source: "Energy assessment means an in-depth assessment of a facility to identify immediate and long-term opportunities to save energy, focusing on the steam and process heating systems which involves a thorough examination of potential savings from energy efficiency improvements, waste minimization and pollution prevention, and productivity improvement." 75 FR 32064. EPA must limit regulatory requirements to methods that will reduce HAP emissions by the regulated combustion unit itself and not to other systems, energy using systems or process areas. EPA goes beyond its authority by imposing requirements beyond the combustion unit, even covering systems not directly associated with combustion units.

Moreover, EPA improperly identifies the energy assessment as a beyond-the-floor standard. This is not consistent with the text of the CAA, which as EPA explains, requires it to consider control options that are "more stringent" than the MACT floor. 75 FR 31905. An energy assessment does not purport to limit emissions, nor impose more stringent standards than the MACT floor.

EPA has developed MACT standards that allow sources to elect to comply with pollution prevention alternatives in lieu of standards for some units and under certain circumstances. See, e.g., Pharmaceuticals Production MACT, 40 CFR Part 63, Subpart GGG; National Emission Standards for Hazardous Air Pollutants for Source Categories: Pharmaceuticals Production; Final Rule, 63 FR 50280 (Sept. 21, 1998) (Pharma MACT). These do not, however, establish analogous precedent for the action EPA proposes in this MACT. The provisions of the Pharma MACT, for example, are a compliance alternative to compliance with the MACT standard. Here, EPA defines this as a beyond-the-floor MACT standard, making it not only mandatory, but also grounding it in the notion that sources can and must achieve by its greater stringency than the floor, greater emission reductions. In addition, the Pharma MACT compliance alternative relates directly to the reduction of the regulated pollutants from the same four regulated source types as those regulated by the MACT standard. Here, no such direct correlation can be made,

and the assessment covers unregulated, non-emitting elements of the company's operation beyond the regulated boiler.

In another section of the Proposed Rule, EPA identifies the energy assessment as a work practice standard, including it in Table 2, entitled "Work Practice Standards." 75 FR 31932. Authority to require work practice standards derives from § 112(h), and EPA does not provide any legal justification for the energy assessment as a work practice. Its inclusion in Table 2 appears to be in error, but in any event, EPA lacks statutory authority to require the assessment as proposed under any provision of the CAA.

B. The Assessment is Arbitrary Because it Lacks a Relationship to HAP Reduction, and EPA Provides no Record Basis Demonstrating Such a Relationship.

EPA states that "[t]he purpose of an energy assessment is to identify energy conservation measures (such as, process changes or other modifications to the facility") that can be implemented to reduce the facility energy demand which would result in reduced fuel use. Reduced fuel use will result in a corresponding reduction in HAP, and non-HAP emissions." 75 FR 31907. The problem with this assertion is that in many cases it is simply not true.

The simple comparison of two boilers – one using coal and one co-firing coal and bark – demonstrates EPA's misdirection on this issue. In this example, an energy efficiency audit would show that a boiler using only coal is more efficient than a boiler using bark and coal. However, a boiler using only coal would have increased emissions.

Reduced energy does not necessarily mean reduced pollutant emissions, even if it means reduced HAP emissions from the boiler. To offer but one specific countervailing example: periodic operation of solid fuel boilers in a highly turned down mode is common among many industrial sectors, as an efficient way to manage manufacturing process energy needs. For example, industrial process boilers in the wood products industry supply steam according to the immediate demand from processes for which they are operated. These boilers operate at widely varying load levels, depending on, among other things, the amount of steam the process equipment is demanding at the time. During high turndown periods the actual HAP emission load should be lower since the total fuel load is reduced from the normal operation. Conversely, however, high CO emissions are a common occurrence to all solid fuel boilers during high turndown operation due to a combination of well-known combustion fundamentals. It is impossible to avoid these countervailing effects. EPA has recognized boiler, or burner, turndown ratio as a factor affecting performance in several contexts.⁷

In addition to a turndown resulting in increased non-HAP emissions from the boiler, in other scenarios, reduced energy could result in increased HAP emissions from other non-combustion processes. In fact, in this proposal, EPA acknowledges that categorical assertions regarding

⁷ See, EPA, Final Technical Support Document for HWC MACT Standards, Vol. IV, p. 3.6 (July 1999); EPA Region 6 Center for Combustion Science and Engineering, Hazardous Waste Combustion Unit Permitting Manual, Component 1 How to Review a Test Burn Plan, p. D-5.5 (Tetra Tech Jan. 1998).

energy-pollutant emissions relationships are not accurate, when it notes that "[i]mprovement in energy efficiency results in decreased fuel use which results in a corresponding decrease in missions (both HAP and non-HAP) from the combustion unit, but not necessarily a decrease in emissions of all HAP emitted." 75 FR 31907.

Teeing energy assessments (EAs) to finite HAP limits implies that the Energy Intensity (EI) of the processes served by the ICI boiler is a static quantity and that the incremental improvement brought about by the implementation of opportunities discovered by the EAs would therefore incrementally reduce HAP emissions. This could not possibly be more incorrect. The EI of a facility depends on many constantly changing factors, including environmental conditions, raw material quality, product output, and others. Further, facilities may have hundreds of different products that are produced in ever-changing combinations. These products may have individual EIs that are one, two, three, or more orders of magnitude different. Thus product mix only further complicates the already dynamic nature of a facility EI. Further, a specific energy improvement opportunity may only affect the production of one specific product or may only apply during certain environmental conditions, and thus its effect would be affected by the same dynamic factors as the overall EI.

EPA has not proposed this concept in any other MACT standard for any other regulated sector, nor should it. Boilers provide a single product—heat—to a tremendous number of consumers in hundreds of different contexts. The product consumed is often in some proximity to the boiler itself, which makes it conceptually appealing for EPA to imagine the efficacy of the "energy assessment." But certainly EPA would never impose such a requirement on other sectors regulated under § 112, because the absurdity of the proposal would be highlighted. For example, we doubt that EPA would ever propose that entities owning surfacing coating facilities for metal furniture (40 CFR § 60.310 *et seq.*) review their "demand" for such surface coating. EPA has promulgated MACT standards for five different sources common to the phosphate fertilizer industry (40 CFR Subpart T through Subpart X) but would never demand that the phosphate fertilizer industry identify a "more efficient" phosphate fertilizer. Yet less demand for surface coating for metal furniture, and less demand for the chemicals produced by sources regulated under Subparts T through X, would according to EPA's logic reduce the demand for the products produced by sources regulated under section 112, thereby limiting inputs and thereby reducing HAPs. EPA has arbitrarily picked one product out of the thousands produced by sources regulated under § 112 and demanded that regulated entities identify ways to make less of it.

EPA does not and cannot demonstrate that conducting an energy assessment will actually reduce HAP emissions. Similarly, EPA does not and cannot demonstrate that even implementing the findings of an energy assessment, assuming EPA were to require implementation, will reduce HAP reductions. EPA admits as much in the proposal, offering unsubstantiated projections of possible reductions as support:

If a facility elected to implement the cost-effective energy conservation measures identified in the energy assessment, it would potentially result in greater mercury and POM reduction than achieved by a boiler tune-up alone.

75 FR 31907 (emphasis added).

Notwithstanding no demonstrated correlation between yet-unidentified energy saving measures and projected possible HAP reduction, and no proposal to require their implementation, EPA offers this flawed syllogism: an energy assessment identifies ways to reduce fuel use; reduced fuel use will reduce pollutant emissions; therefore an energy assessment will reduce HAP emissions consistent with § 112(d)(2). 75 FR 31907. The proposal irrationally concludes that an energy assessment will contribute to achieving the maximum HAP emission reduction. 75 FR 31907. In fact, an unimplemented energy assessment will not reduce fuel use, will not reduce HAP emissions, and even if implemented, will not reduce HAP emissions consistent with § 112(d)(2).

C. Any Possible Energy and Cost Savings From the Energy Assessments Cannot Be Projected Reliably and the Proposed Rule Irrationally Presumes Such Savings.

EPA presumes HAP reductions and energy and energy-related cost savings from implemented energy assessments 75 FR 31907. Each of these presumptions is unreliable, and entirely unsupported by the record. As described above, at some facilities, reduced fuel consumption could result in increased emissions to the facility, rendering the measures inconsistent with § 112(d)(2). Alternatively, undertaking measures to reduce fuel consumption could require more costly measures to counterbalance the effect of the reduced fuel consumption, rendering the measures not cost-effective. What is clear, however, is that EPA cannot possibly project with any accuracy the ability of sources in this category to cost-effectively undertake energy efficiency measures, much less their emission impacts, cost, or other factors that the CAA requires be included in that analysis. The complete absence of data makes any such presumptions irrational.

EPA makes an unsupported assertion that "the costs of any energy conservation improvement will be offset by the cost savings in lower fuel costs." 75 FR 31907. EPA to some extent assures that this assumption will be true by defining a "cost-effective energy conservation measure" as one that has a payback period of two years or less. *Id.* Yet this is an artificial criterion applied with no basis or support to EPA's conclusion that the benefits of the program outweigh the costs. Project justification criteria vary significantly by company, facility, product and even time of year. EPA's conclusory analysis of the cost-benefit analysis vastly oversimplifies capital expenditure decisions and artificially limits the calculus to fit the need to justify the beyond-the-floor standard. Nowhere, however, does EPA explain what provision in §112(d) or elsewhere in the CAA grants EPA the authority to mandate investment criteria for projects implemented pursuant to the energy assessments.

Even regarding the presumption of emission reductions itself, the proposal is very inconsistent. In some sections, the proposal accurately points out that if efficiency measures are implemented, fuel use is reduced, HAP emissions may be reduced and energy-related savings are realized. 75 FR 31907. Yet, in other sections, the proposal inaccurately asserts that the energy assessment in-and-of-itself will lead to emission reductions. 75 FR 31907.

D. EPA Lacks Authority Under the Clean Air Act to Compel Regulated Facilities to Implement Any Measures That May Be Identified in an Energy Assessment.

EPA is considering whether to require the implementation of energy saving measures and seeks comment on whether that would be "economically feasible." 75 FR 31907. EPA needn't determine the economic feasibility of their implementation, because in any event, EPA has no authority to compel sources to implement the findings.

No provision of the CAA provides EPA with the free-ranging authority to compel energy efficiency reductions at a regulated source. It is quite possible that an energy efficiency measure, if implemented, would constitute a "modification" that would trigger other provisions of the CAA such as prevention of significant deterioration (PSD) or new-source status under NSPS. If indeed major measures are identified, then *a fortiori* EPA lacks authority to compel their implementation, where that would effectively require additional permitting measures unrelated to the MACT implementation. EPA likewise lacks authority to compel reduced fuel use to reduce HAP emissions from the boiler, particularly where that would cause increased HAP or non-HAP emissions from systems affiliated with or served by the regulated boiler. In instances where energy consumption adjustments could cause adverse consequences at the source, such as, for example, exceeding allowable emission limits or consuming an unacceptable amount of the compliance margin for a particular pollutant, EPA lacks the authority to compel a source to undertake such measures.

E. If EPA Decides to Require an Energy Assessment, Several Features Should Be Amended, and Cost and Other Beyond-the-Floor Impacts Should Be Analyzed, Which Will Require Notice and Comment.

1. The assessment should be expressly limited to HAP reductions at the combustion unit of the affected area source, consistent with § 112.

EPA should eliminate its proposed definition of a "boiler system." EPA should further limit the scope of energy assessments to "boiler(s)" as currently defined. It is implicitly understood that a boiler as the affected unit includes the directly associated components relative to fuel feed, heat transfer and recovery, and emissions control systems, since they all in coordinated fashion result in the emissions being controlled.

2. EPA must also consider impacts of the assessment, including cost and whether boiler-related HAP reductions may be offset by HAP and other pollutant increases, or other energy-consumptive measures that could occur at the facility associated with the boiler.

For any beyond-the-floor requirement, the CAA requires EPA to analyze cost, non-air quality health and environmental impacts and energy requirements (§ 112(d)(2)). EPA purports to propose as beyond-the-floor that an energy assessment be undertaken, yet it relies on projected energy and cost benefits from implementation of the assessment. The record lacks any beyond-the-floor analysis of requiring either the assessment or its implementation, without which EPA has no basis to sustain the requirement.

EPA estimates the cost of an energy assessment to be \$2,500 - \$55,000, depending on the size of the facility. 75 FR 31907. EPA does not view as significant, asserting that the cost is "minimal" compared to the compliance cost that could be imposed through an emission limit. 75 FR 31907.⁸ Yet EPA fails to account for strained budgets and the real cost to conduct a third-party energy assessment required by the proposed rule, much less the cost to implement any energy conservation measures.

Based on experience with energy assessments, we estimate the cost of an energy assessment at a complex facility with multiple types of combustion equipment and systems could well exceed \$100,000 since multiple types of people would be needed. The need to evaluate economic viability of changes requires engineering and cost estimates of capital expenditures and determination of return on investment or economic payback; the level of engineering assessment typically requires some level of design, thus greatly increasing the cost of the assessments and project viability determination. The EPA estimated cost in no way would cover such a level of detail. Programs developed by U.S. Department of Energy (DOE) have not extended fully throughout facilities or to the level of detail envisioned by EPA, so that comparable costs to DOE programs are not necessarily correct. Therefore, the total cost and burden of the energy assessment requirement as proposed will be significantly higher than estimated by EPA.

In other aspects of the rulemaking, EPA expresses graver concern with the cost of the rule. For example, EPA expressed concern with the cost of Title V permitting that would be imposed on the "estimated 91,300 area source facilities (including schools, hospitals, and churches) in the categories." 75 FR 31912.

3. EPA should not require a third-party certified contractor as proposed.

The Proposed Rule would require sources to hire a "qualified specialist . . . who has successfully completed the Department of Energy's Qualified Specialist Program for all systems or a professional engineer certified as a Certified Energy Manager by the Association of Energy Engineers." 75 FR 31907. This is an arbitrary requirement that overlooks the increased cost associated with a certified specialist and existing regulated entity resources. Sources have at their disposal the most qualified individuals to assess the energy savings opportunities for the regulated source – those who are most familiar with the processes involved, day-to-day operations, and historic patterns of operation at the site. Sources should not be compelled to contract with outside personnel who are far less knowledgeable about the operations of the site, to assess energy conservation measures that may be undertaken. This requirement would unnecessarily increase costs and burden to the regulated entities.

⁸ EPA's comparison also rings hollow, because EPA benchmarks the cost against a regulatory action it cannot take for want of authority; EPA cannot impose a limit on a source's fuel consumption under the guise of an "emission" limit.

F. The Energy Assessment Will Require Sources to Submit Data that in Many Cases Constitutes Confidential Business Information.

A requirement that an energy assessment be conducted for energy systems served by all combustion units that are affected sources would require evaluation of confidential processes and systems. Since these evaluations and resulting information do not reflect the control of HAP emissions, EPA has no authority to require that sources provide this information. Even if EPA were to expressly indicate that such data provided does not constitute emissions data, and may therefore be protected from dissemination as confidential business information (CBI), this approach still does not resolve EPA's lack of authority to compel its submission in the first instance. In addition, CBI protections are not absolutely protective of sensitive data, as they are discretionary and always subject to evaluation and reevaluation by EPA.

Although current CAA CBI regulations permit a source to designate information provided to EPA as CBI, the type of information EPA proposes to compel companies to report here is, by legal definition, CBI. 40 CFR § 2.301(e) (allowing information to be designated as trade secret, proprietary or company confidential). Therefore, EPA should not permit competitors to force reporting entities to defend the nature of this data in an agency CBI proceeding. Whether such information constitutes CBI should not be assessed on a case-by-case basis. Instead, it should be given categorical protection because the entire class of information EPA is seeking here constitutes CBI, it is not emissions data and its collection is outside EPA's § 112 authority. If energy assessments are required, this CBI issue can be partly avoided by not requiring submission of energy assessments, but only have them available at the facility for inspection by EPA or the regulatory authority.

XVIII. Emissions Averaging

EPA included emissions averaging as a compliance option in the proposed Boiler Rule, and this should be a compliance option for area sources as well. In the preamble, EPA notes 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 FR 31919. Although EPA asserts that it "proposed provisions consistent with each of the Panel's recommendations regarding area source facilities," EPA did not propose an emission averaging compliance alternative for area sources. This flexible compliance alternative should be included in the final rule.

A. EPA Should Adopt an Emissions Averaging Compliance Alternative for Area Sources.

In the Proposed Boiler MACT Rule, EPA is considering a provision for emissions averaging with respect to the proposed emissions limitations for industrial, commercial and institutional boilers and process heaters. 75 FR 32034. Use of emissions averaging would allow owners and operators of an affected source to demonstrate that the source complies with the proposed emission limits by averaging the emissions from an individual affected unit that is emitting above the proposed emission limits with other affected units at the same facility that are emitting below the proposed emission limits. *Id.* EPA further acknowledges that "emissions averaging represents an equivalent, more flexible and less costly alternative to controlling certain emission

points to MACT levels" and its application "would not lessen the stringency of the MACT floor limits and would provide flexibility in compliance, cost and energy savings to owners and operators." *Id.*

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

B. Averaging Should be Allowed Across All Subcategories/Fuels With Emission Limits For The Pollutants to be Averaged.

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

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

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

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

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

Emissions averaging generally allows a facility to avoid otherwise cost-prohibitive compliance options by over-controlling some other emission unit in a more cost-effective combination. It also has corresponding environmental benefits, by creating an incentive to burn more natural gas or renewable fuels such as biomass as a strategy to average out emissions from a coal-fired unit. As EPA explained in the Boiler Rule, emissions averaging does not result in any higher total

HAP emissions than those permitted under the Rule, and therefore there is no additional risk to human health or the environment.

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

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

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

There is precedent in MACT standards for allowing averaging across different types of units of a single source. For example, the HON Rule allows process vents, storage vessels, transfer racks, and wastewater streams to all be included in an emission average across an affected source. 40 CFR Subpart G. EPA reasoned that averaging needed to be allowed across all emission points (except equipment leaks) in order to provide as much flexibility as possible while maintaining an enforceable emission limitation. 59 Fed. Reg. 19,425. Similar mechanisms have been adopted in other MACT standards. *See, e.g.* Petroleum Refinery NESHAP, 60 FR 43244, 43254 (Aug. 18, 1995) (allowing wide range of emission sources to be averaged, noting that "EPA has the flexibility to allow trading within a facility that includes units in different source categories"); Boat Manufacturing NESHAP, 66 FR. 44218, 44232 (Aug. 22, 2001).

As in the HON, the compliance methodology can easily accommodate subcategories with different emission limits for a given pollutant. This is done basically by calculating a weighted

average allowable mass emission and a weighted average actual mass emission each month using heat inputs or steam production for each unit.

C. EPA Should Not Include a 10% Discount Factor as it Did in The Proposed Boiler MACT Rule.

In the Proposed Boiler MACT Rule, EPA proposed a restriction on emissions averaging that requires facilities using that option to meet a standard that is 10% stricter than the otherwise applicable limits. 75 FR 32035. EPA should not include this 10% penalty for using emissions averaging because it is arbitrary, unnecessary for environmental protection and reduces the flexibility that averaging provides. In the Proposed Boiler MACT Rule, EPA asserts that its inclusion further ensures the allowable emissions are at least as stringent as the MACT floor limits without using averaging. However, EPA offers no demonstration of this in the proposal. Given the accuracy of heat input weighted emission calculations, there is no uncertainty that the average emission rates will be any less stringent than when not using averaging. Because EPA has already determined that the standards in the rule achieve the maximum emission reduction achievable for health and environmental protection, to require an additional 10% reduction of emissions has no basis in the environmental underpinnings of the rule. Because emissions averaging is a compliance alternative, the 10% discount factor would constitute a beyond-the-floor requirement. Although the 10% discount may be perceived as a fair trade-off for the flexibility of emissions averaging, it still lacks a legal basis and creates a disincentive for sources to use this compliance method. Where, as here, proposed emission limits are very tight, sources will not be able to ensure an additional 10% reduction in emissions below the limits and imposing this penalty effectively would deprive many sources of the availability of the emissions averaging compliance alternative.

XIX. Emission Reporting Tool (ERT) Problems

EPA is requiring submission of data via the Electronic Reporting Tool (ERT). 75 FR 31903. Notwithstanding EPA's assertions to the contrary, data submitted through the ERT is error-prone and imposes additional burdens on reporting sources because the ERT bypasses all data quality control. For the information collection process for the Boiler MACT suite of rules, EPA required sources to use the ERT. Sources had requested in the ICR proposal stage that EPA not utilize the ERT, which was going through Beta testing, and informed EPA that the ERT had serious flaws including difficulty of use, content problems and inaccessibility. EPA decided to use it for data collection for these rules. The concerns proved correct, however, as sources were compelled to use the ERT, which is a difficult and time-consuming tool for submission of test data. The ERT data compiled was riddled with mistaken entries, incorrect and missing data, and the ERT had generally faulty output. Then the problem was compounded when EPA relied on the inaccurate data, leading to multiple calculation and other inaccuracies.

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

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

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

XX. Definitions

A. EPA is Correct to Exclude Gas-Fired Boilers Burning Liquid Fuel During Curtailment Periods.

In the Proposed Rule, EPA states that gas-fired area source boilers is not necessary. 75 FR 31900. EPA defines "gas-fired boiler" to include

any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

75 FR 31931. CIBO agrees that gas-fired boilers burning liquid fuel only during periods of gas curtailment are in fact gas-fired boilers and not covered under the Proposed Rule.

B. EPA Should Clarify That Boilers Using Liquid Fuel for Limited Times Are Not Subject to Emission Limits in Table 1.

Small sites that are area sources of HAP should have the flexibility to use liquid fuel or fuel oils on a limited basis without these sources being classified as a unit that combusts oil. A boiler that uses less than 10% liquid fuel or fuel oil on an annual average heat input basis should not be classified as a New Oil or Existing Oil Boiler. We believe that making such an adjustment to this rule will better align the area source rule with the major source MACT rule in subpart DDDDD for boilers and heaters, which uses a 10% heat input criterion to classify a number of sources. In addition, allowing this additional flexibility in the final rule will result in a negligible emission increase of HAPs from these boilers at area sources. We suggest changes to the definitions later in this comment package that reflect this comment.

C. EPA Should Modify the Definition of "Gas-Fired Boilers" and the Oil Subcategory.

EPA Should Modify the Definition of "Gas- Fired Boilers" to include boilers that burn less than 10% liquid fuels on an average annual heat input basis. The definition of "gas-fired boiler" is too restrictive for small sources and does not represent GACT. Specifically, the proposed rule classifies any existing boiler that burns even a small amount of oil as an oil-fired unit subject to a stringent carbon monoxide limit of 2 ppmv. Area source sites need additional flexibility to combust fuel oils on a limited basis without boilers being classified under the Existing Oil subcategory.

The proposed area source rule is more stringent than the proposed MACT standards for boilers at major sources. Specifically, §63.7575 defines gas fired units as "Unit designed to burn gas 1 (NG/RG) subcategory includes any boiler or process heater that burns at least 90% natural gas and or/refinery gas on a heat input basis on an annual average."

Therefore, EPA must provide at least the same exclusion for boilers at area sources that burn less than 10% oil or other fuels on a heat input basis. Based on the above reasoning, we recommend that the definition for Gas-Fired boiler in § 63.11237 be revised as follows:

Gas-fired boiler includes any boiler that burns at least 90 percent gaseous fuels on a heat input basis on an annual average, and a boiler that burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

75 FR 31931

Similarly, EPA should revise the definition for the "Oil" subcategory to remove the exclusion for units that burn solid fuel. EPA should also remove the limitation that boilers in the Oil subcategory must either burn liquid fuel alone or in combination with gaseous fuels. Instead, EPA should amend the definition so that the Oil subcategory includes "any boiler that burns at least 10 percent liquid fuels on a heat input basis on an annual average. Gas boilers that burn liquid fuel during periods of gas curtailment, gas supply emergencies, or for periodic testing of liquid fuel are not included in this definition."

D. EPA's Definition of "Natural Gas" in the Proposed Rule is in Conflict With the Agency's Own Views As To That Term.

EPA failed to use the definition of "Natural Gas" that represents the most current thinking of the agency. The definition adopted in § 60.41 Subpart Da, published in the Federal Register on 28th January 2009 (Federal Register /Vol. 74, No. 17 /Wednesday, January 28, 2009 /Rules and Regulations, p. 5079) includes an third definition of Natural Gas to read,

§ 60.41Da Definitions.

Natural gas means:

- (1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or
- (2) Liquid petroleum gas, as defined by the American Society of Testing and Materials in ASTM D1835 (incorporated by reference, see § 60.17); or
- (3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

This third definition enables affected sources to burn gaseous fuels that are substantially similar to naturally occurring natural gas without being subject to a variety of additional requirements that impose a regulatory and cost burden on the source. The net impact of this third definition is to promote the beneficial combustion of clean gaseous fuels, such as clean Landfill Gas, which might otherwise be released into the atmosphere or flared. As EPA has indicated in its Landfill Methane Outreach Program (LMOP),

The U.S. Environmental Protection Agency's Landfill Methane Outreach Program (LMOP) is a voluntary assistance program that helps to reduce methane emissions from landfills by encouraging the recovery and beneficial use of landfill gas (LFG) as an energy resource. LFG contains methane, a potent greenhouse gas that can be captured and used to fuel power plants, manufacturing facilities, vehicles, homes, and more. <http://www.epa.gov/lmop/>

By failing to adopt the most current definition of "Natural Gas", as incorporated into § 60.41 Subpart Da, EPA is inhibiting sources from burning clean gaseous fuels like Landfill Gas that could be beneficially combusted. EPA should define "Natural Gas" to be identical to the definition in § 60.41 Subpart Da.