

February 21, 2012

EPA Docket Center  
Environmental Protection Agency  
Mailcode 2822T,  
1200 Pennsylvania Ave., NW.,  
Washington, DC 20460

**RE: Docket ID No. EPA-HQ-OAR-2006-0790, National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers (76 Fed. Reg. 80532, Dec. 23, 2011)**

The following parties hereby submit comments on the proposed changes to the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Industrial Boilers (76 Fed. Reg. 80532, Dec. 23, 2011).

- American Forest & Paper Association
- American Coke & Coal Chemicals Institute
- American Home Furnishings Alliance
- American Iron and Steel Institute
- American Sugar Cane League
- American Wood Council
- Biomass Power Association
- Brick Industry Association
- Energy Recovery Council
- National Association of Manufacturers
- National Oilseed Processors Association
- Rubber Manufacturers Association
- Society of Chemical Manufacturers and Affiliates
- Treated Wood Council
- U.S. Chamber of Commerce

Trade association commenters' member companies own and operate thousands of boilers and process heaters that will be subject to the Boiler GACT. The petitioners and several member companies submitted extensive comments on the June 4, 2010 proposed Boiler GACT and EPA's May 18, 2011 notice of reconsideration to Docket No. EPA-HQ-OAR-2006-0790. We appreciate the fact that EPA made numerous changes from the proposed GACT rule in response to public comments. As a result, the final rule is much more workable for area sources than the proposed rule would have been. The work practice standard approaches included in the rule will help our members with area

source facilities achieve their goals for sustainability and use of renewable energy without the application of costly and unnecessary emissions controls to small boilers.

Thank you for your consideration of the important issues included in these comments. Please feel free to contact Tim Hunt at 202-463-2588 on my staff as a representative of the coalition of industries if you have questions or need more information.

Sincerely,

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Vice President for Public Policy  
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On behalf of the listed trade associations

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## **I. EXECUTIVE SUMMARY**

We appreciate the opportunity to submit comments on the proposed changes to the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Industrial Boilers and Process Heaters (76 Fed. Reg. 80532, Dec. 23, 2011). First and foremost, we support and firmly believe that EPA is justified in setting GACT and not MACT standards for existing oil and biomass boilers at area sources. The work practice standard approaches included in the final rule as GACT will help our members with area source facilities achieve their goals for sustainability and use of renewable energy without the application of costly and unnecessary emissions controls to their small boilers. We also support the reduction in burden created by establishing a 5-year tune-up frequency for very small boilers and seasonal boilers and the exemption for temporary boilers, as these units have very small emissions.

We support the proposed extension of the compliance date for the initial tune-up. This will harmonize all of the compliance dates for this rule to 3 years from the March 2011 final rule, which will give sources time to determine if they are burning materials that are considered fuels, and are thereby subject to the Boiler GACT, or materials that are considered solid waste, and therefore subject to CISWI. We support the exemption of both minor and synthetic minor sources subject to Boiler GACT from Title V permitting, as the imposition of Title V permitting requirements on these sources is unnecessarily burdensome. In addition, we applaud improvements to the monitoring requirements for O<sub>2</sub> and CO due to the added flexibility these changes provide.

However, we believe that EPA's affirmative defense provisions are not a substitute for setting emission standards for periods of malfunction. All boilers, even top performers, have malfunctions that are beyond the control of the operator. We are also requesting additional clarification on the definition of natural gas curtailment.

## **II. EPA HAS CORRECTLY ESTABLISHED STANDARDS BASED ON GACT, NOT MACT, FOR BIOMASS- AND OIL-FIRED BOILERS AT AREA SOURCES**

EPA based the June 4, 2010 proposed standards for biomass- and oil-fired area source boilers on maximum achievable control technology (MACT). EPA is now taking comment on basing the March 21, 2011 final area source standards on generally available control technology (GACT) instead of based on MACT.

In the December 23, 2011 proposal, EPA stated (76 FR 80537):

*“As explained in the preamble to the final rule, rather than require a numeric MACT-based limit for CO as a surrogate for the individual organic urban HAP (including POM), new and existing biomass- and oil-fired*

*boilers must meet GACT requirements consisting of management practice requirements.”*

We support EPA’s rationale to regulate biomass and oil-fired boilers based on GACT. The CAA §112(d)(5) authorizes EPA, in most cases, to set standards for area sources using GACT, “generally available control technologies or management practices” (i.e., GACT”) rather than “MACT.” The use of GACT is authorized in this case; therefore, §112(d)(5) authorizes EPA to establish “standards or requirements . . . which provide for the use of generally available control technologies or management practices.” When setting a GACT based standard, EPA is expressly authorized to establish work practices instead of emissions limitations. In addition, EPA has acknowledged that only coal fired area source boilers are needed to account for the 90 percent requirement set forth in section 112(c)(6) for POM and mercury (76 Fed. Reg. 80537), therefore, it is not reasonable or necessary to regulate biomass- or oil-fired boilers based on MACT. Our comments on the proposed rule (see for example AF&PA’s comments at EPA-HQ-OAR-2006-0790-1939 through EPA-HQ-OAR-2006-0790-1944) provided detailed justification for setting area source standards for biomass and oil-fired boilers based on GACT.

### **III. THE FINAL PM LIMITS FOR NEW OIL-FIRED BOILERS AT AREA SOURCES WERE CORRECTLY DETERMINED**

EPA finalized a PM emission limit based on GACT (76 FR 15574) for new oil-fired area source boilers and is soliciting comment on the level at which the limit was set. In the Dec. 23, 2011 proposal, EPA stated (76 FR 80537):

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

First, we agree with EPA’s rationale to base these limits on GACT versus MACT (please refer to comments in Section II above). We agree that PM GACT standards for new oil-fired units should consist of numeric emission limits based on the NSPS for larger units (>10 MMBtu/hr). Basing the limit on NSPS Subpart Dc is justified, as EPA has recently reviewed the small industrial boiler NSPS (changes were published in 2007 at 72 Fed.

Reg. 32759 and in 2009 at 74 Fed. Reg. 5091) and determined that a PM limit of 0.030 lb/MMBtu (see 40 CFR 60.43c(c)) was appropriate for new small boilers.

Second, we support the decision to forego a numerical emission limit for smaller sources (<10MMBtu/hr). As EPA has acknowledged, it is not appropriate to set a numerical emission limit for small units because of technical limitations of testing PM emissions from boilers with small diameter stacks. The installation of ports into small diameter vents may interfere with the functionality of exhaust systems for new and existing boilers. Many existing area source boilers with a capacity below 10 MMBtu/hr have stacks with diameters less than 12 inches, and many area source boilers do not currently have sampling ports or a platform for accessing the exhaust stack. Furthermore, very small boilers (less than 5 MMBtu/hr) typically exhaust through vents and not stacks which would cause further complications to meet testing requirements. (See 75 Fed. Reg. 15568). EPA determined that the testing and monitoring costs that area source boiler facilities would incur to demonstrate compliance with numerical emission limits would present an excessive burden for smaller sources. Thus, we support EPA's decision to establish work practice standards for these smaller sources.

#### **IV. EPA SHOULD USE A 99.9 UPL FOR DETERMINING MACT FLOORS FOR CO**

EPA is proposing to revise the CO MACT floor analysis to use a 99 percent confidence interval as opposed to a 99.9 percent confidence interval to determine the UPL. We do not agree with EPA's rationale for reverting to a 99 percent confidence interval. EPA states (76 FR 80536):

*"In the final rule, the EPA selected the use of a 99.9 percent confidence interval for calculating the MACT floor for CO emissions. A petitioner requested reconsideration of this selection given the fact that the EPA used a 99 percent confidence interval for all of the other emission limits in the final rule. The petitioner pointed out that if the data are highly variable, the 99 percent confidence interval should adequately reflect the variability of emissions as well as for the data sets for other pollutants. In the development of the final rule, the 99.9 percent confidence interval was selected in part because the standards covered periods of startup and shutdown, while the data did not reflect CO emissions during those periods. While the EPA finalized work practice standards for startup and shutdown periods, the selection of the confidence interval was not revisited due to time constraints. The EPA is now proposing to use a 99 percent confidence interval in order to maintain a consistent methodology with the development of the MACT floors for other pollutants, and because optional CO CEMS-based limits are being proposed that would allow sources additional flexibility in meeting the requirements of the rule."*

We do not agree with the justification to use a 99 percent confidence interval for consistency's sake. First, EPA is not establishing CO CEMS-based emission limits in the area source standard, it is only giving sources the option to comply with the stack test-based CO limits using a CO CEMS. Second, carbon monoxide emissions have a much greater degree of variability than other pollutants and sources must certify compliance with the CO limit over all operating conditions except startup and shutdown; therefore, EPA's CO MACT floor should account for variability to the maximum extent possible. The small amount of data used in EPA's analysis are not representative of the range of expected operations and true variability that is expected from the best performers. The emissions data used to set the CO limit is based on stack testing performed during maximum load conditions, only providing a snapshot of the day-to-day operations of each source.

The reasons for using a 99.9 UPL for setting the CO MACT floor cited in the preamble to the March 2011 Boiler MACT rule remain valid:

*“For CO, EPA considered several comments from industry and States, which provided both quantitative and qualitative comments on how CO emissions vary with load, fuel mixes and other routine operating conditions. After considering these comments EPA determined that a 99.9 percent confidence level for CO would better account for some of these fluctuations. While a good deal of CO data are available, at least for some of the subcategories, the data show highly variable emissions that can result from situations beyond the control of the operator, such as fuel moisture content after a rain event, elevated moisture in the air, and fuel feed issues or inconsistency in the fuel. The higher confidence level selected for CO is intended to reflect the high degree of variability in the emissions.” 76 Fed. Reg. 15628.*

Therefore, EPA should retain the use of the 99.9 UPL for calculating CO limits.

#### **V. EPA SHOULD EXTEND THE INITIAL COMPLIANCE PERIOD FOR THE TUNE-UP REQUIREMENT TO THREE YEARS**

EPA has proposed to extend the deadline from one year to two years from the original promulgation date of March 21, 2011 for sources to complete the initial compliance demonstration of the tune-up requirements applicable to existing boilers. However, EPA has requested comments on whether the tune-up requirement should be extended to three years from the original promulgation date of March 21, 2011.

In regard to the proposed extension to the initial compliance period, EPA states (76 Fed. Reg. 80535):

*“Even though existing boilers that are subject to emission limits have three years to demonstrate initial compliance, we believe the proposed change to the tune-up initial compliance period is appropriate because compliance with the tune-up requirement does not involve the installation of control equipment. Providing the amended compliance schedule would eliminate the potential need to approve alternative compliance schedules for facilities with multiple boilers or seasonal boilers that could not comply with the one-year compliance requirement.”*

We agree with extending the compliance date for the initial tune-up for the reasons outlined below. EPA should also clarify that §63.11223(b)(7), which provides the option to postpone a tune-up for non-operating units until up to 1 week following startup, applies to the required initial tune-up as well as the required ongoing tune-ups.

In addition, EPA needs to provide a stay of the current rule’s initial tune-up deadline of March 21, 2012 as soon as possible. Many area sources are on the verge of not being able to meet that deadline for scheduling or fuel versus waste reasons identified below and will either shut down or face non-compliance actions despite the fact EPA has proposed moving the deadline for valid reasons.

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

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

EPA estimated that there are 183,000 existing area source boilers (76 Fed. Reg. 15579, Table 4). Affected sources will have to develop procedures and train personnel or engage contractors for the tune-ups required by this rule. Sites will be required to set up recordkeeping practices and compliance assurance procedures to meet the requirements of this rule. For many companies, one year is not enough time to complete the initial tune-up and associated compliance activities.

The next section discusses an additional issue with fuel vs. solid waste decisions that provides additional justification for the three year compliance schedule for tune-ups.

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

In addition, due to the uncertainty surrounding the fuel versus waste issue and the proposed revisions to the solid waste definition rule, area sources need the additional time to determine if they are burning solid waste and if they will be covered under the area source boiler rule or the CISWI rule. As EPA has proposed revisions to the non-hazardous secondary materials rule, many sources are not yet sure how their secondary materials will be classified. For example, in some cases a material is being burned that a facility believes should qualify as a fuel but the final NHSM reconsideration rule to be promulgated after March 2012 could lead to an opposite determination (concluding the NHSM is a solid waste). Members tell us some of their facilities will prefer to comply under the GACT rule rather than the CISWI rule, and therefore the facility will need at least another 12 months after a determination is complete to utilize an alternate fuel to meet the Area Source Rule tune-up requirements. The proposed amended §63.11223(b)(5), which is applicable to both initial and continuous compliance demonstrations for work practices, requires that the tune-up be conducted “while burning the type of fuel that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up.” The facility also has to state in its Notification of Compliance Status that “No secondary materials that are solid waste were combusted in any affected unit.” [§63.11225(a)(4)(iv)]. Each of these leads to a timing concern that supports the three-year compliance timeline for the initial tune-up requirement.

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

## **VI. CHANGES TO THE WORK PRACTICE FREQUENCY FOR SMALL AND SEASONAL BOILERS ARE APPROPRIATE**

### **a. The Changes in Tune-up Frequency for Small Oil-Fired Boilers are Justified**

EPA has proposed to change the frequency for tune-ups (following the initial tune-up) for oil-fired boilers that are equal to or less than 5 MMBtu/hr to a tune-up once every 5 years (76 FR 80536, Dec. 23, 2011). For new units, EPA has proposed to remove the requirement for the initial tune-up, considering that new units will likely be tuned during

the initial startup process as part of commissioning. For facilities with a large number of small oil-fired units, completion of tune-ups on a biennial basis can quickly become a logistics issue, due to the need to schedule periods where the boilers can be shutdown and tuned without undue disruption to the operation of the facility. For area source boilers, we believe that a tune-up every 5 years is appropriate, as emissions from these boilers are small, and allowing a reduced tuning frequency will reduce the cost of the rule. Therefore, we support these changes, as they minimize burden on small sources with minimal emissions impact.

**b. The Subcategory for Seasonal Boilers is Appropriate but the Definition Should be Adjusted**

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

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

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

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

## VII. AN EXEMPTION FOR TEMPORARY BOILERS IS APPROPRIATE

We support EPA's decision to add an exemption for temporary boilers in the area source rule, as was already included in the major source boiler rule. EPA defines a temporary boiler as follows (76 FR 80548):

*“...any gaseous or liquid fuel boiler that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler is not a temporary boiler if any one of the following conditions exists:*

- (1) The equipment is attached to a foundation.*
- (2) The boiler or a replacement remains at a location for more than 12 consecutive months. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.*
- (3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.*
- (4) The equipment is moved from one location to another in an attempt to circumvent the residence time requirements of this definition.”*

We agree that an exemption is warranted for temporary boilers, as EPA does not need these units to satisfy the requirement to regulate emissions from at least 90 percent of the area source emissions of mercury and POM. Our members periodically use portable/transportable boilers to supply/supplement other site steam supplies. These boilers, which are typically rented and used on a temporary basis, are portable shop-fabricated package design units. They are typically used when an existing onsite boiler is out of service for a period of time for maintenance. Because temporary boilers are used on a limited time basis, portable units are typically not fully integrated with site control systems.

Most portable/transportable boilers are owned by a rental company, not the stationary source. Rental boilers may or may not be operated by the facility owner/operator. These temporary boilers will typically only fire gas or liquid fossil fuels (natural gas or distillate oil) which may have lower hourly emission rates than the boiler(s) they are temporarily replacing, due to either size or fuel fired. In addition, these units often do not have exhaust stacks that meet EPA Method 1 requirements for application of test methods.

Since portable/transportable boilers are required to be used, for a temporary time period, on either an emergency basis or to cover planned unit maintenance downtimes, it is not practical to comply with all of the area source rule requirements that are more suitable for permanent fixed units.

EPA has ample legal authority to exempt temporary boilers from the rule. EPA has substantial discretion as to how it defines source categories. It would be a reasonable exercise of that discretion to determine that the industrial boiler area source category does not include temporary boilers. In addition, there is no evidence that HAP emissions from gaseous or liquid fueled temporary area source industrial boilers present a threat of adverse effects to human health or the environment. Since the § 112(c)(3) threshold area source listing criteria are not met for temporary boilers, EPA arguable does not have authority to include them in the source category in the first instance.

### **VIII. WE SUPPORT THE EXEMPTION FROM TITLE V PERMITTING FOR AREA SOURCES**

In the proposed rule published on June 4, 2010 (75 FR 31925), EPA proposed to exempt area sources from the requirement to obtain a title V permit, if they were not an area source as a result of installing a control device on a boiler after November 15, 1990. This exemption would have only applied to “natural” area sources and would not have applied to “synthetic” area sources that would otherwise have been major sources but for the control device.

In the March 21, 2011 final rule, EPA extended the exemption to all area sources, including major sources that became synthetic area sources by installing air pollution controls. After promulgation of the final boiler area source rule, EPA received a petition to reconsider the decision to not require Title V permits for area source boilers in the final rule, and to reconsider the decision to extend the exemption to include synthetic area sources. The petition was from Sierra Club and is discussed in the preamble to the Dec. 23, 2011 proposed changes (76 Fed. Reg. 80538):

*“The petition disputes our conclusion that title V permitting is unnecessarily burdensome; discusses the benefits of permitting, including compliance benefits; contests our estimation of the costs of permitting; and challenges our determination to extend the proposed exemption from title V permitting to include synthetic area sources.”*

We support EPA’s rationale expressed in the March 21, 2011 final rule (76 Fed. Reg. 15578):

*“...we lack sufficient information at this juncture to distinguish the sources which have applied controls to boilers in order to become area sources*

*from other synthetic and natural area sources. As a result, the rationale for exempting most area sources subject to this rule as explained in the proposal preamble (see pages 31910 to 31913) is also now relevant for sources which we proposed to permit. Thus, no area sources subject to this subpart are required to obtain a title V permit as a result of being subject to this subpart.”*

Synthetic minor sources must have a federally enforceable permit to assure emissions remain below the major source threshold. The federally enforceable permit serves to ensure, through monitoring, recordkeeping and reporting requirements, the source's compliance. An additional Title V requirement would not provide any further compliance assurance and no emission reductions. Therefore, it would be unreasonable to impose Title V permitting burdens on the sources or the permitting authorities for synthetic minor sources.

## **IX. EPA HAS MADE IMPROVEMENTS TO MONITORING REQUIREMENTS**

### **a. 30-Day Averages are Appropriate for Operating Parameters**

We support EPA's determination that a 30-day rolling average for parameter monitoring and compliance with operating limits is appropriate for this rule. A longer averaging time for operating parameters is appropriate, because the standards apply over-all operating conditions, and operating conditions of industrial boilers can be highly variable, especially when fuel mix and load change. The operating parameter ranges will be established using test data obtained at one steady state operating condition, so a 30-day averaging period allows for some fluctuations that will occur over the range of operating conditions. EPA is correct in pointing out that variability outside the operator's control such as fuel content, seasonal factors, load cycling, and infrequent hours of needed operation give cause to use a longer averaging period (76 Fed. Reg. 80536).

We also request that EPA add a 30-day averaging period to the operating load requirement in Table 3 of the rule. Table 3 requires operators to maintain the operating load of each unit such that it does not exceed 110 percent of the average operating load recorded during the most recent performance test. For the same reasons provided above for the other operating parameters, EPA should allow a 30-day averaging period for operating load so short term high load periods that are more than 10 percent above the tested load do not result in deviations. Facilities make every attempt to schedule stack tests during periods of high utilization, but sometimes need to operate at more than 100 percent of the load achieved during the stack test for short periods of time in order to meet operational demands. The way the requirement is currently written implies that the 110 percent load limitation is instantaneous. We note that in Table 7, the load monitoring requirement does have a 30-day averaging period specified.

## **b. We Support the Changes to O<sub>2</sub> Monitoring Requirements**

In the March 21, 2011 final rule, EPA included continuous oxygen monitoring as the compliance method for sources with a CO limit, instead of mandating the use of CO CEMS. EPA now proposes to amend the oxygen monitoring requirements (76 FR 80536, Dec. 23, 2011) to allow for the use of continuous oxygen trim analyzer systems instead of oxygen CEMS. EPA is also removing the requirement that the oxygen monitor be located at the outlet of the boiler, so that it can be located either within the combustion zone or at the outlet as a flue gas oxygen monitor. We support EPA's proposal to add flexibility and reduce the cost and burden of the continuous oxygen monitoring requirements, as these changes allow facilities to utilize existing oxygen trim systems rather than installing CEMS.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

In addition, §63.11224(a)(7) should be modified to incorporate a safety component associated with the operation of oxygen trim system. Coal fired boilers subject to the

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

*(7) You must operate the oxygen analyzer system with the oxygen level set at or above the minimum percent oxygen by volume that is established as the operating limit for oxygen according to Table 64 to this subpart when firing the fuel or fuel mixture utilized during the most recent CO performance stack test. Operation of oxygen trim control systems to meet these requirements shall not be done in a manner which compromises furnace safety.*

#### **c. Sources Should Have the Option to Use a CO CEMS**

EPA is proposing to amend the monitoring requirements in 40 CFR 63.11224(a) to allow sources subject to a carbon monoxide emission limit the option to install, operate and maintain a carbon monoxide and oxygen continuous emission monitoring system (CEMS) (76 FR 80536, Dec. 23, 2011). This will allow facilities to choose between compliance using CO CEMS or compliance using an O<sub>2</sub> CEMS in combination with CO stack testing. We support EPA's decision to allow more flexibility in the CO monitoring requirements and allow facilities that already have CO CEMS to use their existing systems.

#### **X. EPA SHOULD PROMULGATE WORK PRACTICE STANDARDS FOR MALFUNCTIONS INSTEAD OF AFFIRMATIVE DEFENSE PROVISIONS**

EPA's proposal to provide an affirmative defense for periods of malfunction is without merit. EPA must instead establish work practices to address emissions during periods of malfunction. Comments recently submitted by the "SSM Coalition" on EPA's proposed "Risk and Technology Review" rule for Mineral Wool and Wool Fiberglass manufacturing explain in detail that: (1) EPA must take malfunctions into accounts when setting § 112 emissions standards; (2) the proposed affirmative defense is not a permissible substitute for setting emissions standards for periods of malfunction; and (3)

the proposed affirmative defense is unreasonable and impracticable.<sup>1</sup> Several of the undersigned associations also are members of the SSM Coalition. We incorporate these comments of the SSM Coalition by reference. For these reasons, EPA should set aside the proposed affirmative defense for periods of malfunction and, instead, set a work practice standard for such periods.

## **XI. THE DEFINITIONS OF STARTUP AND SHUTDOWN SHOULD BE REVISED**

EPA has proposed definitions of startup and shutdown that include a 25 percent load threshold as the end of startup and the beginning of shutdown. See 76 Fed. Reg. 80541. Some units have a minimum stable operating load that is higher than 25 percent (e.g., stable operation for a stoker or fluidized bed boiler may not be reached until 60 percent load). Likewise, liquid units may reach their minimum safe and stable operating load prior to reaching 25 percent of their maximum load. Therefore, EPA should revise the startup and shutdown definitions to allow facilities to determine the minimum stable operating load on a unit-specific basis. Startup should end when combustion conditions are stable for a particular unit, which is not always at 25 percent load. In some cases, this may be when the unit begins sending steam to the process. Facilities could include a site specific definition of startup and shutdown and the proper procedures to follow during startup and shutdown in a site-specific plan.

## **XII. THE DEFINITION OF NATURAL GAS CURTAILMENT SHOULD BE REVISED**

EPA has proposed to amend the definition of period of natural gas curtailment (76 FR 80536). The definition would be amended to read as follows:

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

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<sup>1</sup> See Letter to EPA Docket Center from the American Chemistry Council, *et al.*, Comments on Proposed National Emission Standards for Hazardous Air Pollutant Emissions: Mineral Wool Production and Wool Fiberglass Manufacturing (January 24, 2012).

We appreciate EPA's movement on this matter, but additional clarification is still needed. The current definition is unclear and problematic, particularly as it relates to typical requirements of interruptible gas supply contracts such as those often in place at industrial facilities. Many manufacturing companies that utilize natural gas-fired boilers and process heaters operate under contractual supply agreements with local utilities and natural gas suppliers. These entities often utilize FERC-regulated natural gas pipelines to transport natural gas supply from point of production to the consuming manufacturing facilities. Utilities and natural gas pipelines offer limited "firm supply" contracts and "interruptible supply" contracts, as appropriate, under FERC regulations to ensure the integrity of the natural gas pipeline transportation system and to maximize service according to defined user priorities for a given supply. Hospitals for example are critical users and are afforded high priority. Interrupting or "curtailing" service is required by FERC to ensure the integrity of the pipeline system. Contracts for supply define the terms of that curtailment. Interruptible service may involve lower gas prices than firm service prices because the higher priority commands a higher price. In many areas firm service is no longer available and interruptible service is the only option for manufacturing sites.

When disparity between overall supply and overall demand threatens the integrity of the pipeline transportation system, interruptible supply contracts are curtailed first generally by Operational Flow Orders (or similar contractual requirements by another name) issued to users under their supply contract terms. These orders do not generally involve physically blocking the supply pipeline,<sup>2</sup> but rather an evaluation after the fact of possible non-contractually compliant use during the curtailment period and the institution of a fine or penalty that can be assessed as high as 10 or so times the contract gas sales price. Payment of a penalty due to unauthorized natural gas usage during an Operational Flow Order (OFO) is regularly not considered an increase in the cost or unit price of natural gas or a surcharge due to market supply/demand fluctuations. The contracts and user requirements are to protect the integrity of the pipeline system and allow its operation in compliance with FERC requirements.

The current definition could be interpreted to mean that if a company contracts for interruptible natural gas supply, where the interruption could either mean the supply is halted by the utility/FERC regulated pipeline or the facility must switch fuels to avoid contractual fines, the use of backup liquid fuel during periods of high residential/critical

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<sup>2</sup> More drastic response such as blocking service lines generally is not considered unless more drastic curtailment situations warrant. This is not typical practice in the experience of many small manufacturers. In limited supply areas Operational Flow Order restrictions and curtailment may happen multiple times a year for interruptible supply users. In some regions even this level of curtailment is infrequent.

infrastructure demand would not constitute curtailment unless the utility/FERC-regulated pipeline actually physically halts the entire supply of gas to the facility.

Most utilities/FERC regulated pipelines do not have automatic shutoff capability, but rather rely on customers taking appropriate action to reduce gas use when needed. Therefore, due to the inclusion of the word “halted” in the current definition, we are concerned that the only conditions that would meet the definition are those where the gas supply to the facility is completely stopped beyond the control of the facility.

Given the many contractual arrangements possible, we request that EPA clarify that the Agency does not intend to restrict the ability of natural gas consumers to obtain the most appropriate gas purchasing contract arrangement for their purposes. In addition, please clarify that EPA will allow use of backup liquid fuel firing under those situations where the supply of natural gas is restricted to affected facilities under a purchase contract arrangement.

We suggest the following revision (see underlined text) to the definition:

*“Period of gas curtailment or supply interruption means a period of time during which the supply of gaseous fuel to an affected facility is halted or restricted for reasons beyond the control of the facility or due to the terms of a contractual agreement with a supplier of natural gas that allows gas curtailment or supply interruption. An increase in the cost or unit price of natural gas due to normal market fluctuations that does not occur during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. Restriction of supply by a natural gas supplier under a contractual order (e.g., operational flow order under a user’s interruptible supply contract) does constitute a period of natural gas curtailment. On-site gaseous fuel system emergencies or equipment failures also qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.”*

The definitions in both the Boiler MACT and GACT rules should be consistent.

### **XIII. SOME TECHNICAL CLARIFICATIONS ARE NECESSARY**

- EPA has clarified that the emission limits in Table 1 do not apply during periods of startup and shutdown. EPA should clarify that the operating limits set forth in Table 3 do not apply during startup and shutdown. The right column header of Table 3 currently reads “You must meet these operating limits...”. Please revise this to read “You must meet these operating limits, **except during startup and shutdown...**”
- For 40 CFR 63.11224, the preamble Table 1 shows that there will be changes to paragraph (b), but these are not in the rule language. The rule language also

included changes to paragraph (a), which was not discussed in the preamble Table 1.

- A startup and shutdown period exception must be added to the definitions of “30-day average” and “daily block average” added to §63.11237 because sources are exempt from meeting emission standards and operating parameter limits during startup and shutdown.

#### **XIV. CONCLUSION**

We appreciate the opportunity to provide these comments on the proposed changes to the industrial boiler Area Source Rule. As explained above, EPA has ample authority and justification to establish work practice standards instead of numeric emissions limitations for boilers covered by this rule. We agree with EPA’s rationale for exempting minor and synthetic minor sources subject to this rule from Title V permitting requirements. Further, we applaud the proposed changes that add flexibility and reduce the burden of the work practice standards and monitoring requirements. We encourage EPA to consider our arguments concerning the affirmative defense language and the improvements needed to the definition of natural gas curtailment.