

February 21, 2012

**Submitted via [www.regulations.gov](http://www.regulations.gov)**

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

**RE: Docket ID No. EPA-HQ-OAR-2002-0058, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (76 Federal Register 80598, December 23, 2011)**

This comment is submitted on behalf of American Municipal Power, Inc. ("AMP"). AMP is a nonprofit corporation serving a membership composed of 129 public power members in seven states. These comments are submitted on behalf of AMP's generating members who operate fossil fuel utility boilers in the Ohio cities of Orrville, Painesville, Shelby, Dover, and Hamilton. Each of these cities operates one or more municipal utility boilers serving electric generators of 25 megawatts or less, which have been included in the Industrial, Commercial, and Institutional Boiler and Process Heater MACT ("Boiler MACT") Source Category.

AMP submitted extensive comments on the Boiler MACT rule proposed June 4, 2010,<sup>1</sup> and submitted a Petition for Reconsideration of the final rule published March 21, 2011.<sup>2</sup> AMP incorporates those comments and petition (including all attachments) by reference here, and requests that EPA include in the administrative record for this rulemaking all documents submitted to EPA Docket No. EPA-HQ-OAR-2002-0058 at any time.

**EXECUTIVE SUMMARY**

AMP supports EPA's decision to re-propose the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters ("Boiler MACT") in response to the numerous public comments and petitions for reconsideration submitted to EPA. The rule as proposed at 76 Fed. Reg. 80598 (Dec. 23, 2011) ("Proposed Rule"), however, fails to correct the most fundamental flaws articulated in public comments and petitions. The

---

<sup>1</sup> 75 Fed. Reg. 32005 (June 4, 2010).

<sup>2</sup> 76 Fed. Reg. 15608 (March 21, 2011) (hereinafter "March 2011 rule").

rule remains unduly burdensome and unworkable, particularly for small, coal-fired municipal utilities. Small municipal utilities have faced disproportionate impacts under each iteration of this rule, and will continue to face disproportionate impacts under the Proposed Rule. Municipal utilities play an important role that is not filled by any other entity. Municipal utilities provide reliable and cost competitive electric service to small communities, increase electric grid reliability, attract high-quality jobs to local communities, and act as a buffer to price spikes and supply shortages during times of peak usage. These are important functions that the Proposed Rule threatens to regulate out of existence. EPA has the regulatory authority to avoid that adverse result. By adopting the changes recommended below, EPA can fulfill its duties under the Clean Air Act without disrupting the vital public services that small municipal utilities provide.

EPA appropriately requested comment on the impact of the reconsidered rule on small entities. 76 Fed. Reg. 80625. As discussed in greater detail below, the emission limits for the coal-fired subcategories have become significantly more stringent on reconsideration, which increases the disproportionate burden on small entities in these subcategories, including AMP's generating members. Therefore, it is appropriate as part of the reconsidered rule for EPA to revisit the recommendations to mitigate the burden on small entities that came out of EPA's Regulatory Flexibility Act process for small businesses and other small entities. The Small Business Advocacy Review Panel, which EPA convened to identify ways EPA could reduce the impact of the Boiler MACT rule on small entities, identified the health-based emission limit ("HBEL") as the most important step EPA could take to reduce the crushing cost burden on small entities like municipal utilities. The Panel's recommendation is even more apt on reconsideration; the most important change EPA can adopt to reduce the rule's adverse impact on municipal utilities is to allow small entities the opportunity to petition for a site-specific HBEL for HCl. Without this relief, scrubber technologies for HCl impose significant costs on small entities that cannot be justified based on environmental benefits. An HBEL would allow those small utilities whose emissions do not pose a threat to human health or the environment to avoid millions of dollars in unnecessary compliance costs and allow them to remain viable and cost competitive electricity providers in their communities. EPA has the opportunity to mitigate the stranglehold this rule will place on small entities, many of whom are being heralded as the engines of job growth in this economy. Given our economic circumstance, and the disproportionate impact of this rule on small entities, it would be arbitrary and capricious for EPA to set aside one of the key tools Congress provides to EPA in the Clean Air Act for mitigating unnecessary costs. At minimum, EPA should provide this alternative to small entities when they can demonstrate their HCl impact falls below a health-based threshold.

EPA has unquestionable authority to adopt HBELs under section 112(d)(4) for pollutants "for which a health threshold has been established." A health threshold has been established for HCl below which concentrations have no measurable adverse health effects. In 2004, EPA concluded that technology-based limits for these pollutants were unnecessary, in certain circumstances, to assure the "ample margin of safety" required by section 112(d)(4). EPA has changed course with no adequate explanation as to why the thorough analysis it completed in 2004 – and defended rigorously thereafter – is no longer sufficient. EPA should exercise its authority to provide critical relief for small entities, consistent with the recommendations of the Small Business Advocacy Panel, in the form of a site-specific health based option for the HCl emission limit.

EPA should also provide the maximum time allowed by law for facilities to come into compliance with the final Boiler MACT rule. AMP supports EPA's decision to reset the 3-year compliance date with the publication of the reconsidered rule. EPA should also use its authority under section 112(i) to provide a categorical 1-year compliance extension for all units installing additional controls to meet the rule requirements. Municipal utilities face additional challenges in implementing necessary changes within a three-year window due to the special political process that municipal utilities must follow. Many municipalities face multiple layers of approvals, public notice requirements, and complicated bidding processes that are not shared by those in the private sector. For municipal utilities, it is imperative that EPA grant as much time as possible for sources to come into compliance.

AMP supports EPA's decision to require work practice standards during periods of startup and shutdown. However, AMP does not support the additional work practices (and their associated recordkeeping and reporting obligations) EPA added to the Proposed Rule. The additional work practice standards EPA is requiring will place a significant burden on small utilities, who have limited personnel available to track the training, oxygen measurements, and other data EPA is requesting for startup and shutdown events. Boiler operators are already employing best practices for reducing emissions during periods of startup and shutdown, both to comply with EPA's requirement to operate equipment consistent with good pollution control practices and for business reasons. EPA's extra requirements merely serve to increase paperwork and the likelihood of inadvertent technical deviations without providing any environmental benefit.

AMP also supports EPA's acknowledgment that units should have a bright line to determine when units are subject to a numeric emission limit and when they are subject to a work practice standard. However, AMP does not support a blanket definition of startup and shutdown for all units using a 25 percent load threshold. Each boiler has a different point at which operation becomes "stable" and is no longer "starting up" or "shutting down." For coal-fired stoker units, this is generally around 60 percent load. For pulverizers, it is around 50 percent, though these values can differ from unit to unit. Boiler operators must be able to make adjustments during these startup and shutdown periods to maintain safe operation of the boiler and to avoid damaging equipment. The startup and shutdown of any unit will be dependent on a variety of factors, and cannot be defined in terms of either load or timing for all types of units across the board. Facilities must be able to establish unit-specific startup and shutdown definitions to ensure safe operation of their boilers.

AMP supports EPA's decision to not require specific startup fuel for any units or subcategory. Not all fuels are available in all locations, and most sources are only permitted to burn specific fuel types. EPA has not performed a cost/benefit analysis to evaluate the economic and environmental costs of installing new natural gas pipelines to get the gas to units in remote locations or the cost of retrofitting existing units to accommodate a new fuel for startup purposes. EPA appropriately defers to local decisions on how to safely and efficiently start a boiler. AMP continues to support EPA's determination to regulate without dictating fuel choices and EPA's decision to not require specific startup fuels for units in this source category.

AMP also supports EPA's decision to require work practice standards in lieu of numeric emission limits for dioxin/furan. As noted by AMP and many other commenters, the dioxin/furan levels from the

units in the Boiler MACT source category are too low to be reliably measured or controlled. EPA has ample authority under section 112(h) to require a tune-up work practice standard in lieu of a numeric emission limit to facilitate efficient combustion to minimize organic HAP in these circumstances.

EPA should also impose a work practice standard in lieu of a numeric CO limit, as it did in the Utility MACT rule.<sup>3</sup> Unlike most other sources subject to the Boiler MACT rule, AMP's generating members compete with larger utilities subject to Utility MACT. In the Utility MACT rulemaking, EPA determined that work practices were appropriate to control organic HAP, because organic HAP were too low to reliably measure, even in these larger utility boilers. EPA can also justify CO work practices for the small utilities subject to Boiler MACT. They also have organic HAP too low to reliably measure and they are small entities in need of relief. EPA also discovered that, due to these low levels of organic HAP, it was not possible to establish a CO limit that would act as a supportable surrogate for utilities. EPA did not perform this detailed analysis for sources subject to the Boiler MACT rulemaking, but the organic HAP results submitted to EPA for small utilities and other small entities in this source category indicate a significant amount of data that is below the level of reliable measurement. EPA cannot assume that CO is an appropriate surrogate for the small utilities in this source category given this information. Because CO cannot be used as a surrogate for small utilities, and because organic HAP levels are likely too low to measure reliably for these entities, it is appropriate to establish a work practice standard for CO in the final rule instead of a numeric emission limit for the small utilities subject to Boiler MACT.

EPA set emission limits that are unachievable for any existing source by improperly calculating MACT floors. By selecting the top performing 12 percent of sources for *each* pollutant to establish MACT standards, rather than the top performing 12 percent of sources across *all* pollutants, EPA has flouted its statutory obligation to set standards based on the performance of "sources." See CAA § 112(d). Furthermore, these standards were based on inadequate and biased data. In the case of CO limits for pulverized coal units, EPA established emission standards for hundreds of sources based on test results of only two units and then failed to adequately incorporate variability into the emission limits. EPA also tied its own hands by collecting limited stack test data from a subset of high-performing sources and failed to use available "emissions information" to estimate emissions from sources lacking test data. This resulted in EPA considering snap shots of emissions information from only a small subset of the best-performing units and led to unreasonably stringent MACT standards that do not represent the top 12 percent of *all* sources "for which the Administrator has emissions information." EPA must recalculate MACT floors in a manner consistent with the requirements of section 112 of the Act.

AMP supports EPA's inclusion of a limited use boiler subcategory. Limited use boilers spend a significant portion of their operating time in start-up and shut-down mode, and operating times are often unpredictable. This makes it impossible to schedule and test these units at or near full load. Furthermore, these units generally would not collect sufficient data to establish 30-day averages for operating limits. To demonstrate compliance with the emission limits and operating limits, these sources would be required to operate more often than they would otherwise, resulting in increased emissions. Defining a limited use subcategory that restricts operation of these boilers to 10 percent of their annual rated capacity, instead of 10 percent of annual operating hours, would ensure that sources could

---

<sup>3</sup> 77 Fed. Reg. 9304, 9369 (Feb. 16, 2012).

continue to use these backup units in a limited way with limited emissions without the complications of defining an operating hour for units with extended periods of startup or shutdown or inadvertently creating incentives for unsafe or inefficient operation.

AMP does not support EPA's use of operating limits as a means of demonstrating continuous compliance with the emission limits. By requiring sources to operate at the minimum (or maximum, as applicable) value established during a performance test, EPA is imposing a more stringent emission limit on the source every time a source tests below its allowable emission level. This serves as an impermissible beyond-the-floor emission limit that EPA adopted without considering costs or other criteria required by statute. Operating parameters may be appropriate triggers for corrective measures to ensure a control device is properly operating. To that end, AMP supports EPA's proposed removal of the CO CEM requirement and use of an O<sub>2</sub> trim system in its place. Most facilities already operate trim systems to help monitor combustion, and are familiar with their operation. Furthermore, their location at the source of combustion is a more accurate measure of combustion efficiency than a downstream monitor in the stack.

AMP supports a 30-day averaging period for all operating parameters. Municipal utility boilers may experience a variety of load conditions and other variables that may affect performance, and providing a 30-day averaging period will give these units necessary flexibility to demonstrate compliance. AMP further requests EPA to clarify that the 30-day rolling average also applies to operating load and oxygen limits. These parameters currently do not have a defined averaging period, and this clarification is necessary to avoid confusion in the regulated community.

EPA should also clarify that the emission limits, work practice standards, and operating limits apply "at all times ***the affected unit is operating***" and not "at all times." The current language of the Proposed Rule creates an ambiguity that could be interpreted to require sources to meet control device operating limits and demonstrate compliance when the emission unit is not operating and is not generating emissions. This would create an unreasonable and unnecessary burden for small municipalities that struggle to keep on top of already onerous recordkeeping and monitoring requirements. EPA should take this opportunity to clarify the rule and avoid this absurd result.

EPA should also clarify that sources do not automatically reset operating limits during each stack test. If the purpose behind operating limits is to establish a benchmark operating rate that is indicative of compliance, sources should be able to demonstrate compliance with any operating limit that was established during a compliant stack test. EPA should clarify that sources have the *option* of resetting operating parameters with subsequent stack tests, but are not *required* to do so.

AMP appreciates EPA's willingness to abandon its unsupportable PM CEM requirement for coal-fired units greater than 250 mmBtu/hr, but does not support EPA's proposal to require PM CPMS for these units instead. Like the PM CEMS, PM CPMS are unproven technology and redundant in light of the Compliance Assurance Monitoring and opacity monitors already in use by all of AMP's generating members. Requiring a PM CPMS adds no environmental benefit but it does add significant cost. EPA has offered no explanation for requiring additional monitoring on a subset of units (>250 mmBtu/hr),

while relying on other parametric monitoring (such as continuous opacity monitors already installed) for other units. This requirement is arbitrary and unreasonable and should be removed from the final rule.

AMP appreciates the multitude of flexible compliance alternatives EPA has incorporated into the proposed rule, including the TSM alternative, the CEM and fuel analysis options, and the output-based limits. AMP also appreciates the flexibility of the emissions averaging provisions, but requests that EPA make adjustments to the Proposed Rule to make it more usable for municipal utilities. First, the 10 percent penalty provision should be removed. EPA did not include such a penalty in the 2004 rule, and offers no explanation for including it in this rule. The rule as written contains adequate safeguards to ensure emission limits are met. Second, EPA should remove the restriction on units equipped with a CEM or PM CPMS. Units that demonstrate compliance using stack tests are capable of developing 30-day averages based on their stack tests and utilization records to create an apples-to-apples comparison to units utilizing a CEM. Excluding units operating CEMs and PM CPMS creates a disincentive to use these flexible compliance options and it excludes many small entities from this regulatory relief, because, like AMP's small entities, they operate one or more units with continuous monitoring. EPA has articulated no justification for either the 10 percent penalty or the exclusion of CEM/PM CPMS units, and should remove these restrictions from the final rule.

AMP appreciates EPA's efforts to mitigate the impact of this rule in certain instances, but more is needed to focus this relief on the small entities disproportionately affected by this rule. AMP also has serious concerns about the achievability and legality of the emission limits and compliance methods contained in the Proposed Rule. On behalf of its generating members, AMP respectfully requests that EPA adopt the changes recommended herein in the final Boiler MACT rule.

#### **I. EPA Should Adopt a Health-Based Emission Limit for HCl**

EPA has long recognized its authority to adopt health-based emission limits ("HBELs") pursuant to CAA § 112(d)(4). Section 112(d)(4) authorizes EPA to consider, "[w]ith respect to pollutants for which a health threshold has been established . . . such threshold level, with an ample margin of safety, when establishing emission standards under [112(d)]." Congress's intent in including section 112(d)(4) was to avoid setting HAP emission limits that go well beyond what is needed to protect the public. In formulating this section of the CAA, Congress recognized that "[f]or some pollutants a MACT emissions limitation may be far more stringent than is necessary to protect public health and the environment."<sup>4</sup> As a result, Congress included section 112(d)(4) as an alternative standard setting mechanism for HAPs "where health thresholds are well-established . . . and the pollutant presents no risk of other adverse health effects, including cancer. . . ."<sup>5</sup>

In the 2004 Boiler MACT rule, EPA determined that the MACT floor limits established for HCl were in some cases more stringent than necessary to protect public health, and established an HBEL as a compliance alternative for solid fuel-fired boilers. The HCl limits EPA found more stringent than necessary were 0.02 lb/mmBtu and 0.07 lb/mmBtu for new and existing units, respectively.<sup>6</sup> Since that

---

<sup>4</sup> S. REP. NO. 101-228 (1990) at 171.

<sup>5</sup> *Id.*

<sup>6</sup> 69 Fed. Reg. at 55270.

time, EPA has continued to impose even more stringent HCl limits on solid fuel-fired boilers. In the March 2011 Rule, EPA imposed an HCl limit of 0.035 lb/mmBtu on existing units. Despite recommendations and numerous comments from the regulated community (including the Small Business Advisory Review Panel), EPA declined to include an HBEL in that rule. In the Proposed Rule, EPA has proposed an HCl limit that is **more than 30% more stringent** than the March 2011 rule and **almost 70% more stringent** than the 2004 rule for solid fuel-fired units. These significantly more stringent limits only bolster support for EPA's initial 2004 determination and the recommendations of the Small Business Advisory Review Panel ("SBA Review Panel"). EPA has articulated no explanation for abandoning its 2004 approach or ignoring the advice of the SBA Panel. A final rule that does not include an HBEL option would be unsupportable.

**a. It Would Be Arbitrary for EPA to Ignore the Advice of the Small Business Advocacy Panel Given the Increased Stringency of the HCl Limits**

The Regulatory Flexibility Act ("RFA") requires EPA to analyze the impacts of its rules on small entities (including small government entities) for rules that will have a significant impact on a substantial number of small entities.<sup>7</sup> To assist with this analysis, EPA convened the SBA Review Panel to recommend ways the Agency could alleviate the rule's impacts on small businesses and governments. The Small Business Advocacy Review Panel identified HBELs as "**the most important step** EPA could take to mitigate the serious financial harm the Boiler MACT would otherwise inflict on small entities using solid fuels nationwide. . . ."<sup>8</sup> All of AMP's generating members now anticipate needing controls to comply with the proposed HCl limits. Even the best-performing AMP member must now concede that fuel management may not be a sufficient strategy to meet an emission limit of 0.022 lb/mmBtu. Given the increased stringency of the HCl limit in the Proposed Rule, it is likely that many more entities would be forced to install controls than under the March 2011 rule.

EPA estimated a median compliance cost for small public entities of \$1.1 million, with cost-to-revenue ratios greater than 10 percent.<sup>9</sup> EPA has estimated no change in costs for these entities, despite proposing more stringent emission limits on coal-fired units for nearly every pollutant. Furthermore, AMP provided EPA with additional cost information in the 2010 AMP Comments that demonstrated many entities will experience significantly higher annual costs. The City of Orrville and the City of Painesville have independently evaluated the cost of controlling HCl emissions at their coal-fired electric utilities and determined that the capital cost for a single unit would reach \$5-16 million, with annual operating costs between \$900,000 and \$1.2 million. The City of Painesville operates three boilers, and the City of Orrville operates four. These facilities would incur \$3-4 million in operating costs each year *for HCl control alone*.<sup>10</sup> Many small entities will be unable to absorb these unnecessary costs and be forced to severely curtail or shutdown operations entirely. This would significantly hinder municipal

---

<sup>7</sup> 5 U.S.C. § 603.

<sup>8</sup> SBA REVIEW PANEL, FINAL REPORT at 23 (emphasis added).

<sup>9</sup> Memorandum from Tom Walton to Brian Shrager, re: Regulatory Impact Results for the Reconsideration Proposal for National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters at Major Sources (Dec. 1, 2011).

<sup>10</sup> This represents \$33,000 per customer in capital costs and an additional \$3,000 per customer for annual operating costs.

utilities' ability to provide reliable electrical services to their communities, grid support during high demand periods to avoid brownouts, and quality work opportunities for local residents. Adopting MACT standards that force small entities to severely curtail or eliminate operations is contrary to the intent of Congress, which has stated that "MACT is not intended to . . . drive sources to the brink of shutdown." HOUSE REP. NO. 101-490, Part 1 (1990) at 328. But that is precisely what will happen to small entities under the Proposed Rule unless changes are made.

Adoption of an HBEL for acid gases would significantly reduce this cost burden for small entities by allowing them to meet emission limitations that are protective of human health and the environment without spending millions on unnecessary control equipment and operating costs. Under both the RFA and the Unfunded Mandates Reform Act ("UMRA"), EPA is obligated to consider the costs of its rules on small government entities and to analyze the costs of alternative regulatory approaches. EPA has not done so. EPA never analyzed the significant costs that might be avoided by offering an HBEL option for HCl, despite the fact that the SBA Review Panel's number one recommendation was adoption of an HBEL.<sup>11</sup> Instead, EPA vaguely asserted a lack of information and implementation issues that do not exist. In the final March 2011 rule, EPA cited the "potential environmental impacts and cumulative impacts of acid gases on public health."<sup>12</sup> EPA performed a thorough analysis of the HBEL alternative in 2004, and concluded it could establish an HBEL that was protective of human health and the environment with an ample margin of safety. Furthermore, the 2004 HBEL alternative required each source wishing to use the HBEL to perform a site-specific risk analysis to ensure that the public would be adequately protected.

EPA further attempted to justify its exclusion of an HBEL option by citing the co-benefits of collateral non-HAP emission reduction that would occur under the technology-based limitation. Specifically, EPA cited reductions in SO<sub>2</sub>, non-condensable PM, and other non-HAP acid gases.<sup>13</sup> The Clean Air Act does not permit EPA to consider non-HAP collateral emission reductions in setting standards. Section 112(d)(2) provides an express list of factors that EPA may consider in setting section 112(d) standards. That list includes "the cost of achieving such emission reduction, and any **non-air quality** health and environmental impacts and energy requirements." (emphasis added). This list does not include consideration of non-HAP air quality benefits, which are likely to be minimal at best. In the coming years, many of these sources will be required to reduce SO<sub>2</sub> and PM emissions because of other regulatory requirements, such as the revised NAAQS standards. It would be unreasonable for EPA to base its refusal to include an HBEL on reductions in pollutants that are already managed by other programs. EPA cannot support its refusal to properly analyze the HBEL option under the RFA and UMRA by citing non-existent "potential" impacts and air quality benefits that are likely to occur with or without the Boiler MACT rule.

EPA has articulated no legitimate reason for ignoring the advice of the SBA Review Panel, which was convened for the express purposes of helping EPA to analyze the impact of the Boiler MACT rule on small entities. The Panel's recommendations are even more relevant now that EPA has proposed to

---

<sup>11</sup> EPA properly analyzed the costs savings in 2004, and determined it would save approximately \$2 billion in unnecessary control costs.

<sup>12</sup> 76 Fed. Reg. at 15643.

<sup>13</sup> 75 Fed. Reg. at 32032.



reduce the HCl limit by an additional 30 percent. EPA did not adequately consider and analyze regulatory options to reduce the impact of the rule on small government entities as required by the RFA and UMRA, and has acted arbitrarily and capriciously in rejecting the SBA Review Panel's recommendations using meritless arguments.

**b. It Would Be Arbitrary for EPA to Disregard Its Prior Adoption of Health-Based Emission Limits**

When EPA first promulgated the Boiler MACT rule in 2004, it included HBELs for HCl and manganese. These standards required a site-specific risk assessment to demonstrate that emissions from the site were low enough to protect human health with an ample margin of safety. The standards also required actual emission testing to verify emission rates used in the risk assessment, and required sources to include relevant site parameters such as stack height and fence locations in its Title V operating permit.<sup>14</sup> These standards required accountability, and were more than adequate to protect human health and the environment without forcing struggling small entities to invest millions in unnecessary control equipment. EPA and the Department of Justice vigorously defended these HBELs in the final 2004 rule and in the ensuing litigation. EPA dedicated 17 pages of its brief to explaining why its HBELs complied with the requirements of section 112(d)(4). In that brief, EPA acknowledged making the following determinations: (1) both HCl and manganese have reference concentrations and have not been shown to be carcinogenic, (2) the HBELs provided an ample margin of safety, (3) "health-based standards would not reduce the HAP-related health benefits from the rule because only those facilities with emissions that did not pose a health risk would qualify for the alternative standards," (4) it is inappropriate to consider potential cumulative risks until the residual risk stage of the NESHAP process, and (5) "the potential collateral benefits of controls were not a proper reason to impose control costs under the HAPs program on facilities with HAP emissions that did not pose a public health risk." EPA argued that each of these positions was reasonable, in accord with the law, and entitled to deference. EPA has offered no explanation for its about-face on this issue.

Although EPA has discretion in setting HBELs, "a reasoned explanation is needed for disregarding facts and circumstances that underlay or were engendered by [a] prior policy." *FCC v. Fox Television Stations, Inc.*, 129 S. Ct. 1800, 1810 (2009). EPA has offered no explanation for its change in position, or even acknowledged its prior defense of HBELs in the 2004 Boiler MACT rule. In particular, the two main arguments EPA relies upon for refusing to establish an HBEL for HCl – the concern over cumulative risks and collateral benefits – are *directly contrary* to the conclusions EPA reached in items (4) and (5) above. EPA's failure to acknowledge its prior determination and failure to explain why it has raised as questions issues that previously were resolved render its decision not to propose HBELs arbitrary and capricious.

---

<sup>14</sup> See 69 Fed. Reg. at 55227-28.

**c. Including a Health-Based Emission Limit Alternative for Small Entities Is Supported by the Record**

AMP and numerous other commenters provided EPA with significant legal and factual support for including HBELs in the final rule, and demonstrated that EPA's concerns were unfounded. EPA has offered no legitimate justification for ignoring this data and refusing to adopt an HBEL. EPA's actions are even more problematic in light of the Proposed Rule, in which EPA has imposed even more stringent HCl limits than in the March 2011 rule. Municipalities have been hit particularly hard by the economic downturn, as federal and state money and local tax revenues have declined sharply since 2008. They face severe budget constraints that are driving difficult resource allocation choices. Congress gave EPA a tool to mitigate cost when relaxed limits are adequately protective, and EPA should use this tool to mitigate some of the burden on small entities and small governments. Given all of the data now before the Agency, it would be arbitrary and capricious for EPA to publish a final rule that sets HCl limits that are far more stringent than necessary to protect human health and the environment.

EPA could avoid this arbitrary and capricious finding and avoid violating the RFA by crafting an HBEL alternative for those units operated by qualifying small entities under the RFA. EPA has ample authority for adopting an HBEL for HCl, and doing so here would harmonize EPA's actions with the findings it made – and never refuted – in the 2004 Boiler MACT rule. If EPA is unwilling to include a blanket HBEL for HCl in the final rule, the rule should, at minimum, include a provision allowing small entities to petition for an HBEL on a site-specific basis. Because the petition process would be limited to small entities, the number of potential petitions would be limited to a manageable number. Site-specific evaluations would allow for an evaluation of potential cumulative impacts from nearby sources and provide sources an opportunity to demonstrate that they can adequately protect human health and the environment without wasting millions of dollars on unnecessary controls. Preserving the possibility of a site-specific HBEL through a petition process will provide necessary relief to small entities without compromising human health or the environment and without necessitating a complete rewrite of the HCl standards in the final rule.

**II. EPA Should Reset the Compliance Date to Provide Existing Sources with the Maximum Compliance Time Allowed by Law**

EPA proposed resetting the Boiler MACT compliance date for existing sources to the date three years after publication of the reconsidered final rule.<sup>15</sup> AMP supports resetting the compliance date, and encourages EPA to use the discretion granted under CAA § 112(i)(3) to grant a categorical 1-year extension to all sources installing control equipment to comply with the standards. The uncertainty generated by the complicated history of this regulation has made it impossible for sources to begin compliance planning prior to issuance of the final reconsidered rule. Even now, sources are uncertain of the final emissions limits, what controls may be necessary to achieve these limits, and whether they will be regulated by the Boiler MACT rule or the CISWI rule. The Boiler MACT rule will establish limits for multiple pollutants that require multiple controls and facilities cannot analyze the trade-offs posed by

---

<sup>15</sup> 76 Fed. Reg. at 80605.

various control options until the final emission limits are published.<sup>16</sup> Sources must also be cognizant of other regulations imposing emission limits for different pollutants when adopting a Boiler MACT control strategy. For example, a facility cannot implement a CO reduction strategy that will result in a NOx increase if the facility is located in a non-attainment area or is otherwise subject to stringent NOx emission limits. Some control options may affect pollutants subject to a National Ambient Air Quality Standard and changes in the concentration, temperature, velocity and height of the exhaust gas may adversely impact air dispersion modeling results triggering new concerns and complications. These complexities will require extensive and detailed planning that cannot take place until EPA finalizes the Boiler MACT emission standards.

Approximately 1600 boilers will be required to reduce emissions to comply with the expected final Boiler MACT rule. EPA estimates that investments in control equipment will cost more than \$5 billion. As noted in the comments submitted by Paul Noe of the American Forest and Paper Association, submitted on behalf of a group of industry representatives (hereinafter “AF&PA Industry Comments”), these costs are significantly underestimated and are more likely to exceed \$14 billion. In a challenging economy, justifying and acquiring the necessary capital for these improvements will require lengthy negotiations with banks and other financial institutions. Facilities requiring control upgrades will be required to devote significant resources to capital planning purposes. This burden is particularly acute for municipal utilities that do not have personnel dedicated exclusively to environmental compliance planning. Municipally-owned utilities must work through their local council or other political organization to initiate capital planning, solicit and approve bids, finalize compliance plans and allocate necessary funding, which adds significant time to an already complicated compliance planning process. For the City of Orrville, the entire process from initial planning to installation of control equipment is expected to take 4.5 years, assuming no significant adverse public reaction or delays.<sup>17</sup>

The 1600 sources expected to require new control equipment or retrofits will also place an enormous demand on state permitting and regulatory authorities, engineering design firms, stack testing companies, and fabricators. Sources subject Boiler MACT will not only be competing with each other for access to qualified engineers and equipment they will also be competing with sources subject to the updated NOx and SO<sub>2</sub> NAAQS, the Cross-State Air Pollution Rule, the Utility MACT, and various Risk and Technology Review sector rules. Given these realities, it is appropriate for EPA to establish the latest compliance date allowed by law.

In particular, as it has done in at least one prior MACT standard, EPA should grant a categorical one-year extension to the proposed 3-year compliance date. In promulgating MACT standards for marine tank vessel loading operations, the Agency determined that the rule “shall allow existing sources regulated solely under section 112 four years to be in full compliance with the emission control

---

<sup>16</sup> For example, presence of SO<sub>3</sub> can have a significant negative impact on the Hg removal that is achieved by activated carbon injection, and use of catalysts for NOx and CO control can oxidize SO<sub>2</sub> in flue gas to SO<sub>3</sub>. However, presence of SO<sub>3</sub> in flue gas tends to improve PM collection efficiency of ESPs by lowering ash resistivity and also may improve dioxin capture.

<sup>17</sup> See Declaration of Harm, Boiler MACT Major Source Administrative Stay (Apr. 22, 2011) (included as Attachment A).

requirements promulgated under section 112.”<sup>18</sup> EPA observed that “section 112(i) of the Act specifically allows EPA to provide sources with a waiver of up to 1 year to achieve full compliance” and that a categorical extension was warranted in that case because “standards containing similar compliance dates for a large number of sources would result in numerous facilities competing for a limited number of experienced contractors in order to meet the standards at the same time.”<sup>19</sup> Thus, EPA clearly has construed § 112(i)(3)(B) as authorizing categorical compliance extensions.<sup>20</sup>

### **III. EPA Should Retain the Work Practice Standard Adopted in the March 21, 2011 Final Rule During Periods of Startup and Shutdown**

AMP supports the inclusion of work practice standards for periods of startup and shutdown, but sees no need (and EPA has articulated no reason) to adopt work practice standards different from those adopted in the March 2011 Boiler MACT rule. In that rule, EPA properly determined that it was not feasible to establish numeric emission limits for periods of startup and shutdown due to the limited duration of startup and shutdown and the increased emissions that could result from requiring extended operation in this mode to facilitate testing to quantify emissions. Furthermore, the stack test data relied upon to establish emission limits does not reflect periods of startup and shutdown. In lieu of numeric emission limits, EPA developed a work practice standard pursuant to CAA § 112(h) that required sources to minimize emissions during periods of startup and shutdown using the manufacturer’s recommended procedures or the procedures of a unit of similar design.<sup>21</sup> In the Proposed Rule, EPA proposed additional work practice standards, claiming that “[g]eneral duty requirements do not constitute appropriate work practice standards under section 112(h).”<sup>22</sup> EPA provided no reason for this change in position. Nothing in CAA § 112(h) suggests that a work practice standard of minimizing emissions using accepted emission reduction procedures is inadequate.

#### **a. Additional Work Practice Standards During Startup and Shutdown Are Unnecessary**

The additional work practices EPA has proposed create unnecessary recordkeeping and reporting burdens that increase costs without any additional environmental benefits. The duty to minimize emissions consistent with recommended procedures would necessarily include adherence to good combustion practices. Boiler operators have a business incentive to operate their boilers as efficiently as possible. Furthermore, optimal O<sub>2</sub> concentrations will vary by boiler and design. Many existing units, and all of AMP members’ generating units, were constructed prior to 1970, and do not have manufacturer’s instructions indicating optimal O<sub>2</sub> concentrations. “Similar units” that are significantly newer may not necessarily share the same O<sub>2</sub> optimization range. For these units, boiler operator knowledge and general good combustion practices for similar units would be a more

---

<sup>18</sup> 60 Fed. Reg. 48388, 48392 (Sept. 19, 1995).

<sup>19</sup> *Id.*

<sup>20</sup> The DC Circuit decision in the PCWP MACT case, *NRDC v. EPA*, 489 F.3d 1364 (D.C. Cir. 2007), does not take away EPA’s authority to grant categorical 1-year compliance extensions. For further analysis of this opinion, see AF&PA Industry Comments.

<sup>21</sup> 76 Fed. Reg. at 15642.

<sup>22</sup> 76 Fed. Reg. 80615.

appropriate benchmark for optimal combustion than a numeric O<sub>2</sub> concentration that may or may not represent the most efficient combustion for that unit.

Similarly, the proposed boiler operator training requirements are unnecessary and serve only to create additional recordkeeping and reporting requirements and increase the cost of the rule. The Proposed Rule already requires boiler operators to “at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.”<sup>23</sup> To satisfy this condition, and to operate the boiler in a safe manner, boiler operators receive appropriate training. Adding a training work practice standard adds nothing to the rule except additional recordkeeping and reporting requirements that do not serve any beneficial environmental purpose.

These additional recordkeeping and reporting requirements impose particular hardship on small municipal utilities that do not have personnel dedicated solely to environmental compliance. Each additional recordkeeping and reporting obligation created by the Boiler MACT rule must be carried out by boiler operators in addition to their general operating duties. Superfluous recordkeeping and reporting obligations that serve no environmental purpose should be eliminated wherever possible to avoid unnecessary compliance costs that could be better allocated to meaningful emission reduction investments. This is particularly the case here, where EPA has offered no reason for abandoning its previous work practice approach.

**b. Startup and Shutdown Definitions Must Be Established on a Site-Specific Basis**

EPA has included a threshold of 25 percent load in its definitions of startup and shutdown.<sup>24</sup> Setting a threshold for all units is inappropriate, particularly a threshold based on percent load. Some units have a minimum stable operating load that is higher than 25 percent (e.g., stable operation for a stoker boiler may not be reached until 60 percent load). In addition, some control devices cannot be turned on until exhaust gas temperatures reach a certain level, and must be shut off before the temperature dips below this threshold. The ESPs at the City of Painesville, for example, cannot be turned on until the exhaust temperature reaches at least 250 degrees Fahrenheit. At lower exhaust gas temperatures, stack gas can condense on the precipitator plates and cause corrosion. The temperature is dependent on multiple factors, and is not necessarily correlated to a specific load level. AMP agrees that periods of startup and shutdown should be defined for each unit to clearly identify when numeric emission limits apply; however, facilities must be able to define periods of startup and shutdown on a site-specific basis to properly identify the appropriate parameter(s) indicative of stable operating conditions.

**c. It is Inappropriate to Establish Time Limitations on Startup and Shutdown Periods**

EPA requested comment on whether a maximum time should be included in the startup and shutdown definitions. Such a requirement is unnecessary, as safety and proper operation of the boiler and associated equipment dictate the amount of time that is needed for startup and shutdown. This

---

<sup>23</sup> 76 Fed. Reg. at 80629.

<sup>24</sup> 76 Fed. Reg. at 80654.

time period will vary from unit to unit and from site to site. Safe operation of a coal-fired boiler, for example, may require operators to bring a unit online from a cold start over a period of several days. A non-cold startup, however, may take a period of hours.

EPA's concern that units will operate in perpetual startup or shutdown mode to avoid emission limits is unfounded. Industrial boilers cannot operate in perpetual startup or shutdown mode because this is, by definition, not a stable operating condition. Attempting to operate the unit for extensive periods of time at these levels would cause flame instability as well as increased fuel costs due to inefficient operation. This creates an additional burden on control equipment, which does not operate efficiently until the boiler reaches a stable load. Furthermore, units used for electricity generation can only serve this purpose if they are supplying a steady and sufficient steam flow to the turbine generators. Turbines can become unstable and pose a safety risk if they do not receive sufficient steam. During periods of startup and shutdown, the steam flow is not sufficient to operate the turbine for any significant period of time. Frequent startups and shutdowns also cause excessive wear on the equipment and controls and are not part of standard practice.

EPA has adequate assurances that startup and shutdown will be minimized without setting an arbitrary time limit. The Proposed Rule places a general duty on operators to use good combustion practices for minimizing emissions, which would necessarily include minimizing periods of startup and shutdown. Operators also have a business incentive to operate their boilers in the most efficient manner possible, which includes minimizing periods of startup and shutdown. Overly prescriptive and non-facility-specific requirements would be counterproductive, restricting the operators' flexibility in a way that hampers their ability to troubleshoot or respond to an event, or that compromises safety. EPA does not need to establish a time restriction on startup and shutdown events in light of these facts.

**d. Requiring Specific Startup Fuel is Not Feasible for Many Units and Would Be Inconsistent with EPA's Prior Determinations**

EPA also requested comment on whether sources should be required to use specific fuels during periods of startup and shutdown. Not all facilities are permitted for or have access to sufficient natural gas to be able to use it as their startup fuel, and not all units are capable of burning natural gas or distillate oil. Specifying the use of natural gas or distillate fuel oil would also result in increased capital and operating costs for many facilities; these fuels are in many cases more expensive than a unit's primary operating fuel and require different infrastructure to accommodate. EPA has not analyzed the cost of requiring potentially extensive infrastructure changes, such as running natural gas lines to areas where natural gas is not currently accessible. These costs may be significant, and the infrastructure projects themselves may generate more emissions than they save. It would be inappropriate at this time to include a specific fuel requirement when these factors have not yet been quantified and analyzed.

AMP strongly supports EPA's conclusion in the preamble to the June 2010 proposed rule that fuel switching is not an appropriate control option. Mandated fuel switching would be contrary to the goal of safeguarding fuel diversity, which is a fundamental objective of U.S. energy policy. Requiring facilities to use natural gas or distillate fuel oil even for startup purposes would cut against EPA's efforts

to reduce overall fossil fuel consumption. A diverse fuel mix protects energy users from fuel unavailability, price fluctuations, and changes in regulatory practices. We believe that the MACT program is not an appropriate vehicle to force fuel choices.

**e. Operating Parameters and Opacity Limits Should Not Apply During Periods of Startup and Shutdown**

AMP supports the clarification EPA made to Table 2 of the Proposed Rule, which indicates that operating parameter limits and opacity limits do not apply during periods of startup and shutdown because numeric emission limits do not apply during these time periods. These parameters are designed to ensure continuous compliance with the numeric emission limits, and bear no correlation to whether good combustion practices are being employed during periods of startup and shutdown.

**IV. A Work Practice Standard for Dioxin/Furan is Appropriate and Should Be Maintained in the Final Rule**

EPA appropriately established a work practice standard for dioxin/furan instead of a numeric emission limit in the Proposed Rule. This approach is consistent with the approach taken by EPA in the recently finalized Utility MACT rule published December 16, 2011. EPA has the authority to establish a work practice standard in lieu of a numeric emission limit pursuant to CAA § 112(h): “If it is not feasible in the judgment of the Administrator to prescribe or enforce an emission standard for control of a hazardous air pollutant or pollutants, the Administrator may, in lieu thereof, promulgate a design, equipment, work practice, or operational standard, or combination thereof, which in the Administrator’s judgment is consistent with the provisions of subsections (d) or (f) of this section.”<sup>25</sup> The D.C. Circuit Court of Appeals has affirmed EPA’s authority under CAA section 112(h) to use work-practice standards instead of emission floors where “measuring emission levels is technologically or economically impracticable.”<sup>26</sup>

In both the final Utility MACT rule and the proposed Boiler MACT rule, EPA acknowledged that dioxin/furan exists in quantities too low to be accurately measured or detected by EPA Method 23, and that no known control technologies have a demonstrated ability to further reduce dioxin/furan below these already miniscule levels.<sup>27</sup> According to EPA’s Boiler MACT analysis, more than half of the dioxin/furan measurements reviewed for purposes of setting the MACT floor were below the method detection level, and for several subcategories (including stoker coal units) all of EPA’s data is below the level that can be accurately measured.<sup>28</sup> These findings are consistent with EPA’s findings in the Utility MACT rule, in which EPA acknowledged that the presence of sulfur in the exhaust gases prevents the formation of dioxins and furans in quantities greater than the detection limit, specifically when the sulfur-to-chlorine ratio in the gas is greater than 1.0. This ratio will exist for coal-fired boilers almost

---

<sup>25</sup> 42 U.S.C. § 7412(h).

<sup>26</sup> *Sierra Club v. EPA*, 479 F.3d 875, 884 (D.C. Cir. 2007).

<sup>27</sup> See 76 Fed. Reg. at 80606; 77 Fed. Reg. at 9369.

<sup>28</sup> 76 Fed. Reg. at 80606.

across the board.<sup>29</sup> The same analysis applicable to coal-fired Utility MACT boilers is applicable to the smaller coal-fired utility boilers subject to Boiler MACT operated by AMP members.

It is not appropriate to treat detection level limited data for purposes of establishing regulatory limits in the same manner as detected values because the uncertainty associated with measurements near or below the method detection limits is too high. All source emission measurements have random (precision) errors associated with the sample collection, sample and equipment handling, sample preparation, and sample analysis. These errors define method detection and quantitation limits and uncertainty in a non-arbitrary, scientific manner. When emission levels are much higher than the magnitude of these errors, there is a high degree of confidence in the measured value obtained from a single or a few test runs. However, as the measured value decreases, the contribution of these errors to the measured value increases, thus decreasing the confidence level in the accuracy of the measured value from a single or a few runs until the point where the measured value cannot be distinguished from the random error ("noise" level). This is the case with the boiler dioxin/furan data. When this occurs, the measurement cannot be distinguished from zero with high confidence.

These factors all make it infeasible and technologically and economically impracticable to impose a numeric emission limit for dioxin/furan. EPA came to this same conclusion under the Utility MACT rule. Given the basic combustion similarities between the small municipal utilities subject to Boiler MACT and their larger counterparts subject to Utility MACT, it would be arbitrary for EPA to impose an emission limit on the set of smaller boilers and a work practice standard on the set of larger boilers. EPA correctly proposed a work practice standard for dioxin/furan in lieu of a numeric emission limit consistent with CAA § 112(h) in the Proposed Rule, and should retain this work practice standard in the final rule.

**V. EPA Should Establish a Work Practice Standard for Organic HAP Consistent with the Utility MACT Rule**

In the Proposed Rule, EPA established CO emission limits for coal-fired boilers. CO itself is not a regulated HAP, but was used instead as a surrogate for organic HAP. Carbon monoxide is the most common product of incomplete combustion (PIC), and because of its associated chemical kinetics, is one of the most difficult PICs to oxidize completely. As such, CO emissions have historically been used as an indicator of the quality of the combustion process. The concept is that low CO emissions would equate to negligible emissions of other organic compounds. While this is true in general, the mechanisms by which CO is formed and destroyed in the combustion process are different than for other organics. As such, in cases where other organic compounds have been completely oxidized, CO concentrations may still be elevated. While the tendency is to think that further reductions in CO emissions will improve the quality of the combustion, and in turn minimize emissions of other organic compounds, this is not necessarily true. Instead, forcing CO emissions lower and lower ends up over-constraining the combustion process, producing negative impacts on other air quality concerns, without documented improvements in emissions of organics.

---

<sup>29</sup> See 76 Fed. Reg. 24976, 25023 (May 3, 2011).



EPA discovered this during the development of emissions standards for the proposed Utility MACT rule,<sup>30</sup> during which EPA conducted pilot tests on coal-fired boilers to determine if CO was in fact a proper surrogate for organic HAP. The results of the tests indicated that organic HAP exists in extremely low levels for these utility boilers, and below the point of detection or accurate measurement. These findings are reproduced below:

With complex carbon-based fuels, combustion is rarely ideal and some CO and concomitant organic compounds are expected to be formed. Because CO and organics are both products of poor combustion, it is logical to expect that limiting the concentration of CO would also limit the production of organics. **However, it is very difficult to develop direct correlations between the average concentration of CO and the amount of organics produced** during the prescribed sampling period in the MPCRFR (which was 4 hours for the pilot-scale tests described here). This is especially true for low values of CO as one would expect corresponding low quantities of organics to be produced. **Samples of coal combustion flue gas have mostly shown very low quantities of the organic compounds of interest.** Some of the flue gas organics may also be destroyed in the high temperature post combustion zone (whereas the CO would remain stable). Semi-volatile organics may also condense on PM and be removed in the PM control device.

The average CO from the pilot-scale tests ranged from 23 to 137 ppm for the bituminous coals tests, from 43 to 48 ppm for the subbituminous coal tests and from 93 to 129 ppm for the Gulf Coast lignite tests. However, it was difficult to correlate that concentration to the quantity of organics produced for several reasons. The most difficult problems are associated with the large number of potential organics that can be produced (both those on the HAP list and those that are not on the HAP list). This is further complicated by the **organic compounds tending to be at or below the MDL in coal combustion flue gas samples.** Further, there are complications associated with the CO concentration values. Some of the runs with very similar average concentrations of CO had very different maximum concentrations of CO (i.e., some of the runs had much more stable emissions of CO whereas others had some excursions, or “spikes,” in CO concentration). For example, one of the bituminous runs had an average CO concentration of 69 ppm but a maximum concentration of 1,260 ppm (due to a single “spike” of CO during a short upset). Comparatively, another bituminous run had a

---

<sup>30</sup> 76 Fed. Reg. 24976 (May 3, 2011).

higher average CO concentration at 137 ppm but a much lower maximum CO value at 360 ppm.<sup>31</sup>

EPA's inability to accurately measure organic HAP emissions from these units made it impossible to establish a meaningful correlation between CO and inorganic HAP and made numeric emission limits infeasible. In light of this finding, EPA proposed and finalized a work practice standard for organic HAP for coal and oil-fired boilers in the Utility MACT rule. See 76 Fed. Reg. at 25028 ("We are proposing work practice standards because the data confirm that the significant majority of the measured organic HAP emissions from EGUs are below the detection levels of the EPA test methods, and, as such, EPA considers it impracticable to reliably measure emissions from these units.").

EPA did not perform these extensive organic HAP and correlation tests when promulgating Boiler MACT limits. Instead, EPA relied upon the same presumed correlation between CO emissions and organic HAP emissions that it found impossible to substantiate when it measured similar units under the Utility MACT.<sup>32</sup> The large utility boilers analyzed in the Utility MACT rule share the same fuels, design, and combustion characteristics as the smaller utility boilers subject to Boiler MACT. Therefore, low levels of organic HAP would be expected for these smaller units as well, only the levels would be even lower and harder to quantify because the Boiler MACT utilities use less fuel in smaller units. A review of the Boiler MACT emissions database indicates that many of the tests performed for organic HAP produced results that were either non-detect or were at or below the level of reliable measurement.

It would be arbitrary and capricious for EPA to disregard this relevant emissions information and continue to presume that the correlation it was not able to establish for large coal-fired utility boilers nonetheless exists for smaller coal-fired utility boilers. After extensive testing of organic HAPs, EPA determined that organic HAPs were at such low levels that a numeric emission limit for CO was improper. EPA should also impose a work practice standard on small coal-fired utilities under the Boiler MACT rule so there is parity between the regulations for large and small utility boilers. This relief would also reduce the burden on a subset of small entities for which EPA is required to consider mitigation measures.

## **VI. EPA's MACT Floor Methodology is Flawed**

AMP has expressed concern with EPA's MACT floor methodology in its previous comments, and suggested ways EPA could remedy those issues to calculate MACT floors that are both achievable and supportable. EPA has failed to take steps within its discretion to help set achievable emission limits that can be met by all units subject to this rulemaking – including small municipal utilities. AMP asks that EPA take this final opportunity to rectify the persistent flaws in its MACT floor methodology and adopt *achievable* emission limits as the Clean Air Act requires.

---

<sup>31</sup> 76 Fed. Reg. at 25039 (emphasis added). AMP incorporates by reference the full results of EPA's pilot-scale tests from the Utility MACT rule docket as if fully appended hereto and asks that EPA move the test results and all related documents into the Boiler MACT docket and administrative record.

<sup>32</sup> See, e.g., 75 Fed. Reg. 32006, 32018 (June 4, 2010); 76 Fed. Reg. at 15654; 76 Fed. Reg. at 80624.

**a. MACT Floors Must Be Based on the Overall Performance of Actual Sources and Not on a Pollutant-by-Pollutant Basis**

The proposed MACT standards rely on a pollutant-by-pollutant analysis that uses a different set of best-performing sources for each separate HAP standard. The result is a set of standards that reflect the hypothetical performance of a set of sources that simultaneously achieve the greatest emission reductions for each and every HAP without regard to whether such sources actually exist. This approach results in unachievable limits and is contrary to the language of section 112. The Clean Air Act unambiguously directs EPA to set standards based on the overall performance of *sources*. Sections 112(d)(1), (2), and (3) specify that emissions standards must be established based on the performance of “sources” in the category or subcategory and that EPA’s discretion in setting standards for such units is limited to distinguishing among classes, types, and sizes of sources – it has no authority to distinguish sources by individual pollutant.<sup>33</sup> EPA’s pollutant-by-pollutant approach results in a set of emission limits that do not reflect the performance of any existing “source.” Although EPA has forecasted that some sources in the coal-fired subcategories can meet all of the emission limits, it is unlikely that these sources can meet all of the emission limits on a consistent basis. EPA’s conclusion is based on the results of reported stack test data that does not take into account the performance of the source over different operating loads, seasons, and fuel mixtures. In fact, vendors have confirmed that they will be unable to guarantee CO limits for coal-fired units at the levels in the Proposed Rule. EPA must revise its emission limits to reflect the performance of actual sources able to meet all emission limits simultaneously. Municipal utilities will benefit from the less stringent limits that reflect the true performance of actual sources as mandated by the Act.

**b. EPA Impermissibly Ignored Non-Stack Emission Data and Used Inadequate and Biased Data to Set the MACT Floors**

Section 112(d) of the Clean Air Act requires EPA to set MACT floors for existing sources that are not less stringent than “the average emission limitation achieved by the best-performing 12 percent of the existing sources (for which the Administrator has emissions information).” 42 U.S.C. § 7412(d); *Nat. Res. Def. Council v. EPA*, 489 F.3d 1250, 1254 (D.C. Cir. 2007). The top 12 percent “best performing” sources become the MACT floor units. To identify these units, EPA must collect “emissions information” from units that are included in the source category. During Phase I of EPA’s data gathering effort, it requested and received emissions data from over 2,000 sources across all of the subcategories for PM, CO, NOx, and many HAPs. After sifting the data into fuel-based categories, EPA issued a second section 114 request requiring additional testing. During this second phase, EPA impermissibly targeted only those sources the Agency had identified as the top performers based on Phase I, instead of obtaining a random sampling of emissions data across the entire population of boilers in a subcategory to assess the variability in performance of boilers in a particular subcategory. In this way, EPA artificially limited the pool of data from which it drew its top 12 percent and biased the data collection. The data is not evenly distributed, but is clustered well below the mean. EPA further limited the pool of data from which it established the MACT floors by considering only units with stack test data in identifying the top 12

<sup>33</sup> *Sierra Club v. EPA*, 551 F.3d 1019, 1028 (D.C. Cir. 2008).

percent. EPA ignored other “emissions information” that it is required to consider pursuant to section 112(d). This combination of missteps resulted in EPA proposing MACT floors that are based on the top 12 percent of the top 12 percent of units in each subcategory in violation of section 112(d).

This led to EPA considering data from only a portion of each subcategory in setting the MACT floors. For the existing solid fuel subcategory, for example, EPA considered HCl data from only 33 percent of the sources in the subcategory and Hg data from only 29 percent. This led to MACT Floors being set by 4 percent and 3.5 percent of the source category, respectively. The figures are even worse for CO. For existing coal-fired units, EPA considered emissions data from only 11 percent of stoker units and 19 percent of pulverized coal units, with the MACT floor limits being determined by only 1.5 and 1.1 percent of the respective categories. The number of sources used to establish PM limits for coal-fired units was higher, but still inadequate at 47 percent for stokers and 56 percent for pulverizers.

If it was certain that the available data were statistically representative of the entire subcategory (such that calculating the MACT floor with fewer sources would result in approximately the same value as the MACT floor using data from the entire subcategory), then the lack of data likely would not significantly skew the results. However, the Proposed Rule and supporting documentation provide no assurance that the limited available data are representative of the entire source category. As a result, there is no way to know if the available data are producing a MACT floor that is not reflective of the subcategory as a whole. That lack of data raises serious doubts regarding the validity of the MACT floor determinations and resulting emissions limitations.

EPA’s failure to use adequate data is inexcusable. EPA has been working on the Boiler MACT standards for more than 15 years, and had ample time to gather and evaluate sufficient emissions data. Furthermore, the Clean Air Act explicitly instructs EPA to base its MACT floors on all units for which EPA has “emissions information.” This is an unambiguous statutory directive, and EPA may not artificially limit its review to testing data. Emissions information extends beyond stack test data to include volume and types of fuels and the emissions controls used by the vast majority of industrial boilers and process heaters in use today. EPA has developed emissions factors for various types of units based on this information and published them in AP-42 and other compilations. Sources are encouraged to rely on these emission factors to estimate emissions in the absence of actual test data. EPA too, then, should have used these emissions factors to estimate emissions for those units without emission testing data. This is “emissions information” that is readily available to EPA and should be included in selecting the group of sources that represent the top 12 percent of performers.

EPA’s failure to gather sufficient data and evaluate all emissions data available in each subcategory resulted in many units – including small municipal utilities without significant test data – being ignored in setting the MACT floors. EPA has (or could reasonably obtain) emissions information from virtually all coal-fired sources using AP-42 emissions factors, and is obligated to consider the data from all of these units in establishing the MACT floor.

**c. EPA Is Justified in Using Emissions Information from At Least Five Sources to Establish MACT Floors for Existing Sources**

For many subcategories with more than 30 units, including the existing pulverized coal subcategory, EPA established the MACT floor using data from less than 5 units. That approach contradicts the primary structure of section 112(d). When drafting the 1990 Amendments to the Clean Air Act, Congress carefully established distinct approaches for establishing the MACT floors that would apply to existing and new sources. For existing sources, Congress established two alternate approaches in sections 112(d)(3)(A) and (B). Where there are “30 or more sources” in a subcategory, section 112(d)(3)(A) instructs EPA to select “the average emission limitation achieved by the best performing 12 percent of the existing sources.” Similarly, where there are “fewer than 30 sources” in a subcategory, section 112(d)(3)(B) requires use of “the average emission limitation achieved by the best performing 5 sources. . . .” Both of these provisions were designed to ensure that a *group* of existing sources are used to establish the emissions limits for existing sources. In contrast, section 112(d)(3) specifies that the MACT floor “for new sources in a category or subcategory shall not be less stringent than the emission control that is achieved in practice by the *best controlled similar source*. . . .” Thus, new source limits are to be set by a single source while existing source limits were to be set by reference to a group of representative peers. The Proposed Rule would cross that clean statutory line by treating existing sources functionally the same as new sources in some subcategories.

Furthermore, the word “sources” in the first clause of §§ 112(d)(3)(A) and (B) clearly refers to the sources for which EPA has emissions information. Notably, the second use of the word “sources” in § 112(d)(3)(A) also clearly is a reference to sources for which EPA has emissions information. So, it is reasonable to conclude that Congress intended the word “sources” to have a consistent meaning for all purposes under these provisions. In other words, the reference “30 or more sources” at the end of § 112(d)(3)(A) and “fewer than 30 sources” at the end of § 112(d)(3)(B) reasonably should be construed as a reference to sources for which EPA has emissions information. This interpretation allows for EPA to naturally reconcile the application of §§ 112(d)(2)(A) and (B) such that the number of sources for which EPA has emissions information in a given category or subcategory dictates whether § 112(d)(2)(A) or (B) should apply. That alternate approach is far more consistent with section 112(d) and Congress’ plain intent. It is also well within EPA’s discretion to adopt this more consistent approach. The word “sources” as used in the last clause of sections 112(d)(3)(A) and (B) to describe the size of the subcategory at issue does not specify whether it refers to “sources” for which data exist or the total number of sources in the subcategory. However, the word “sources” in the earlier facets of those sections clearly refers to the sources for which EPA has emissions information. Thus, it is reasonable to conclude that Congress intended the word “sources” to have a consistent meaning within these subsections and that the reference “30 or more sources” at the end of section 112(d)(3)(A) and “fewer than 30 sources” at the end of section 112(d)(3)(B) reasonably means sources for which EPA has emissions information. That interpretation allows EPA to read the statute such that Congress’ chosen line between new and existing source-setting methodology is not blurred.<sup>34</sup>

<sup>34</sup> See, e.g., *United Savings Ass’n of Tex. v. Timbers of Inwood Forest Assoc., Ltd.*, 484 U.S. 365 (1988) (rejecting a “reasonable” meaning of a statutory term and stating that “[s]tatutory construction . . . is a holistic endeavor. A provision that may seem ambiguous in isolation is often clarified by the remainder of the statutory scheme - because

However, this dilemma does not exist if EPA properly uses all available emissions information to estimate emissions for all sources in the subcategory. This approach ensures that the top-performing 12 percent of a category with more than 30 sources will never fall below the five-source minimum that Congress established. Indeed, Congress likely did not anticipate a scenario in which EPA would develop a MACT floor with emissions information from less than 50 percent of the sources in a subcategory of 30 or more.

**d. The Sampling Data Used to Set the MACT Floors Does Not Reflect the True Operating Variability of the Sources at Issue.**

EPA is required to estimate the variability associated with all factors that impact a source's emissions, including process, operational, and non-technological variables, in setting MACT floors.<sup>35</sup> Any method used to estimate emissions rather than actually measure them "must allow a reasonable inference as to the performance of the top 12 percent of units," and EPA must show "why its methodology yields the required estimate."<sup>36</sup>

EPA has acknowledged this responsibility and identified a number of factors that contribute to variability in emissions test data, including: (1) the emission test method, (2) the emission analytical method, (3) the design of the unit and the control device(s), (4) operating conditions of the facility and the control device(s), and (5) the composition and relative amounts of fuel constituents in the fuel or flue gases.<sup>37</sup> EPA is correct to incorporate variability into the MACT floor analysis in this rulemaking, but did not properly reflect the full range of variables potentially impacting emissions. Variability in boilers depends on a host of operating and load conditions. While EPA evaluated some of these variables, it did not evaluate a sufficient number to provide "an accurate picture of the relevant sources' actual performance."<sup>38</sup> For example, EPA does not have fuel quality data for all top performers.

EPA also failed to include a fuel variability factor for HCl or Hg for solid fuel-fired units. EPA states that this was unnecessary due to the variety of fuels represented in the top 12 percent, but this ignores the purpose of the variability analysis: to ensure that emission limits are achievable in practice. Each of the fuels represented in the top 12 percent is variable in itself, and EPA has not accounted for this in its analysis. Capturing variability is particularly important for coal-fired units, because variability in coal quality occurs within individual seams and within one unit's supply, which may come from different sources. EPA's testing did not account for this difference in fuel quality. However, EPA may

---

the same terminology is used elsewhere in a context that makes its meaning clear . . . or because only one of the permissible meanings produces a substantive effect that is compatible with the rest of the law" (citations omitted)); *S. Cal. Edison Co. v. FERC*, 195 F.3d 17 (D.C. Cir. 1999) (striking down FERC's statutory interpretation that rendered statutory text meaningless in favor of an alternate interpretation without this effect, noting that "statutory words are . . . designed to carry out the statutory purposes").

<sup>35</sup> See *Nat'l Lime Ass'n v. EPA*, 627 F.2d 416, 443 (D.C. Cir. 1980).

<sup>36</sup> *Cement Kiln Recycling Coalition v. EPA*, 255 F.3d 855, 862 (D.C. Cir. 2001) (emphasis in original) (citing *Sierra Club v. EPA*, 167 F.3d 658, 663 (D.C. Cir. 1999)).

<sup>37</sup> See Proposed National Emissions Standards for Hazardous Air Pollutants for Electric Utility Steam Generating Units, 69 Fed. Reg. 4652, 4670 (Jan. 30, 2004).

<sup>38</sup> *Cement Kiln Recycling Coalition*, 255 F.3d at 862 (emphasis in original).

look to other sources for emissions information related to the variability of coal content among coal rank and regions and apply this information to improve the variability data for the top performers.

As a result of the issues highlighted above, EPA underestimates the true variability of the top-performing sources. This results in a 99% upper prediction limit (UPL) that simply fails to account for all variables and fuel quality variability present in the top 12 percent best-performing units across all the subcategories and certainly across all regulated units. Municipal utilities would benefit from EPA revisiting its methodology and capturing more of the variability for coal-fired sources when it recalculates the MACT floors for the final rule.

#### **VII. A Limited Use Subcategory is Appropriate and Should Be Maintained**

EPA requested comment on final adoption of the limited use subcategory. AMP supports a limited use subcategory for all of the reasons stated in the 2010 AMP Comments. EPA was justified in creating this subcategory because these units have a distinct operating mode and come online only during special circumstances (e.g., emergencies, primary boiler outage). This distinct operating mode results in unplanned and infrequent operation that is not amenable to scheduled testing and monitoring, making emission limits infeasible for these units.

EPA also requested comment on defining limited use boilers to include those units using no more than 10 percent of their annual capacity, rather than defining them as units operating no more than 876 hours per year. Specifically, EPA asked commenters to explain how such units could qualify for work practice standards pursuant to CAA § 112(h). The justification for applying work practice standards to units using no more than 10 percent of their annual capacity is the same as the justification for applying work practice standards to units operating no more than 10 percent of the year. Industrial boilers cannot maintain steady state operation at very low capacity utilization levels. Limited use boilers will operate between 60 and 95% of rated capacity to ensure stable and efficient operation. Thus, a limited use unit defined on an annual capacity basis will still be operating in response to special circumstances; it cannot operate continuously at or near 10% load.

A capacity-based limit ensures 90% reduction from the maximum allowable annual emissions. The annual hour-based limit has no direct correlation to emissions, making its benefit more difficult to quantify and calculate. Also, capacity utilization is easily measurable because sources track the amount of fuel used and its heat rate. By contrast, the number of “operating” hours is more problematic. Do we count startup and shutdown hours? Does “operating” begin when the primary fuel is introduced? Are partial hours counted or should we use every 60-minutes? Operating hour limits may also incentivize inefficient behavior as operators would be motivated to startup quicker or shutdown faster than conditions may warrant to conserve limited use hours. These complications are unnecessary if EPA adopts 10% of annual capacity as the limited use definition.

Under CAA § 112(h), it is appropriate to establish a work practice standard in lieu of numeric emission limits when these limits are infeasible or technically impracticable. AMP urges EPA to alter the definition of “limited use boiler” to use ten percent of the source’s rated annual capacity, rather than ten percent of the annual hours, to increase flexibility and accountability for facilities operating limited

use units. EPA is fully justified in creating this subcategory and establishing work practices for limited use units, and should retain this subcategory in the final rule.

#### **VIII. AMP Supports a 30-Day Averaging Period for All Operating Limits Retained in the Final Rule**

AMP finds EPA's imposition of operating limits based on performance tests to be an impermissible beyond-the-floor requirement that was adopted without considering costs and other factors required by the Clean Air Act. Operating parameters should be indicators that trigger corrective actions to ensure proper control device performance; they should not be enforceable limits that tie an operator to the performance level during a test regardless how far below the MACT floor standard the unit tested. Regardless how EPA characterizes the enforceability of operating limits in the final rule, however, AMP supports a 30-day rolling averaging period for all operating parameters (including load and oxygen parameters). Operating conditions of industrial boilers can be highly variable, particularly for municipal utility boilers that may alter load frequently to account for fluctuating demand requirements. Operating parameters will be established using test data from a single steady-state operating period, and the parameter ranges established during this test are unlikely to be representative of the parametric values occurring over a range of operating conditions. Changes in fuel content and seasonal factors can also impact source variability. An extended averaging period helps accommodate some of this variability.

As the rule is currently written, the averaging period for load and oxygen operating limits is unclear.<sup>39</sup> Sources with highly variable loads, such as utility boilers, may occasionally experience loads in excess of ten percent of the stack tested rate for short periods of time, followed by periods of low load. These load swings will also affect oxygen adjustment, and maintaining a proper oxygen mix during period of load fluctuation is critical to maintaining safe operation of the boiler. The standard as written does not provide sources with clear means of demonstrating compliance in these circumstances, and as a result fails to account for the same variability that affects other operating parameters and that EPA acknowledged made a 30-day averaging period appropriate. EPA should establish a 30-day rolling average for all operating parameters in the final rule.

#### **IX. AMP Supports Replacing the O<sub>2</sub> CEM Requirement with an O<sub>2</sub> Trim System Requirement**

In the 2011 Boiler MACT rule, EPA imposed an O<sub>2</sub> CEM requirement on sources subject to CO limits that required sources to continuously monitor and maintain O<sub>2</sub> levels above the operating limit established during stack testing.<sup>40</sup> An O<sub>2</sub> CEM measures oxygen concentrations in the stack gas. As many commenters noted, O<sub>2</sub> measurements in the stack gas are not a proper measure of good combustion. Furthermore, many existing boilers and process heaters already utilize flue gas oxygen analyzers for indication, alarm, and O<sub>2</sub> trim control, where the fuel/air ratio is automatically controlled for optimum combustion conditions. To the extent EPA retains CO emissions limits and/or operating limits, AMP

---

<sup>39</sup> See 76 Fed. Reg. at 80665.

<sup>40</sup> See 76 Fed. Reg. at 15693.



supports the use of an O<sub>2</sub> trim analyzer in lieu of an O<sub>2</sub> CEM for purposes of demonstrating continuous compliance.

**X. EPA Should Clarify that Emission Limits, Operating Limits, and Monitoring Requirements Apply Only During Periods of Source Operation**

The language of the Proposed Rule states that emission limits, operating limits, and work practice standards apply “at all times” except for periods of startup and shutdown.<sup>41</sup> We do not believe it was EPA’s intent to imply that the source remains subject to these limits even when the emission unit is not operating and is not producing emissions. EPA acknowledged that it did not intend for CPMS and opacity limits to apply during periods of startup and shutdown, because the unit is not subject to a numeric emission limit during these times. It would be nonsensical (and impossible as a practical matter) to require sources to establish compliance with these standards while the source and its associated control equipment are down. EPA should simply clarify in the text of the final rule that the emission limits, work practice standards, and operating limits apply “at all times the affected unit is operating” rather than “at all times.”

**XI. Subsequent Performance Tests Should Not Automatically Reset Operating Limits**

If operating limits remain in the final rule, EPA must clarify the procedures used to establish them. As currently written, § 63.7520 is ambiguous as to whether sources will automatically reset their operating limits each time they conduct a performance test. This provision should clarify that sources have the *option* of resetting their operating limits following each subsequent performance test, but they are not required to do so. Operating limits are established during performance tests because, in EPA’s view, these limits represent an operating mode in which the source is known to be in compliance with its emission limits. If a source has demonstrated compliance at a particular operating limit, the source is presumptively in compliance with its emission limit so long as it maintains compliance with that operating limit. Sources should therefore have the flexibility to demonstrate continuous compliance by complying with any operating limit that has been demonstrated through a stack test to be indicative of compliance.

**XII. PM CEM and PM CPMS Requirements Are Unnecessary and Unsupportable**

AMP supports EPA’s removal of the PM CEM requirement for units greater than 250 mmBtu/hr. As AMP noted in its 2010 Comments, PM CEMS are an unproven and unfamiliar technology, and their installation and certification would be unduly burdensome and redundant in light of the opacity monitors already installed on most boilers of this size. However, AMP does not support EPA’s replacement of the PM CEM obligation with a PM CPMS obligation for coal- and oil-fired units of this size. Requiring a PM CPMS in lieu of a PM CEM does not resolve any of the issues pointed out by petitioners in prior comments.

---

<sup>41</sup> 76 Fed. Reg. at 80629.

EPA has offered no justification for requiring any type of additional PM monitoring for coal- and oil-fired units greater than 250 mmBtu/hr. All other units are subject to less burdensome operating limits (such as opacity limits, bag leak detection requirements, and primary and secondary voltage requirements), and have the option to use PM CPMS in lieu of these other monitors.<sup>42</sup> EPA has determined that these other monitoring parameters are sufficient to ensure continuous compliance with the emission limits. There is no justification for requiring the installation of an additional, expensive monitor for coal- and oil-fired units >250 mmBtu/hr when there is no evidence that the monitoring requirements applicable to other units are insufficient for units of this size. Because EPA can articulate no rationale for making PM CPMS optional for some units and mandatory for others, this requirement is arbitrary and should be eliminated. Instead, installation of a PM CPMS should be optional for all units in the final rule.

This arbitrary decision to require PM CPMS for coal- and oil-fired units >250 mmBtu/hr is particularly problematic considering that these units already employ continuous monitoring devices to comply with the Compliance Assurance Monitoring (“CAM”) provisions of 40 C.F.R. § 64. AMP’s municipal utilities are also required to have continuous opacity monitoring (“COM”) systems that monitor PM control device performance. COMs monitor particulate matter in flue gas streams by sending a beam of light through the flue gas and measuring the attenuation caused by particles in the flue gas. Certain PM CEMs use a similar light absorption technique, or other optical techniques, to generate PM readings.<sup>43</sup> PM CPMS also use principles of light scatter to monitor PM emissions.<sup>44</sup> EPA has relied on COMs readings, combined with periodic stack testing, to monitor compliance with PM limits for decades. EPA also proposes to rely on these readings to ensure continuous compliance with the Boiler MACT requirements for units not subject to the PM CPMS requirement. Regulated units have already installed this equipment and are familiar with its maintenance and operation. Requiring a PM CPMS, in addition to COMs that are already installed and relied upon by the Agency, in addition to annual PM stack testing, is arbitrary and unreasonable and places an unnecessary burden on municipal utilities without any environmental benefit.

### **XIII. Emissions Averaging Provisions Should Be Modified To Provide Additional Flexibility**

#### **a. Emissions Averaging Should Not Be Subject To a Ten Percent Penalty**

AMP supports EPA’s continued inclusion of emissions averaging as a flexible compliance alternative for facilities with multiple units. Emissions averaging requires overall compliance with the MACT standards, and thus protects human health and the environment while also lowering costs and increasing flexibility for the regulated community. However, AMP does not support the continued inclusion of a ten percent penalty factor for sources choosing to demonstrate compliance through emissions averaging. This penalty erodes the very compliance flexibility that emissions averaging is designed to create. Despite multiple rounds of rulemaking, EPA still has not offered a rational explanation for why the penalty is necessary to uphold the stringency of the MACT floor.

---

<sup>42</sup> 76 Fed. Reg. at 80637.

<sup>43</sup> Electric Power Research Institute, Status of Particulate Matter Continuous Emission Monitoring Systems 2-1 (Mar. 2006).

<sup>44</sup> 76 Fed. Reg. at 80603.

EPA has included emissions averaging provisions in other rules without imposing a ten percent penalty. In the 2004 version of the Boiler MACT rule, EPA included emissions averaging provisions that were substantially similar to those in the Proposed Rule, but did not include a penalty for utilizing this compliance alternative.<sup>45</sup> Similarly, EPA is allowing units equipped with CEMS to participate in emissions averaging under the Utility MACT rule with no penalty.

EPA has never explained why such a penalty is necessary to ensure compliance with the MACT limits, and its failure to do so in light of the 2004 Boiler MACT rule, make the penalty provision in the Proposed Rule arbitrary and capricious. The Proposed Rule already contains safeguards to prevent the “backsliding” that may otherwise occur when emissions averaging is employed. Averaged sources must: (1) demonstrate that the emission rate achieved during the compliance test does not exceed the emission rate that was being achieved at a set time after publication of the final rule; (2) demonstrate that the control equipment used during the compliance test is no less effective than it was at the same set time, and; (3) develop and submit an emissions averaging implementation plan for approval.<sup>46</sup> Furthermore, sources demonstrating compliance through emissions averaging must test annually regardless of test results, and must demonstrate compliance on a monthly basis.<sup>47</sup> These requirements are already more stringent than the requirements for units that are not using emissions averaging, and they are sufficient to ensure compliance with the MACT limits.

**b. Units Employing CEMS or PM CPMS Should Not Be Excluded From Emissions Averaging**

In the Proposed Rule, EPA established a new provision excluding units employing a CEMS or PM CPMS from participating in emissions averaging. EPA offered no explanation for this exclusion. Sources using the stack testing option have the ability to extrapolate their test results over a 30-day period using operating data, and establish 30-day averages that can be compared to the data for units operating continuous monitoring systems. Furthermore, EPA allowed units with CEMS to participate in emissions averaging in the recently finalized Utility MACT rule.<sup>48</sup> EPA should provide the smaller municipal utilities operated by AMP members subject to Boiler MACT with at least the same flexibility it provides the much larger electric generating units subject to the Utility MACT rule. EPA should not discourage the use of CEMS (where they are optional) in cases where a source elects to utilize emissions averaging. It also unnecessarily restricts emissions averaging among fossil fuel fired units to those of 250 MMBtu/hr or less, due to the PM CPMS restriction. EPA should not discourage use of CEMS as a compliance option or limit emissions averaging to smaller sources. On the contrary, EPA should provide sources that use a continuous direct measure of emissions with more flexibility, not less, than sources using periodic stack testing and parameter monitoring.

---

<sup>45</sup> See, e.g., 69 Fed. Reg. at 55257.

<sup>46</sup> 76 Fed. Reg. at 80633-34.

<sup>47</sup> 76 Fed. Reg. at 80631, 80634.

<sup>48</sup> See 40 C.F.R. §63.10009 (not yet published).

**XIV. AMP Supports a 5-year Tune-up Frequency for Gas- and Light Liquid-fired Units Less Than or Equal to 5 mmBtu/hr**

EPA proposed changing the frequency for tune-ups (following the initial tune-up) for gas and light liquid boilers that are equal to or less than 5 MMBtu/hr to a tune-up once every five years.<sup>49</sup> This tune-up frequency is appropriate for these units. Municipal utilities that operate these small units do so to provide supplemental power and heating when the main boilers are not operating. Operation of these units may be infrequent, and a biennial testing requirement may force these units to operate more often than necessary simply to comply with the tune-up requirement. This would cause an increase in emissions that would not occur but for the Boiler MACT tuning requirement. Furthermore, emissions from these boilers are small, and allowing a reduced tuning frequency will minimize the compliance burden for small units with minimal emissions impact. AMP supports the five-year tune-up frequency for these units.

**XV. AMP Supports EPA's Inclusion of Flexible Compliance Alternatives in the Proposed Rule**

EPA has included numerous compliance demonstration alternatives in the Proposed Rule. AMP appreciates EPA's efforts to provide flexibility to the regulated community and supports EPA's inclusion of the following optional compliance alternatives:

- Operation of Hg, HCl, and CO CEMS in lieu of stack testing;
- Compliance with a TSM limit in lieu of a PM limit;
- Use of fuel testing to demonstrate compliance with HCl, Hg, and TSM limits; and
- Output-based emission limits tied to an emission credit scheme.

These compliance alternatives allow sources to allocate resources in the most economic way while ensuring compliance with the MACT requirements.

-----

---

<sup>49</sup> 76 Fed Reg. at 80614.



AMP looks forward to helping EPA refine the Proposed Rule in ways that will ensure achievable MACT limits and the elimination of duplicative, unwarranted, or unnecessary obligations for municipal utilities. Towards that end, we would be pleased to meet to discuss these comments at your convenience.

Sincerely,

A handwritten signature in black ink, appearing to read "Doug McWilliams". The signature is fluid and cursive, with a long horizontal stroke at the end.

Douglas A. McWilliams  
Counsel for American Municipal Power, Inc.

cc: Jolene Thompson, American Municipal Power, Inc.  
Julia Blankenship, American Municipal Power, Inc.  
Jeff Brediger, Orrville Utilities

**ATTACHMENT A**

**DECLARATION OF HARM  
BOILER MACT MAJOR SOURCE ADMINISTRATIVE STAY  
APRIL 22, 2011**

**MUNICIPAL SOLID FUEL-FIRED UTILITY BOILERS**

To illustrate the dilemma faced by municipal utilities, one municipal utility developed the following detailed schedule for implementing the Boiler MACT rule. As indicated by the schedule, municipal decisions move more slowly than private sector decisions. Each significant issue requires consideration by the Utility Committee that recommends a solution to the Utility Board that, in turn, recommends a solution to City Council. The City Council procedure ensures that Council Members have time with experts on the project to answer the elected officials' questions. The Council is required to convene multiple public meetings with notice and opportunities for public input before making each significant final decision required for the project. The attached schedule anticipates this City Council approval process for three decisions in the first 15 months: (1) preliminary project design, (2) 2012 cost appropriations, and (3) the project financing. The schedule does not include time for significant objections, adverse public reactions to new rates, or other obstacles that may arise in any political decision-making process. These decisions must proceed sequentially because the project financing cannot be considered until the project design is approved. Similarly, the project manufacturing and installation must occur after the project engineering has defined the equipment or process changes in sufficient detail to allow determinations on what permits must be secured prior to project construction.

Once the project has been approved, the schedule must allow time for the unique public process for bidding procedures and contract requirements required by statute. The schedule below includes the time necessary to comply with Ohio Revised Code Chapter 155, which sets forth the specific bid procedures and contract requirements for municipal utilities in Ohio. Once a significant project expenditure is approved by Council, it must then be advertised in a newspaper of general circulation for 2-4 weeks, the bids must be publicly opened, and a contract entered (or rejected) within 60 days with the lowest and best bidder. The attached schedule does not include potential delays arising from the rushed preparation of bid documents or if the bids received exceed acceptable project costs.

<b>Date</b>	<b>Time</b>	<b>Description of Project Milestone</b>
<b>March 21, 2011</b>		<b>MACT Rule published in the <i>Federal Register</i></b>
Mar.-May 2011	12 wks	Preliminary engineering feasibility study
May 2011		Submit 2012 Budget (continues preliminary feasibility costs for 2012)
May-June 2011		Utility Board committee meetings to consider study and recommend to full Utility Board for consideration
June-July 2011	2-4 wks	Utility Board & City Council workshops on preliminary study
Sept.-Oct. 2011		Utility Board approves preliminary concept and identifies information needed for final project consideration
Oct. 2011		Utility Board receives final preliminary engineering report and approves project with recommendation to City Council

<b>Date</b>	<b>Time</b>	<b>Description of Project Milestone</b>
Nov. 2011	2 wks	Project Design - City Council 1st reading (notice agenda prior to meeting)
Dec. 2011	4 wks	Project Design - Utility Board, City Council, & public workshops
Jan. 2012	2 wks	Project Design - City Council 2nd reading (notice agenda prior to meeting)
Feb. 2012	2 wks	Project Design - City Council 3rd reading (notice agenda prior to meeting)
Mar. 2012	30 days	30-day waiting period for proceeding with project after City Council approval
Mar. 2012		Final appropriation process for 2012 project costs
Apr.-June 2012	12 wks	Conduct rate study in support of project financing and feasibility analysis
May 2012		Submit 2013 Budget (with projected 2013 project costs)
July-Sept. 2012		Appropriation Amendment to fund 2012 project costs: City Council meetings (1st reading, public workshops, 2nd reading, and 3rd reading) [Excludes August when Council is not in session]
Oct. 2012-Jan. 2013	12-16 wks	Financing option discussions with Utility Board with bond rating process as necessary to determine credit worthiness for bond financing of project
Feb. 2013		Utility Board consideration and approval of project financing recommendation to City Council
Feb.-Mar. 2013		Financing - City Council 1st reading, public workshops, 2nd reading, 3rd reading
Mar. 2013		Final appropriation process for 2013 project costs
Apr. 2013		30-day waiting period for City Council's financing approval
May 2013		Budget for 2014 project costs
May-Oct. 2013	24 wks	Project engineering
Oct. 2013-Mar. 2014		Air permitting evaluation, prepare and submit application (if needed), procure final permit as needed
Mar. 2014		Final appropriation process for 2014 project costs
Apr.-Aug. 2014	20 wks	Bid out major equipment and award contracts; prepare bid documents, publish bid request; collect and evaluate bids; approve winning bid
Sept. 2014-Aug. 2015 (or May 2016)	12-22 mos.	Manufacture of equipment and preparation of installation plans and specs; install and startup
<b>May 20, 2014</b>		<b>MACT Rule compliance</b>
<b>May 20, 2015</b>		<b>MACT Rule compliance - with 1-year extension for installation of controls (discretionary)</b>
<b>May 20, 2016</b>		<b>MACT Rule compliance – with additional extension pursuant to Presidential Exemption (CAA 112(i)(4)) (discretionary)</b>

This Boiler MACT implementation schedule is conservative. It assumes an orderly process without upsets or delays. It assumes that contractors will be available to engineer, manufacture, and install this equipment within the timeframes allotted, which may not be the case given the demand on these resources from this and other rules mandating additional emission controls on combustion units. It also



does not account for the extended public process (five regularly scheduled City Council meetings) required by City Charter to accommodate objections to rate increases recommended by the Utility Board. Even under this conservative schedule, however, this municipal utility will need two discretionary extensions under Clean Air Act Section 112(i) to give the City any chance of meeting the Boiler MACT compliance deadline.