

COMMENTS on

National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (76 Fed. Reg 80598, Dec. 23, 2011)

Docket ID No. EPA-HQ-OAR-2002-0058

National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers (76 Fed. Reg. 80532, Dec. 23, 2011)

Docket ID No. EPA-HQ-OAR-2006-0790

Commercial and Industrial Solid Waste Incineration Units: Reconsideration and Proposed Amendments; Non-Hazardous Secondary Materials That Are Solid Waste (76 Fed. Reg. 80452, Dec. 23, 2011)

Docket ID Nos. EPA-HQ-OAR-2003-0119 and EPA-HQ-RCRA 2008-0329

By the National Association of Manufacturers

Submitted to the Environmental Protection Agency on
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COMMENTS ON EPA'S PROPOSED MACT RULES FOR BOILERS, PROCESS HEATERS AND CERTAIN SOLID WASTE INCINERATORS

INTRODUCTION

The National Association of Manufacturers (the NAM) welcomes the opportunity to comment on the three proposed Environmental Protection Agency (EPA) rules identified above,¹ which address emissions from boilers, process heaters and certain solid waste incinerators.² The NAM is the largest industrial trade association in the U.S., representing over 12,000 small, medium and large manufacturers in all 50 states. The NAM is the leading voice in Washington, DC for the manufacturing economy, which provides millions of high wage jobs in the U.S. and generates more than \$1.6 trillion in GDP. In addition, two-thirds of our members are small businesses, which serve as the engine for job growth. The NAM's mission is to enhance the competitiveness of manufacturers and improve American living standards by shaping a legislative and regulatory environment conducive to U.S. economic growth. While we support environmental regulations designed to provide real net benefits to the environment and public health, we consistently oppose regulations that create adverse economic impacts and that are not in compliance with the underlying law.

These rules are important to the NAM, as sectors of our membership use industrial boilers that will be subject to these rules, including the chemical, auto manufacturing, metalworking, petroleum refining, steel, cement, and forest and paper sectors. If these rules are not properly crafted, compliance costs associated with these rules will harm U.S. manufacturing jobs and hurt global competitiveness, just as our members are attempting to recover from the harshest economic downturn since the Great Depression.

The EPA has made a number of improvements to the proposed rules in response to prior comments from the NAM and others. While the NAM welcomes and supports those changes, there are still fundamental problems with the rules. Notably, the rules:

- Impractically truncate capital planning time. These proposed rules do not provide enough time for capital planning and compliance, given the complexity of the rules and competition for a limited pool of qualified domestic vendors and installers for emission controls and boilers. Additional time is needed to allow businesses to synch up compliance with these rules with compliance on upcoming National Ambient Air Quality Standard rules.
- Jeopardize critically needed jobs. Some standards in the proposed rules are more stringent than prior iterations of the rules, the total costs of compliance has increased several hundred of million dollars for manufacturers, and some limits may not be achievable, especially within the current three year compliance

¹ Since the NAM's comments associated with these three rules overlap on key topics and because EPA's justifications for aspects of three rules are so intertwined, the NAM is submitting one set of comments to address all three proposed rules. Where there are overlapping issues, these comments are directed to all three rules regardless of whether the citations are only to the draft of one of the rules.

² The NAM files these comments in addition to comments filed earlier in these dockets, including but not limited to the NAM's August 3, 2010 and August 23, 2010 comments and April 27, 2011 stay and reconsideration request. In addition, the NAM is a signatory to the AF&PA et al comments on both Boiler MACT and CISWI. As relevant and appropriate, those prior comments are adopted and incorporated by reference into these comments.

timeframe. For example, the particulate standards are more stringent for the predominant boilers in the forest products industry (wet biomass stoker boilers). In addition, the EPA has made the standards for coal and coal-biomass boilers significantly more costly. As a result, these proposed rules jeopardize more than 200,000 critically needed jobs.

- Fail to list important biomass materials as fuels: Important biomass materials such as paper recycling residuals, pulping sludge, wood construction debris and railway ties are still not listed as fuels, which creates great uncertainty for the businesses that rely on them. The failure to list such materials as fuels means that the boilers burning such fuels could be regulated under the onerous and stigmatizing incinerator standards. Alternatively, those materials could end up being sent to landfills, rather than being used to produce energy—a bad result for jobs and the environment.

In order to avoid these results and to conform the rules to the requirements of the Clean Air Act, the NAM requests that the EPA make significant changes to the proposed rule in light of the following points.

I. The NAM supports the EPA's decision to establish work practice standards in lieu of emission limits for certain gas-fired boilers, for dioxin/furan and for periods of startup and shutdown

The EPA has properly exercised its authority by proposing to rely on work practice standards in lieu of emission limits for certain gas-fired boilers (units that combust only natural gas, refinery gas, or equivalent fuel (other gas that qualifies as Gas 1 fuel)). 76 Fed. Reg. 80,601. The EPA is also proposing a work practice standard for dioxin/furan emissions from all subcategories. *Id.* at 80,602. In addition, the EPA is proposing revised work practice standards for periods of startup and shutdown. *Id.* at 80,602. By taking these steps, the EPA will help to make sure that these rules do not unduly harm segments of the nation's critical manufacturing base.

The EPA has ample legal authority to set the standard in terms of a work practice. First, section 112(d)(1) authorizes – if not requires – the EPA to set “emission standards” for each category or subcategory, and section 302(k) defines “emission standard” to include work practice standards. Thus, if the EPA determines that the best performing sources achieved their emissions performance through work practices rather than control equipment, those work practices should be identified as the “floor.” Second, section 112(h)(2)(b) independently authorizes the EPA to use a work practice standard where, as here, the application of a system for measuring the effect of the control measure for enforcement purposes is not practicable.

The EPA has independent authority to promulgate work practices as emission standards under CAA §302(k) as long as the work practices provide a continuous limit on emissions or are part of a set of regulations that provide a continuous limit on emissions. As required by CAA § 112(d), the EPA must promulgate “emission standards” for the control of hazardous air pollutants at major sources. Originally, these “emission standards” were found to be limited to only numeric emission limits. *See, e.g., Adamo Wrecking Co. v. U.S.*, 434 U.S. 275 (1978). However, in the 1990 Amendments, Congress expanded the definition of “emission standards” in §302(k) to expressly include work practices. As a result, the plain language of the Clean Air Act now authorizes the promulgation of work practices: (1) as direct emission standards under §302(k), and (2) in lieu of emission standards under CAA §112(h).

That statutory authority greatly simplifies the development of work practice standards for boiler units. Instead of turning to the alternate stop-gap provisions in §112(h) that apply when continuous emissions standards are not feasible, the EPA can focus on the direct establishment of work practices that existing sources use to ensure continuous compliance under §§112(d) and 302(k). For example, if the top 12% of existing natural gas-fired boilers are using tune-ups to achieve their “best performing” status, then the EPA has the authority to establish that protocol as a work practice-based emission standard. Tune-ups are an appropriate emission standard for these units because, if conducted with adequate frequency, they provide continuous reduction of the quantity and rate of HAP emissions from boilers by ensuring that they operate properly.

The NAM agrees with the EPA’s conclusions regarding the basis for relying on work practices for units that combust only natural gas, refinery gas, or equivalent fuels. As the EPA recognizes, the capital cost of emissions controls for the numerous existing gas-fired boilers would be extraordinarily high. See 75 Fed. Reg. at 32,025, 32,029. Further, the EPA correctly concluded that imposing emission limitations on gas-fired boilers would create a disincentive for switching to gas from oil, coal or biomass as a control technique. *Id.* In fact, it could create an incentive for facilities to switch away from gas to other fuels. Both outcomes should be avoided. Finally, the EPA recognized that “[t]he inability to accurately measure emission from Gas 1 units and the related economic impracticability associated with measuring levels that are so low that even carefully conducted tests do not accurately measure emissions warrant setting a work practice standard under CAA section 112(h).” 76 Fed. Reg. at 15,638.

In addition, the EPA is correct that work practices are appropriate for dioxin/furan, as the large majority of the dioxin/furan measurements are below the level that can be accurately measured. 76 Fed. Reg. at 80,606. This is consistent with the approach that the EPA correctly took in the recently finalized Mercury and Air Toxics Standard.

Finally, the NAM agrees with the EPA’s rationale for justifying work practice standards for periods of startup and shutdown, as described in the preamble to the final rule. 76 Fed. Reg. 15,642. The EPA’s rationale, along with the concerns raised in prior comments by the NAM and others, justify reliance on work practices.

II. The NAM supports the EPA’s creation of additional subcategories

The CAA unequivocally authorizes the EPA to establish appropriate subcategories of sources. CAA §112(c)(1) instructs EPA to establish “categories and subcategories” of sources for regulation under Section 112. CAA §112(d)(1) then further provides that the EPA “may distinguish among classes, types and sizes of sources within a category or subcategory” when establishing MACT standards. These provisions vest the EPA with the clear authority to group like units for purposes of establishing emissions limitations. Further, the EPA’s ability to subcategorize is a key tool in ensuring that MACT floors are achievable. See *Sierra Club v. EPA*, 479 F.3d 875, 884-85 (D.C. Cir. 2007) (Judge Williams’ concurrence noting the need to use subcategorization to avoid imposing unreasonable or unachievable MACT floors).

Thus, the NAM supports the EPA’s conclusion that certain additional subcategories are warranted. For example, the EPA’s division of the liquid subcategory into light and heavy liquid subcategories for PM and CO is warranted because of the differences in equipment design, operations and emissions between the subcategories. In addition, the EPA’s establishment of a limited use subcategory subject to work practices is warranted for a variety of reasons previously highlighted by the NAM, including the fact that these units spend a far greater

percentage of their time starting up and shutting down than other units, leading to different emission profiles and control options.

III. The NAM supports the EPA's decision to exempt burn-off ovens

The NAM agrees with the EPA's decision not to apply the proposed incinerator MACT standards to small "burn-off ovens." 76 Fed. Reg. 80,460. In addition to the reasons identified by the EPA, it is not appropriate to categorize burn-off ovens as incinerators, as most burn-off ovens are not actually combusting material. Instead they use lower temperature processes such as melting or pyrolysis and are specifically designed to avoid flaming conditions, which would damage the parts being cleaned.

IV. The EPA should extend the compliance deadline given the breadth of sources and competition for resources

The EPA proposes to set the compliance deadline for existing affected sources at three years after the date of publication of the Final Rule in the Federal Register. 76 Fed. Reg. at 80,605. It will be extraordinarily difficult – if not impossible – for all of the entities with existing boilers to make the changes necessary to comply with this rule in the three year timeframe that the EPA proposes. Put simply, the task of performing a boiler retrofit in three years will be made nearly impossible by the competition for critical resources and the likely gridlock in many state permitting processes that the broad application of this rule will create. Many boiler owners will be simply unable to secure equipment and assistance and/or to obtain the state/local permits needed to retrofit their units within three years.

Even under the best of circumstances, a major retrofit of a boiler takes years from project start to finish. The EPA has estimated that the installation of an activated carbon injection control system on one combustion unit – a comparatively simple installation – takes about 15 months.³ However, the EPA expects a range of control devices will be used to meet the standards, including fabric filters, carbon bed adsorbers, activated carbon injection, electrostatic precipitators, wet scrubbers, replacement burners, and combustion controls.⁴

Further, the sheer number of boilers impacted by the rule will make finding – and then scheduling – the design and construction resources almost impossible. The EPA estimates that approximately 5,500 boilers would need to meet emission limits under the rules.⁵ Many, if not all, of these boilers would need to be retrofitted. Boiler owners will need to hire engineers to assist them in designing and performing the retrofit. Thus, across the various industry sectors impacted by this rule, boiler owners will be competing for qualified engineers to design, permit and perform the retrofits necessary to make boilers compliant with this stringent rule. There will be a similar scarcity in equipment vendors, construction contractors, construction equipment (e.g., heavy lifting cranes), skilled labor (e.g., boilermakers), and other critical suppliers.

³ EPA, *Engineering and Economic Factors Affecting the Installation of Control Technologies for Multipollutant Strategies* (2002).

⁴ EPA, *Regulatory Impact Analysis: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters*, 3-1 (April 2010) ("The control analysis considered fabric filters, carbon bed adsorbers, and activated carbon injection to be the primary control devices for mercury control, electrostatic precipitators for units meeting mercury limits but requiring additional control to meet the PM limits, wet scrubbers to meet the HCl limits, tune-ups, replacement burners, and combustion controls for CO and organic HAP control, and carbon injection for dioxin/furan control.")

⁵ <http://www.epa.gov/airquality/combustion/docs/20111202presentation.pdf>.

Companies may even be unable to secure the basic building materials and control equipment (e.g., baghouses and scrubbers).

In order to retrofit a boiler, the owner will need to line up the capital necessary to pay for the retrofit. In these difficult economic times, just securing the necessary capital may take significant time. In addition, the owner will need to go through the relevant permitting process(es), which will take a number of months. Finally, once the finances are secure and the permitting is complete, the owner will actually need to perform the retrofit. The design, procurement, installation, and shakedown of a retrofit project (e.g., installing a scrubber on a large boiler) can easily take multiple years.

In addition, the timing of the retrofit work needs to be carefully planned, particularly for boilers that provide the primary and/or base load energy supply for their facilities. A facility owner will only shut down a boiler when everything is properly staged to ensure minimal disruption of the facility's operation. Based on a discussions with a number of potentially affected companies, the turnaround or shutdown cycles for boilers at many of the facilities is so long as to make this type of precise staging exceedingly difficult to do in a three year period without substantial business interruption.

Finally, in many instances, the installation of pollution control equipment and associated charges to boiler must be permitted under state air pollution statutes and/or construction codes (building permits, etc.). The proposed rule will result in an increase in the number of permit applications, potentially swamping the state and local agencies. Even in those areas where the rule may not result in significant increases in permitting work, the normal delays associated with permitting may make meeting the three year compliance deadline impossible.

In light of the difficulty in meeting a three year compliance deadline, the EPA and authorized states should be prepared to readily grant one-year extensions under CAA § 112(i)(3)(B) to those units that have problems installing the necessary control equipment to comply with the industrial Boiler MACT rule.

In addition, the EPA should establish an extended two-step compliance period for situations where a boiler owner voluntarily elects to replace or retrofit a boiler to burn a cleaner fuel source.⁶ If a facility decides to switch to a cleaner fuel, the replacement or retrofit work required to make that switch will potentially take years, for all of the reasons discussed above. Rather than require the facility to add emissions controls to its existing boiler in time for the proposed three year compliance deadline – likely eliminating the possibility that the facility would switch to a cleaner fuel source – the EPA should allow five years total for facilities to change their boilers and meet the MACT requirements for the cleaner fuel source. This five year period would occur in two steps; a no-backsliding provision would apply for two years from publication of the rule in the Federal Register, and then the facility would have three years to comply with MACT standard for the subcategory for the cleaner fuel subcategory. The EPA promulgated exactly this type of extended MACT compliance deadline for certain facilities that voluntarily elected to install new technology as part of the Pulp and Paper Cluster Rule. See Pulp and Paper Cluster Rule, 60 Fed. Reg. 18503, 18,508 (Apr. 15, 1998).⁷ In addition to

⁶ EPA recognizes the MACT rule should be crafted to encourage the use of cleaner fuels, such as natural gas. 75 Fed. Reg. 32025.

⁷ This two-step approach for the MACT standard is consistent with the D.C. Circuit's decision in NRDC v. EPA, 89 F.3d 1364 (D.C. Cir. 2007) (finding invalid EPA's decision to extend the compliance deadline for a promulgated MACT rule by a year because of the substantial changes that the agency made to the

providing an incentive for facilities to switch to cleaner fuel sources, this approach would reduce some of the competition for resources discussed above by extending the deadline to complete the work to replace or retrofit certain boilers.

V. EPA should change 40 CFR 63.11196 to allow three years, rather than two, for sources subject to the tune-up requirement to demonstrate compliance

The EPA is proposing to amend 40 CFR 63.11196 to specify that all existing boilers subject to the tune-up requirement would have two years (by March 21, 2013) in which to demonstrate initial compliance, instead of one year to demonstrate initial compliance. The EPA requested comment on whether the initial compliance period for the tune-up requirement should be extended to three years. 76 Fed. Reg. 80,535.

For many of the same reasons discussed above, the NAM recommends that this compliance period should be extended to three years. See 76 Fed. Reg. 15579, Table 4 (identifying 183,000 existing area source boilers). Combining a potential shortage of environmental engineers with the long range planning required for testing and work at facilities, it will be difficult to schedule and complete the testing needed to comply with the tune-up requirements in time to meet a two year deadline, particularly for facilities with multiple boilers.

VI. EPA's HAP by HAP approach to setting the MACT floor violates the Clean Air Act

The EPA ignored the record evidence of the performance of actual "sources" when establishing the suite of emissions limits. Instead, for each subcategory, the EPA set individual limits for each HAP that reflect the best performing source only for that individual HAP. The EPA then combined the HAP limits into a suite of emissions standards for each subcategory. This methodology results in a combined set of standards reflecting purely hypothetical boilers that have never actually been achieved by any single, real world source, and possibly never will. Creating hypothetical "best performing" units that demand compliance with emission standards not achieved by any actual source in a subcategory (let alone the necessary 12% of sources for a true floor) is arbitrary and capricious and violates the EPA's statutory obligation to establish limits that are based on actual the performance of "sources."

The proposed MACT standards for industrial boilers and process heaters are based on pollutant-by-pollutant analyses that rely on a different set of best performing sources for each separate HAP standard. See, e.g., 76 Fed. Reg. at 15,621-23. In other words, the EPA "cherry picked" the best data in setting each standard, without regard for the sources from which the data came. This approach violates the language of § 112, which is focused on the performance of "sources," and produces arbitrary and capricious standards.

The statute unambiguously directs the EPA to set standards based on the overall performance of "sources."⁸ Sections 112(d)(1), (2), and (3) specify that emissions standards must be established based on the performance of "sources" "in practice" for the category or

rule). Rather than functioning as an extension of the compliance deadline, this MACT standard for certain facilities would become applicable in two steps. For the first three years, a no-backsliding MACT standard would be applicable, then the three year deadline to implement the MACT standard for the applicable "cleaner" source would begin to run.

⁸ In the proposed CISWI rule, EPA similarly failed to follow the statutory mandate under Section 129 to examine the performance of "units." For the reasons discussed above, the CISWI standards must be based on actual sources ("units"), and cannot be the product of pollutant-by-pollutant parsing.

subcategory and that the EPA's discretion in setting standards for such units is limited to distinguishing among classes, types, and sizes of sources. In particular, Section 112(d)(3) emphasizes that the EPA must focus on what emissions reductions are achievable "in practice" for a "source," using the word "source" no fewer than nine times.

These provisions make clear that standards must be based on actual sources, and cannot be the product of pollutant-by-pollutant parsing which results in a set of composite standards that do not necessarily reflect the overall performance of any actual source. Congress provided express limits on the EPA's authority to parse units and sources for purposes of setting standards under § 112 and that express authority *does not* allow the EPA to "distinguish" units and sources by individual pollutant as is proposed in this rule. *Sierra Club v. EPA*, 551 F.3d 1019, 1028 (D.C. Cir. 2008) (noting statutory limitations on EPA's authority to distinguish sources).

Further, the EPA has calculated its proposed MACT floors solely on the basis of emission data. The EPA utterly ignored the plain mandate of the Clean Air Act by entirely neglecting to determine whether there was emission control equipment in use in each subcategory that could actually achieve those inordinately strict emission limits, a critical and necessary analysis required by the Clean Air Act.

The EPA's focus on individual HAPs has resulted in a failure to recognize the critical interplay between emissions controls and emissions of other pollutants. For example, the NAM is concerned that the controls necessary to meet the stringent emissions limitations for CO will result in increased energy usage, with the concomitant increase in emissions of NO_x and other pollutants. Further, the EPA failed to account for this interrelationship in its economic analysis.

VII. The NAM disagrees with EPA's proposed malfunction affirmative defense

As the NAM has previously commented, the EPA should establish work practices to address emissions during periods of malfunction. Given that the EPA's floor data does not consider malfunctions and that the statute requires that the MACT standard be "achievable," The EPA should set work practice requirements to address periods of malfunctions as well. CAA Section 112(h) allows the EPA to set work practice standards for situations where "it is not feasible in the judgment of the Administrator to prescribe or enforce an emission standard" Malfunctions fit with the situations described in the definition of "not feasible to prescribe or enforce an emission standard" as any situation where "the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations." Emission testing for malfunctions would be near impossible to conduct given the sporadic and unpredictable nature of the events. Section 112(h) work practice standards, therefore, are well-suited to address malfunction periods and the complexities and challenges surrounding collecting data and establishing numerical standards for those events.

The NAM disagrees with the EPA's proposal to provide an affirmative defense for periods of malfunction. As has been discussed in various comments in this rulemaking, as well as others where the EPA has proposed a similar affirmative defense, the proposed affirmative defense is not a permissible substitute for setting emissions standards for periods of malfunction, and it is unreasonable and impracticable.

VIII. The EPA's proposed energy assessment is too broad in scope

The NAM continues to believe that the EPA's proposed energy assessment requirements are unwarranted. Further, although the EPA has indicated that it is limiting the scope of its energy assessment requirements, the NAM believes that the measures still exceed the scope of the EPA's authority. Section 112(d) of the Clean Air Act is focused entirely on regulation of "sources." It requires the EPA to set emissions standards that are "applicable to new or existing sources" § 112(d)(2). Thus, it reaches no further than the specific "sources." The "affected source" regulated by this NESHAP is the specified emission unit – boilers – not any other portions of the plant. Thus, if the EPA retains the energy assessment requirements, they should be clearly limited to addressing only the boiler and auxiliaries.

IX. The EPA should allow a co-fired unit to opt between the CISWI rule and the Boiler MACT Rule

The NAM supports the EPA's proposal to allow a co-fired unit to opt out of the CISWI rule and into the Boiler MACT rule, or vice versa. This will provide a beneficial measure of flexibility to operators. However, the EPA should eliminate the arbitrary restriction in the proposal that would limit a facility from moving from being regulated under CISWI to being regulated under Boiler MACT for a six month period after it had stopped burning solid waste. As a policy matter, forcing operators to remain regulated under the one standard when there are reasons to switch would needlessly penalize them with little to no benefit gained.

X. Conclusion

The NAM supports a number of the changes that the EPA has made to the proposed rule, but encourages the Agency to make further adjustments consistent with the comments above. The NAM urges the EPA to craft its rules to capitalize on the manufacturing sector's demonstrated record of technological innovation that continues to improve the quality of life for all Americans. For more information related to these comments, please contact Alicia Meads (ameads@nam.org) at 202-637-3174. Thank you for the opportunity to comment.