Poultry Industry Comments on National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

August 23, 2010

VIA ELECTRONIC MAIL
EPA Docket Center (EPA/DC)
U.S. Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

RE: Comments on the Proposed National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

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

These comments are submitted on behalf of the U.S. Poultry & Egg Association, the National Turkey Federation and the National Chicken Council in response to the Environmental Protection Agency's proposed National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (Boiler MACT). 75 Fed. Reg. 32006 (2010).

Our concerns are two-fold. First, we are troubled by the potential impacts of the agency's action on a significant number of U.S. poultry processing operations that operate gas and oil-fired boilers and process heaters. Second, we are concerned that promising opportunities for the further expansion of animal biomass fuels – particularly broiler and turkey litter – will be hampered by the disincentives contained in the proposed rule for the larger industry universe of boiler operations that use, or are exploring the use of, animal biomass. These comments summarize these issues and confirm several concerns we share with a range of other industries commenting on the proposed requirements. We request that EPA modify the proposed regulations consistent with the comments provided below.

I. INDUSTRY OVERVIEW

The **U.S. Poultry & Egg Association** is the world's largest poultry organization, whose membership includes producers of broilers, turkeys, ducks, eggs and breeding stock, as well as allied companies. The Association focuses on research, education and technical services, as well as communications to keep members of the poultry industry current on important issues.

The **National Turkey Federation** is the national advocate for all segments of the turkey industry. NTF provides services and conducts activities which increase demand for its members' products by protecting and enhancing their ability to profitably provide wholesome, high-quality, nutritious products.

The **National Chicken Council** is a nonprofit member organization representing companies that produce and process over 95 percent of the broiler/fryer chickens marketed in the United States. NCC promotes the production, marketing and consumption of safe, wholesome and nutritious chicken products both domestically and internationally. NCC serves as an advocate on behalf of its members with regard to the development and implementation of federal and state programs and regulations that affect the chicken industry.

II. Applicability of MACT Standards to Poultry Processing Operations

Most U.S.-based poultry processing facilities operate boilers or process heaters that burn primarily natural gas or oil with a designed heat input capacity of 10 million British Thermal Units (Btu) per hour or greater. Because the majority of these operations exceed this threshold they will be subject to some of the requirements imposed under the Boiler MACT rule. Table 1 indicates that the 10 million Btu threshold would trigger applicability of certain MACT requirements for medium-sized as well as large processing operations. There are very few, if any, small facilities with boilers or process heaters whose design capacity falls under the 10 million Btu threshold.

TABLE 1: Poultry Processing Operations Affected by EPA Boiler MACT Proposed Rule

The proposed rule may impact a range of boilers and process heaters that have a designed heat input capacity of 10 million British Thermal Units (Btu) per hour or greater.

Facility Size	Boiler Size (Horsepower Rating)	Heat Input Capacity (in Btu/hour)
Small	**100 HP**	**4.2 million**
Medium	**300 HP - 600 HP**	**12.6 million – 25.2 million**
Large	**900 HP and above**	**37.8 million +**

As U.S.-based poultry processing operations continue to face a challenging economic environment, new requirements under the Boiler MACT must promote human health and environmental protection without imposing unnecessary regulatory burdens and requiring unreasonable expenditures of time and resources.

While EPA has taken some steps in the proposed MACT and GACT rules to avoid onerous potential burdens on the use of certain fuel types such as natural gas, EPA has the legal discretion and technical justification to further reduce the regulatory burdens of the proposed Boiler MACT for gas and other fuel types, while still providing ample protection to human health and the environment. These comments include several suggestions for revising the proposed regulatory requirements appropriately.

III. The Proposed Approach for the "Gas 1" Subcategory is Appropriate, but Should Be Extended to Biomass Boilers and Units in the "Gas 2" Subcategory

Instead of prescribing numeric HAP emissions limitations on boilers burning clean gas fuels (the "Gas 1" subcategory), EPA proposes to adopt work practices requiring an annual tune up of the boiler. For units larger than 100 mmBtu/hr, EPA explains that "the capital costs estimated for installing controls on these boilers and process heaters to comply with MACT limits for the five HAP groups is over $14 billion." 75 Fed. Reg at 32025. EPA further explains that:

> [T]he need to employ the same emission control system as needed for the other fuel types would have the negative benefit of providing a disincentive for switching to gas as a control technique (and a pollution prevention technique) for boilers and process heaters in the other fuel subcategories. In addition, emission limits on gas-fired boilers and process heaters may have the negative benefit of providing an incentive for a facility to switch from gas (considered a "clean" fuel) to a "dirtier" but cheaper fuel (i.e., coal). It would be inconsistent with the emissions reductions goals of the CAA, and of section 112 in particular, to adopt requirements that would result in an overall increase in HAP emissions. *Id.*

EPA proposes that work practice standards are appropriate and justified for units in the Gas 1 subcategory out of concern for the cost of complying with numeric emissions limitations and based on the adverse policy incentives that would be created. The

proposed approach of the Gas 1 subcategory and the proposed work practices is reasonable and justified based on sound technical, legal and policy grounds.

The rationale that supports the proposed approach for the Gas 1 subcategory applies equally well to biomass boilers used in several major industrial sectors and, therefore, provides ample support for adopting work practices instead of numeric emissions limitation for biomass boilers. The estimated total cost of complying with the proposed HAP emissions limitations for biomass boilers is several billion dollars. This is an extraordinary cost that equals or exceeds the magnitude of the economic burden that EPA predicts for the Gas 1 subcategory. Similarly, severe economic impacts are expected in a broad range of other industry sectors where biomass boilers are widely use, such as the broader agricultural products sector, along with the forest products, furniture and sugar industries. Thus, there is strong economic justification for prescribing work practice standards for biomass and gas-fired boilers in lieu of numeric emissions limitations.

In addition, biomass is a "clean" fuel in many of the same respects as the Gas 1 fuels. Perhaps more importantly, biomass-fired boilers produce no net GHG emissions, which make the combustion of biomass an important tool in managing and reducing the nation's carbon footprint. Similarly, biomass is an abundant, renewable domestically-produced fuel that can help reduce reliance on foreign sources of fossil fuel and, thus, improve the Nation's energy security. Prescribing stringent HAP emissions limitations on biomass boilers will create a significant barrier to the continued use and expansion of biomass fuels and incentivize the use of less desirable fossil fuel alternatives.

In light of the inordinate costs of complying with the proposed HAP emissions limits for biomass boilers, and the strong policy reasons for promoting the combustion of broiler and turkey litter and other animal biomass, EPA has ample justification to prescribe work practices rather than HAP emissions limitations for biomass boilers.

There is also very little difference between the emissions from the top performing sources in the Gas 2 subcategory as compared with the Gas 1 subcategory. As a result, EPA would be justified in concluding that the Gas 1 and Gas 2 subcategories should be combined into a single gas-fired subcategory that would be regulated by work practice standards for the reasons EPA explains in the preamble.

EPA should also consider the following for all natural gas-fired boilers and process heaters:

- Work practices for natural gas boilers and process heaters are appropriate in lieu of emission limits;
- Given the very low-HAP emissions of natural gas-fired units, EPA should consider delisting these sources from regulation under CAA section 112(c)(9);
- The proposed energy assessment is not supported by the statute and is not demonstrated as providing any HAP reduction;
- EPA's definition of natural gas needs to be broader to account for non-geological origins of natural gas such as landfill gas, biogas, and synthetic gas derived from coal.

IV. EPA Should Establish Health-Based Emissions Limitations

Section 112(d)(4) of the Clean Air Act (CAA) authorizes EPA to set health-based emissions limitations when establishing standards for HAPs. This provision is a powerful tool that enables EPA to match the stringency of a HAP emissions limitation to the level determined necessary to protect human health fully. As a result, the standard would be no more stringent and no less stringent than needed to get the job done.

The technology-based method of setting MACT standards is the default approach that results in HAP emissions limitations that may go well beyond what is needed to protect human health. The clear purpose of health-based emissions limitations is to prevent this from happening. As part of the legislative history of section 112(d)(4), Congress recognized that, "For some pollutants a MACT emissions limitation may be far more stringent than is necessary to protect public health and the environment." S. Rep. No. 101-228 (1990) at 171. As a result, section 112(d)(4) was provided 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. . . ." *Id.*

When the first Boiler MACT was promulgated in 2004, it included health-based emissions limitations for two HAPs – hydrogen chloride ("HCl") and manganese. These proposed health-based emissions limitations would have protected human health with an ample margin of safety. At the same time, these standards would have avoided unnecessary regulatory burdens on industrial, commercial and institutional sources. It was estimated at the time that these health-based standards were proposed, they would have saved over $2 billion in compliance costs, compared to the technology-based standards that otherwise would have applied.

In the newly proposed Boiler MACT, EPA acknowledges its authority to establish a health-based emissions limitation for threshold pollutants in lieu of a MACT emissions limitation. Nonetheless, the Agency proposes ***not*** to establish any health-based emissions limitations "[g]iven the limitations of the currently available information (*i.e.*, the HAP mix, where boilers are located, and the cumulative health impacts from co-located sources), the environmental effects of HCl, and the significant co-benefits of setting a conventional MACT standard for HCl." 75 Fed. Reg at 32032. However, health-based emissions limitations are fully justified on scientific and technical grounds.

In the preamble to the proposed rule, EPA sets out a number of questions that might be relevant in deciding whether to establish health-based emissions limitations. Nonetheless, merely asking questions is not a sufficient basis for reversing prior determinations adopted through notice and comment rulemaking. EPA's proposal not to set health-based emissions limitations runs counter to the law and is based on an inadequate explanation of why the Agency proposes to depart from its prior approach. Accordingly, EPA should establish health-based emissions limitations to protect human health and avoid unnecessary regulatory burdens on industrial, commercial and institutional sources.

V. The "Pollutant-by-Pollutant" Approach to Determining MACT Is Not Appropriate

The proposed Boiler MACT standards are based on pollutant-by-pollutant analyses that rely on a different set of best performing sources for each separate HAP standard. 75 Fed. Reg. at 32019. In other words, EPA has "cherry picked" the best data in setting each standard, without regard for the sources from which the data come. The result is a

set of standards that reflect the performance of a hypothetical set of best performing sources that simultaneously achieve the greatest emission reductions for each and every HAP, rather than the actual performance of one or more real sources. This biased approach is contrary to the language of section 112 of the CAA and produces unrealistic and impracticable standards.

The statute unambiguously directs EPA to set standards based on the overall performance of *sources*. Sections 112(d)(1), (2), and (3) of the CAA 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. These provisions make clear that standards must be based on actual sources, and cannot be the product of pollutant-by-pollutant parsing that result in a set of composite standards that do not necessarily reflect the overall performance of any actual source. Congress also provided express limits on EPA's authority to parse units and sources for purposes of setting standards and that express authority *does not* allow EPA to "distinguish" units and sources by individual pollutant as it has proposed in this rule. *Sierra Club v. EPA*, 551 F.3d 1019, 1028 (D.C. Cir. 2008).

Even if the Agency did have discretion to depart from a source-wide approach to standard setting, EPA has improperly exercised its discretion in this rule. EPA has failed to provide an assessment of how many existing boilers and process heaters will be able to meet the proposed standards without taking any further control measures – *i.e.*, EPA has not shown or attempted to show that the proposed standards reflect the performance of any actual affected sources. This failure to assess a critical and fundamental aspect of the proposed Boiler MACT rule renders the rulemaking process arbitrary and capricious.

Furthermore, EPA's database shows that very few units are best performers for more than one pollutant. As a result, the record demonstrates that the proposed standards reflect the performance of exceedingly few actual sources. Thus, even if EPA had investigated the consequences of using a pollutant-by-pollutant approach, it could not have reasonably concluded that the proposed standards reflect the performance of actual sources.

VI. EPA Inappropriately Relies on Emissions Data from the "Best of the Best" in Determining the Existing Source MACT Floors

EPA has been working on the Boiler MACT standards for more than 15 years and has known that it needs to set these standards since the 1990 Clean Air Act Amendments were enacted almost 20 years ago. Despite this long development process for the proposed rule, the Agency has very limited data available to set the existing source standards. Using biomass-fired boilers as an example, Table 2 in the preamble to the proposed Boiler MACT shows that the subcategory includes 420 sources, yet EPA has emissions testing data on 192 units for PM, 91 units for mercury, and 92 units for HCl – 46 percent, 22 percent, and 22 percent data availability, respectively. The data availability is far worse for many other pollutants and subcategories.

The relative lack of data is a fundamental problem because EPA construes the statute as requiring it to set existing source MACT floors based on either the top performing 12 percent of sources for the larger source categories and subcategories. Less data means the pool from which the top 12 percent is drawn is smaller and, therefore, the actual number of sources used to determine the MACT floor is smaller – approximately the top two or three percent in most cases.

While it is true that the statute allows EPA to determine the MACT floor based on sources "for which the Administrator has emissions information," this provision does not excuse EPA from using its resources and legal authority to obtain as much information as it reasonably can prior to setting MACT standards. Despite having 15 to 20 years to gather the needed information, EPA has data on only a small subset of sources in each subcategory. This critical data gap represents a fatal flaw in EPA's process, and subsequently, renders the resulting proposed standards arbitrary and capricious.

This problem is further exacerbated by the fact that the bulk of the information on which EPA has relied in developing the proposed standards was collected by way of a CAA section 114 information request that required testing of specified units for specified pollutants. The record reveals that EPA intentionally directed the information request to units that it had reason to believe were the better performing units in each subcategory.

During the Phase I Boiler MACT data collection effort, EPA requested and received emissions data from most of the potentially affected sources across all of the subcategories for PM, CO, NOx and many HAPs. After reviewing the Phase I data, EPA developed a Phase II plan for collecting additional data. During this second round, however, EPA targeted only those sources whose data EPA determined it would need to set the MACT floor. 75 Fed. Reg. at 32010. In this way, EPA artificially limited the pool of data from which it drew its top 12 percent best performing sources. The result is fatally arbitrary because EPA's sampling approach for Phase II created a data set that is not representative of the sources for which the data is being used to infer emissions.

Instead of only using emissions data from the "best of the best," EPA should simply use emissions data from the "best" units in each subcategory. In other words, EPA should determine how many units constitute the top 12 percent in each subcategory (or top 5 in subcategories with fewer than 30 sources), and then use emissions data from this number of units (or as many of these units for which emissions data are available) in determining the MACT floor and MACT standard. This approach is more appropriate because the Phase I ICR data allowed EPA to select the top performers in each subcategory more reliably for purposes of collecting the Phase II information. As a result, EPA would have sufficient "emissions information" for each subcategory to reasonably select the top performers from which the MACT floor and MACT standard should be based.

VII. The Emissions Database Includes Numerous Fundamental Flaws that Compromise the MACT Floor Analysis

Given the limited comment period that EPA has provided on the Boiler MACT proposal, it has not been possible to conduct a thorough data quality assessment on EPA's entire emissions data base. EPA's failure to provide adequate time for an appropriate assessment of the data violates the Agency's obligation pursuant to the Administrative Procedure Act (APA) to provide a full and fair opportunity for public comment on the proposed rule. Within the limited time available, a spot check of 100 stack test reports and associated information from top performers was conducted to

assess the quality of the data that the Agency relied upon in calculating the MACT floors that underlie the proposed rule.

This spot check revealed numerous data errors – many of which, if corrected, would have a material impact on the stringency of EPA's calculated MACT floors and associated proposed standards. To name just a few, there was: (1) widespread inconsistency in the data reported under the Phase I and Phase II ICRs, such as entirely different methods of determining and reporting "non detects;" (2) inconsistent reporting of dioxin/furan emissions testing results; (3) inconsistent and incompatible PM emissions testing methods; and (4) mischaracterization of boiler types. The number and magnitude of the errors identified in this spot check provide clear evidence that the database is fundamentally flawed and that any standard derived from the database does not have adequate factual support.

To resolve this problem, EPA must conduct a thorough review of the database, correct or eliminate the flawed data, recalculate the MACT floors and associated proposed standards, and provide a new opportunity for public comments (including sufficient time for commenters to conduct their own review of the data).

VIII. Additional Time Is Needed to Comply with the New Regulatory Requirements of the Boiler MACT

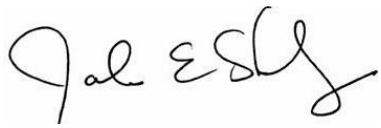
Even with the changes suggested above, owners and operators will be required to retrofit countless industrial boilers and process heaters in order to meet the final rule. The three-year compliance deadline for existing affected sources is an exceedingly short time given the extensive nature of the needed retrofits and the limited technical resources available to accomplish the retrofits.

Accordingly, EPA should adopt a significantly longer compliance deadline. EPA should consider an across-the-board extension of the compliance deadline for the boiler MACT pursuant to section 112(i)(3)(B) of the CAA and/or establishing phased or sequenced requirements such that certain element of the rule become effective no later than three years after promulgation (thus satisfying section 112(i)(3)(A)), while others are phased in at later times.

IX. Conclusion

Consistent with these comments, EPA has both the need and the opportunity to make significant changes to the proposed Boiler MACT. EPA should revise the proposed regulation to satisfy the requirements of the CAA, the APA, and sound technical, economic and policy considerations. These changes are needed to correct fundamental technical and data issues that compromise the validity of the proposed standards. They also are needed to address several basic legal infirmities that call into question the legal viability of key aspects of the rule. Lastly, EPA can and should take advantage of the several significant opportunities summarized in these comments that would substantially reduce the burden on affected sources while still protecting human health and the environment.

We appreciate the opportunity to submit these comments. If you have any questions, would like additional information, or would like to discuss these comments, please contact Paul Bredwell at pbredwell@poultryegg.org or Christian Richter at crichter@thepolicygroup.com.



John E. Starkey, P.E.
President
U.S. Poultry & Egg Association