NACAA
national association of clean air agencies

March 18, 2015

U.S. Environmental Protection Agency
EPA Docket Center (EPA/DC)
Mailcode 28221T
Attention Docket ID No. EPA-HQ-OAR-2013-0291
Attention Docket ID No. EPA-HQ-OAR-2013-0290
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Dear Sir or Madam:

On behalf of the National Association of Clean Air Agencies (NACAA), thank you for this opportunity to comment on the proposed National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing and for Clay Ceramics Manufacturing, which were published in the *Federal Register* on December 18, 2014 (79 *Federal Register* 75622). NACAA is a national, non-partisan, non-profit association of air pollution control agencies in 41 states, the District of Columbia, four territories and 116 metropolitan areas. The air quality professionals in our member agencies have vast experience dedicated to improving air quality in the United States. These comments are based upon that experience. The views expressed in this document do not necessarily represent the positions of every state and local air pollution control agency in the country.

1. Risk-Based MACT Standard

In this rule, EPA is proposing to introduce health-based risk assessment into the establishment of the Maximum Achievable Control Technology (MACT) standard for hydrogen chloride (HCl), hydrogen fluoride (HF) and chlorine (Cl_2), using Section 112(d)(4) of the Clean Air Act (CAA).[1] EPA noted that, while the agency has used this section in the past to establish health-based standards for other source categories, it was restricted to "HCl emissions for discrete units within the facility."[2] Additionally, "[t]o date, the EPA has not implemented a NESHAP that applied the provisions of CAA section 112(d)(4) to HF or Cl_2."[3] It appears, then, that this would be the first time that EPA will use the health-based option under Section 112(d)(4) for HF and Cl_2, and in this magnitude for HCl.

[1] 79 *Federal Register* 75638
[2] 79 *Federal Register* 75639
[3] 79 *Federal Register* 75639

NACAA is very concerned with the introduction of health-based risk assessment into the establishment of the MACT standards for Brick and Structural Clay Products Manufacturing and Clay Ceramics Manufacturing. We believe it is not appropriate to propose such a far-reaching and significant change in the manner in which MACT standards are established under Section 112(d) of the Clean Air Act. While we support focusing our efforts on the greatest risks, we are concerned that EPA has not adequately established that the approaches in its proposal are the appropriate vehicles to accomplish that goal. Furthermore, a precedent-setting change of the magnitude that EPA has proposed should be discussed openly and carefully with all affected parties, rather than being buried in an individual MACT proposal.

Congress established Section 112 of the CAA to rely heavily on a technology-based approach to avoid the gridlock of the unsuccessful risk-based methods used before the adoption of the 1990 Clean Air Act Amendments. Accordingly, while the Clean Air Act includes language under Section 112(d)(4)[4] allowing the use of risk in the establishment of MACT, it should be used only under limited and very specific circumstances. We do not believe EPA's proposal adequately makes the case for the use of Section 112(d)(4). Additionally, it raises critical questions and concerns that the agency needs to address before proceeding. Among our concerns are the following:

a. Health Thresholds

In order to use the Section 112(d)(4) health-based standard provisions, EPA must: 1) adequately demonstrate that the pollutants in question (in this case, hydrogen chloride, hydrogen fluoride and chlorine) have *established* health thresholds and 2) select limits that are not only below those thresholds, *but also* provide protection with an ample margin of safety. If EPA is to use this provision instead of the technology-based MACT, the hurdle should be sufficiently high to ensure the pollutants in question are non-carcinogens and have well-documented health-based thresholds. If there is uncertainty, EPA should err on the side of caution and not apply Section 112(d)(4).

We are not satisfied that EPA has substantiated adequately that there is a safe threshold for these substances. We have multiple concerns about EPA's analysis and do not believe it justifies the establishment of a health-based standard under Section 112(d)(4). Additionally, EPA's approach does not include a mechanism to ensure that the health-based limits are still protective, as health values change as a result of additional research into the pollutants and their impacts.

Below are some of our concerns related to each of the pollutants. Several of them are statements that EPA itself makes in the proposal, which are especially troubling because they illustrate a lack of certainty in the information the agency possesses on these pollutants and on which EPA is relying to propose a standard:

[4] Section 112(d)(4) – "With respect to pollutants for which a health-based threshold has been established, the Administrator may consider such threshold level, with an ample margin of safety, when establishing emission standards under this subsection."

Hydrogen Chloride (HCl)

- We believe the use of health-based standards should only be considered for hazardous air pollutants (HAPs) that have been thoroughly evaluated by EPA and are contained in the Integrated Risk Information System (IRIS) database with a **high level of confidence** in the reference concentration (RfC). With respect to HCl, IRIS states that the confidence levels for the inhalation RfC, the study and the database are all "Low." For the "Carcinogenicity Assessment for Lifetime Exposure," IRIS states, "This substance/agent has not undergone a complete evaluation and determination under US EPA's IRIS program for evidence of human carcinogenic potential." [5]

- In the proposal itself, EPA acknowledges deficiencies in its body of knowledge: "The EPA has not classified HCl for carcinogenicity"[6] and "[l]ittle research has been conducted on its carcinogenicity."[7] It seems the agency has not safely established that HCl is a threshold pollutant because, among other things, it has not determined it is a non-carcinogen.

Hydrogen Fluoride (HF)

- As stated earlier, we believe health-based standards should be contemplated only for HAPS that are contained in IRIS with a high level of confidence in the RfC. However, HF does not have an RfC in IRIS.

- The proposal states, "There is limited/equivocal evidence of the carcinogenic potential of HF"[8] and "[t]he EPA has not classified HF for carcinogenicity."[9] Thus it is not clear how the agency could be confident that HF is eligible to be a threshold pollutant if its status as a non-carcinogen is uncertain.

- The proposal states, "[a]nother cause for concern is the potential for greater susceptibility of children to the effects of inhaled fluorides, considering the rapid bone growth at early lifestages.[10]

Chlorine

- The IRIS database states that chlorine has not been assessed under IRIS for an RfC for Chronic Inhalation Exposure, nor has it been assessed for a Quantitative Estimate of Carcinogenic Risk from Inhalation Exposure.[11] In the proposal, however, EPA states that, "the agency *presumptively* considers Cl2 to be a threshold pollutant" (emphasis

[5] http://www.epa.gov/iris/subst/0396.htm#coninhal
[6] 79 *Federal Register* 75639
[7] 79 *Federal Register* 75639
[8] 79 *Federal Register* 75641
[9] 79 *Federal Register* 75640
[10] 79 *Federal Register* 75640
[11] http://cfpub.epa.gov/ncea/iris/index.cfm?fuseaction=iris.showQuickView&substance_nmbr=0405

added).[12] We do not believe that a presumption is adequate to justify the use of the health-based standard option.

b. Cumulative Effects

EPA acknowledges the importance of considering the cumulative effects of exposure to hazardous air pollutants when contemplating establishing a health-based standard under Section 112(d)(4). Specifically, EPA states that the agency would consider: "[t]he potential for cumulative adverse health effects due to concurrent exposure to the same HAP or other HAP with similar biological endpoints from either the same or other source categories, where the concentration of the threshold pollutant emitted from the given source category is below the threshold."[13]

Given that all three of the pollutants in question likely share the same critical effect of portal-of-entry irritancy (i.e., eye, nose and throat irritation, and potential for aggravating respiration), it would be reasonable to regard all three as having potential additive and/or interactive effects. Additionally, EPA expressly admits that for both the Brick and Structural Clay Products Manufacturing and Clay Ceramics Manufacturing source categories, the agency's "quantitative analysis of nearby emissions may contain significant uncertainty."[14] The agency is merely assuming, then, that there are not cumulative health and environmental impacts of concern. NACAA wonders how EPA can ensure that its proposed standards include an ample margin of safety without properly accounting for the additive and/or synergistic effects of multiple pollutants and the cumulative effects of nearby emissions.

c. Risk Assessment to Determine Health-Based Limit

In addition to EPA's reliance on a threshold for the pollutants, NACAA is also concerned about the methodology that the agency used to develop its risk assessment for this rule. For example, EPA stated that "the air concentrations at each nearby census block centroid were used as a surrogate for the chronic inhalation exposure concentration for all the people who reside in that census block."[15] This analysis dilutes the effect of sources' emissions by estimating the impact at the centroid of the census block instead of at the property line or wherever the maximum exposed individual is. Census blocks can be large geographically, depending on the population density, so the maximum point of impact can be far from the centroid, including at or near the property line. Even if the area near the property line is not developed, over time homes and businesses could locate closer to the facility. While it is possible that population distribution is homogenous over a census block, this assumption is not necessarily accurate in considering the predicted impacts from the location of a source. Using HEM-3, EPA can identify the maximum individual risk at any point in a census block that is within a 50-kilometer radius from the center of the modeled facility. Based on HEM-3's power and ability, NACAA suggests that EPA abandon its use of the predicted chronic exposures at the census block centroid as a surrogate for the exposure concentrations for all people living in that block. Rather, we

[12] 79 *Federal Register* 75640
[13] 79 *Federal Register* 75641 and 75660
[14] 79 *Federal Register* 75642 and 75661
[15] 79 *Federal Register* 75643 and 75661

recommend that EPA use the truly maximum individual risk, irrespective of its location in the census block, in its risk assessments.

In light of the aforementioned and other uncertainties in the science and EPA's analysis, NACAA is concerned that EPA's determination that a health-based standard, which would also need to provide an ample margin of safety, is difficult to defend. NACAA recommends that EPA either abandon the Section 112(d)(4) option and rely on the technology-based approach that is the foundation of the MACT program or adequately address these significant deficiencies in its analysis.

2. Emissions Averaging

The proposed rule includes a request for comment on the use of emissions averaging. We have long had concerns about emissions averaging, especially if there will be any interpollutant trading. Besides concerns about the associated health impacts, there are implementation challenges, such as complications that averaging poses for inspectors and enforcement personnel in determining the requirements for individual units.

If EPA is determined to include emissions averaging in the final rule, we urge the agency to include the very important restrictions relative to emissions averaging that were articulated in the proposal.[16] These include, among others:

- assurance that the environmental benefits of the averaging will be equal to or greater than if each individual unit had complied separately;
- averaging for new sources would be prohibited; and
- averaging between different pollutants, sources or source categories (even if the latter are within the same facility) would be prohibited.

EPA requested comment on whether a discount factor should be applied when emissions averaging is used, to ensure that the average will be at least as stringent as the MACT floor limits without averaging. NACAA believes that such a discount factor is appropriate to ensure that health protection and the environment do not suffer as a result of the use of emissions averaging.

3. Ecological Effects

The proposed emissions standard for acid gases is an HCl equivalent of 250 tons per year, which we believe is cause for concern with respect to ecological effects.[17] For years, federal, state and local agencies have struggled to reduce emissions of sulfur dioxide and other acid gases to prevent the devastating effects of acid rain on large ecosystems. However, the proposed standards may likely result in the acidification of the ecosystems in close proximity to these sources over time. We believe the ecological analysis about the impact of these emissions standards in this proposal is woefully inadequate and should be improved.

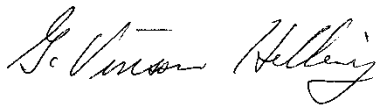
[16] 79 *Federal Register* 75650
[17] 79 *Federal Register* 75644

4. Alternative Mass-Based Standard

For sources in the Brick and Structural Clay Manufacturing category, EPA is proposing two compliance options for mercury and total non-mercury HAP metals: a numerical emission rate limit as a mass of pollutant emitted per ton of bricks produced and a numerical emission limit in units of concentration.[18] We are concerned that, through the use of the mass-based option, there will be many smaller kilns that will be able to meet the standard without the use of additional pollution controls. This outcome is not only inconsistent with the intent of Section 112 of the Clean Air Act, but by allowing a significant number of sources to avoid additional controls altogether, it will limit the degree of health protection expected from this program.

Thank you for this opportunity to comment on the proposal. Please feel free to contact us for additional information.

Sincerely,



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[18] 79 *Federal Register* 75633