



December 25, 2025
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Subject: **National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors: Residual Risk and Technology Review**
Docket Number: EPA-HQ-OAR-2004-0022

To Whom It May Concern:

Thank you for this opportunity to submit comments on the Environmental Protection Agency's (EPA's) proposed national emission standards for hazardous air pollutants from hazardous waste combustors.

We read your 173-page proposal and can say without a doubt: **If your goal is to Make America Healthy Again, this proposal will not get us there.** The proposed rule fails to protect children and their families from the dangerous chemicals released by burning hazardous wastes.

This rule is highly consequential for parents and for all Americans because in it, EPA decides how much hazardous air pollution – such as PCBs, beryllium, and heavy metals -- hazardous waste combustors are allowed to release into our air. In other words, the rule will directly affect what we and our children breathe. The toxic chemicals from these combustors can disturb the sensitive windows of fetal, infant and child development, and can trigger cancers, adverse neurodevelopmental outcomes, reproductive effects, and other harms. Even tiny amounts of these chemicals can induce life-altering, and sometimes, life-ending conditions.

EPA is proposing a “do nothing” rule that fails to protect our precious children – or any of us – from the dangerous pollution released by hazardous waste combustors. This is a huge disappointment on a rule that is already two decades overdue.

EPA promulgated its first national emissions standards for hazardous air pollution from hazardous waste combustors in 1999, but the rule failed to protect human health and was found to violate the Clean Air Act. Those first standards were vacated as unlawful by the DC Circuit Court of Appeals [in 2001](#). Subsequent versions failed to fix the problems. [In 2008](#), the DC Circuit Court ruled that EPA was using flawed methodology. The court remanded the entire hazardous waste combustor rule to EPA in 2009, and since then the agency has stalled and delayed. Failing to fix the rule, and to conduct Residual Risk and Technology Reviews to update

the rule (which the Clean Air Act requires every eight years for hazardous air pollution standards) these past 17 years, the EPA is now under a court-ordered deadline to issue a final rule by December 31, 2025. Unfortunately, what EPA is proposing fails to accurately assess and regulate the risks posed by hazardous waste combustors. It does not even rectify the problems raised by the court back in 2008.

EPA's proposal includes significant shortcomings. For example, the proposed rule

- Fails to set standards for all pollutants emitted by smaller hazardous waste combustors, known as "area sources," and illegally allows states to exempt these area source hazardous waste combustors from the requirement to obtain Title V permits
- Absurdly gerrymanders the regulatory definition of the hazardous waste combustor source category to exclude any fugitive emissions so that EPA won't have to regulate this pollution, and consequently claims that there is no need for fence-line monitoring
- Erroneously justifies decisions to decline required pollution controls on the unlawful grounds that the dollars-per-ton costs are too high for polluters to pay
- Slices and dices the liquid fuel boiler category by size, and then claims the agency doesn't have enough data on each little subcategory, so they won't impose limits on the emissions
- Sets standards for the previously unregulated chemicals hydrogen fluoride and hydrogen cyanide, as required, but makes the standards so low that they are almost meaningless – facilities can meet them with no additional pollution controls -- and says that so-called area source hazardous waste combustors are exempt. Also, EPA fails to set standards for 1-bromopropane
- Claims to be removing the exemption for Startup, Shutdown, and Malfunction (SSM) events, but in practice only replaces SSM with an "SSM Plan"
- Includes so-called "work practice standards" in contexts that require numeric limits, in contravention of Clean Air Act requirements
- Fails to consider the combined risks from multiple sources and multiple chemicals at once, instead modeling the risks as if people are exposed to just a single chemical at a time
- Refuses to protect fetuses, infants, and children from lead
- Makes other methodological missteps, including claims that actual emissions are lower than allowable emissions; heavy reliance on surrogate chemicals; and the watering down of dry kiln standards by combining data from wet and dry kilns
- Fails to protect the health of infants, children, and all people.

We briefly elaborate on these issues later in this letter.

EPA's proposed rule would expose people to dangerous amounts of hazardous air pollution. It would also affect the business decisions made by industrial polluters and whether they choose to pollute more or try and avoid generating the toxic chemical wastes in the first place. By opting for more lax requirements, the rule incentivizes toxic pollution by letting polluters release hazardous air pollution more freely and cheaply. It makes the combustion of hazardous wastes –

showering communities with hazardous air pollution -- a more profitable option on the menu of hazardous waste disposal technologies.

Hazardous waste combustors

Hazardous waste combustors burn everything from paints to pesticides to chemical manufacturing wastes. The facilities pollute [surrounding communities](#), [forcing people to breathe](#) highly concentrated [toxic chemicals](#). The nation's 163 hazardous waste combustors collectively emit approximately 9,900 tons (19,800,000 pounds) of hazardous air pollutants per year. The threat from these toxic chemicals does not end at the fenceline: persistent toxic chemicals can move far and wide. Some of these substances – including heavy metals, dioxins, and PFAS chemicals – may travel hundreds or even thousands of miles before settling in the lungs of people and animals, and in our food, soils, and water. They become part of our food chain and our drinking water, and they accumulate in our bodies, increasing the risk of cancers, neurological issues, hormone disruption, reproductive and developmental harms, and other ill effects.

Incineration fails to destroy all toxic chemicals. Some hazardous waste chemicals are released from the combustors as fugitive and stack emissions, while others become hazardous ash requiring further disposal.

While publicly-available data are sparse, it appears that roughly 10 to 30 percent of the hazardous waste inputs, by weight, are converted into ash. This includes the heavier “bottom ash” and the more toxic “fly ash.” Some of the ultrafine particulates in this fly ash escape the facility, as do chemicals that have transformed into vapors and gases, evading the filters, scrubbers, activated carbon, and other pollution control systems. These chemicals exit the combustor through stacks, vents, valves, and other pathways, polluting surrounding communities with lead, mercury, and other toxic chemicals.

Much of the pollution that gets captured by the pollution control devices needs to be transported by truck and rail to hazardous waste landfills given the high concentration of dioxins, heavy metals, and other dangerous chemicals – adding risks from derailment, collisions, containment failures during extreme weather, and other dangers. The proposed rule makes no mention of these combustion products and the additional dangers they present to communities.

Many materials (such as the heavy metals lead, chromium, and mercury, and the alkaline earth metal beryllium) do not break down during incineration but rather vaporize in high heat and then convert into ultra-fine particulate forms as they cool down. These chemicals can escape the incinerator in even more toxic forms – for example [chromium 3](#) can oxidize into the far more [potent carcinogen chromium 6](#) (hexavalent chromium) in the high-temperature enhanced oxygen environment of the combustor.

Chemicals such as extremely dangerous PFAS (which the US still [fails to classify](#) as hazardous air pollutants under the Clean Air Act) are only partially destroyed by hazardous waste combustors. [Even when](#) operating at more than 1000 degrees C (>1832F), hazardous waste combustors that are burning PFAS chemicals can form incomplete combustion byproducts, including [smaller fluorinated compounds](#) that may be equally or even more hazardous than the original PFAS. These more diminutive, more mobile forms of PFAS [can spread](#) the toxic contamination through the fly ash and other emissions. PFAS combustion can also release vast amounts of [greenhouse gases](#).

Also burned in these incinerators is the known human carcinogen [beryllium](#), which is [increasingly used](#) in the aerospace and weapons industries, electronics and telecommunications, oil and gas, nuclear, energy efficiency, medical imaging, and other sectors. Beryllium is a naturally occurring metal and thus cannot be destroyed by incineration. The combustors capture some of the beryllium in filters, which must then be disposed of in other hazardous waste facilities. The beryllium dust that's not ensnared in the filters or recovered as ash can escape into neighboring communities [and beyond](#). It takes exceedingly tiny amounts to trigger chronic beryllium disease, a debilitating and fatal illness that has ravaged workers and their families in the [US Department of Energy nuclear weapons](#) facilities and other industries. The metal is so toxic that even people who *never* entered beryllium-contaminated facilities have become sick with the disease, having inhaled particles from their partner's clothes, for example while doing the family laundry.

Since no incinerators are able to achieve full combustion of all the toxic materials, there are also releases of polycyclic aromatic hydrocarbons, volatile organic compounds, and other byproducts. The incomplete combustion of chlorinated materials like PVC plastic generates acid gases such as hydrogen fluoride and hydrogen chloride. This combustion also releases persistent organic pollutants such as [dioxins](#), furans, and PCBs, which are some of the most toxic chemicals known to humankind. The presence of heavy metals in the incinerator (for example from burning plastics or used electronics) serves as a [powerful catalyst](#) in the formation and release of these chemicals.

Although a large proportion of the dioxins, furans, and PCBs are broken down by the incinerator, particularly at higher temperatures, these chemicals are so toxic that even tiny amounts escaping the facility can still do extreme harm, especially to infants and children, who are uniquely vulnerable to pollutants. The risk levels can be off-the-charts during malfunction events, during which vast quantities of toxic chemicals may be released into surrounding communities. There is limited transparency on the frequency and emissions from these so-called "upsets," but evidence suggests that they happen far too often, caused by equipment failures, inadequate maintenance, severe weather events, and other factors.

EPA states that in 2023, 32.2 million tons of hazardous waste were generated in the US, and 1.1 million tons were burned in hazardous waste combustors, with another 1.4 million tons combusted in energy recovery facilities such as boilers. Adding those two categories, it would mean that 2.5 million tons of hazardous wastes were incinerated in 2023, releasing a formidable

amount of hazardous air pollution. These figures raise obvious questions about the remaining 29.7 tons of hazardous waste that were generated that same year – presumably disposed of in highly engineered hazardous waste landfills, deep well injection for liquids, use of reagents and chemical treatments to stabilize wastes, and other technologies. We urge the US government to proceed with caution, and to assess all possible options, rather than rushing to incentivize the combustion of hazardous waste, given the potency of the resulting air pollution, the harm to people living in the vicinity of these facilities, the broader toxic threats, and the climate-heating potential of the resulting emissions.

What’s in (or not in) the EPA’s proposal

Here are some highlights.

“Area sources” of hazardous air pollution

“Area source hazardous waste combustors” are units that release less than 10 tons per year of any single hazardous air pollutant or 25 tons per year of a combination of hazardous air pollutants. These “area sources” are smaller than many of the larger-sized incinerators. But 25 tons (50,000 lbs) of extremely potent carcinogens, neurotoxic chemicals, hormone disrupting chemicals, and reproductive toxicants is still an enormous amount for people to breathe. Some of these pollutants (such as mercury, lead, dioxins, and PCBs) are harmful in fractions of a gram.

EPA is required to set standards for all hazardous air pollutants emitted by hazardous waste combustor area source categories, and to set Maximum Achievable Control Technology standards for incinerators, cement kilns, lightweight aggregate kilns and other hazardous waste burning sources emitting Clean Air Act section 112(c)(6) pollutants (alkylated lead compounds, polycyclic organic matter, hexachlorobenzene, mercury, polychlorinated biphenyls, 2,3,7,8-tetrachlorodibenzofurans, and 2,3,7,8-tetrachlorodibenzo-p-dioxin). Yet EPA’s proposal fails to set standards for all pollutants emitted by these hazardous waste combustor area sources, including HF, HCN, PCBs, and PAHs.

Moreover, the Clean Air Act requires all hazardous waste combustors, *regardless of their size*, to obtain legally enforceable title V operating permits. This includes the “area source” combustors. These title V permits are critically important. They consolidate federal, state, and local air pollution control requirements into a single legally binding document that lays out specific pollution limits and monitoring, recordkeeping, and reporting requirements. Title V permits increase transparency and public involvement in facility operations, helping to ensure continuous compliance with air quality standards.

Disturbingly, EPA now proposes to *exempt* area source hazardous waste combustors from title V permitting requirements or to give states the option to make the exemption. EPA claims that the title V requirements are “unnecessarily burdensome” for these incinerators, because “no additional benefits would be achieved” and because of EPA’s unsubstantiated conjecture that the cost may be “burdensome” for some companies. EPA estimates that renewing these permits would amount to an expense of between \$15,000 and \$30,000 for companies, which EPA considers too much. The additional cost of title V permitting over non-title V state permitting

would only be \$7,500 to \$15,000. EPA suggests that it is concerned about area source hazardous waste combustors that are small businesses, but it fails to identify a single one. Note that, based on EPA's current proposal, no affected hazardous waste combustor is expected to incur an annual cost of more than 0.16 percent of their revenues on compliance.

Communities rely on the monitoring, public transparency, and compliance requirements of title V, which is part of the 1990 Amendments to the Clean Air Act. Title V offers people information (where sources are, what they are emitting, the standards they are subject to) and a mechanism through which to be heard, so that laws are enforced and heavily polluting hazardous waste combustors are held accountable. Losing the protections of title V would be a major setback for public health.

Fenceline monitoring

EPA rejects fenceline monitoring with the dubious claim that any fugitive emissions from these combustors are not actually part of the hazardous waste combustor source category. EPA is claiming that the category only includes the emissions that come from the stack (aka the smokestack or chimney). In essence, *EPA is gerrymandering the regulatory definition of the source to exclude any fugitive emissions so that EPA won't have to regulate this pollution.* This far-fetched rationale is unlawful and arbitrary.

EPA states that the agency considered whether fenceline monitoring would be appropriate, but decided there would not be any reason for such monitoring because "the emissions from the source category are not fugitive emissions and come from stacks with an average height of approximately 125 feet and stack parameters that would cause the emissions to be much higher than where the fenceline monitors would be located." EPA is not denying that fugitives are released, but rather it is claiming that the fugitive pollution (from leaky pipes, valves, pumps, storage tanks, and other components) and during waste handling *don't count* because the agency has defined them to be outside of the source category. The only pollution EPA is willing to consider comes out of tall stacks which it says are too high to affect any fenceline measurements. This absurd manipulation of the source category definition is against the law. The Clean Air Act does not allow EPA to gerrymander the source definition into separate emission streams and then refuse to regulate the fugitive emissions.

Even assuming, *arguendo*, that the hazardous waste combustor source category could legitimately exclude fugitive emissions, as EPA incorrectly claims, fenceline air monitoring would still be vitally important. Fenceline monitoring is critical to alert communities about what they are breathing from the *entire* petrochemical complex, both stack and fugitive emissions, not just the one combustor. Moreover, continuous emissions monitoring could capture not only what is released when operations go as planned, but also that which escapes during malfunctions or other unanticipated events.

These monitors do far more than educate the public: fenceline monitoring can be integrated with public alert systems and with root-cause analysis and mandatory corrective actions. These life-saving technologies can identify the hazards, mitigate the risks, and prevent chemical fires,

leaks and explosions. Despite the well-validated protections that fenceline monitoring systems would provide, EPA declines to require them.

EPA has not attempted to explain how its approach is lawful or consistent with section 112(d)(6) of the Clean Air Act, which requires EPA to review and revise National Emission Standards for Hazardous Air Pollutants for specific source categories no less than every eight years to ensure that standards keep pace with new practices, processes, and control technologies.

Specifically, 112(d)(6) of the Clean Air Act mandates that the Administrator take into account “developments in practices, processes, and control technologies.” Fenceline monitoring is one such “development” under section 112(d)(6), part of a category that EPA has previously interpreted to mean, “[a]ny add-on control technology or other equipment that was not identified and considered during development of the original . . . standards.” 90 Fed. Reg. at 47273. Fenceline monitoring is a “development” that would advance the control of hazardous air pollutants and make such protection more “achievable,” consistent with sections 112(d)(2)-(3) and 112(h). Achievability depends on multiple factors including company revenues and whether the regulated industry can afford to pay the cost, not on EPA’s untethered assertions of cost effectiveness.

Cost effectiveness

EPA’s proposed rule relies on a laughably simplistic (and unlawful) dollars-per-ton calculation of the “cost effectiveness” of pollution controls for mercury, dioxins, and other hazardous air pollutants, concluding that each technology would cost the companies too much to operate. EPA pays no heed to the vast social and economic harms that come with toxic chemical assaults on human health. The agency’s callousness is stunning, turning a blind eye to families dealing with radiation and chemotherapy treatments, child developmental nightmares, reproductive harms, funeral costs. Nor does EPA admit that the monetary costs of pollution controls would be *a drop-in-the-bucket* for the petrochemical polluters.

EPA claims that running the equipment to control the release of the powerful neurotoxicant hydrogen cyanide would take *too much energy* and would release criteria pollutants like *carbon monoxide*. Elsewhere, EPA declines the use of caustic scrubbers to control hydrogen chloride and hydrogen cyanide on grounds that the controls would produce additional wastewater and use additional energy. While we appreciate the agency’s purported interest in saving resources, these token conservation measures do not justify subjecting children and families to dangerous and sometimes fatal chemical exposures.

EPA offers no basis for its claims that the air pollution technologies cost too much. Moreover, EPA’s cost evaluations are inaccurate and misleading: EPA’s consideration of costs fails to reflect the fact that many pollution control devices can control more than one pollutant at no additional cost. EPA is double-counting: for example, it charges the full cost of the pollution control device at solid fuel boilers *twice* -- once to the hydrogen fluoride account and again to the hydrogen cyanide account.

Liquid fuel boilers

EPA's treatment of liquid fuel boilers is particularly devious with regard to hydrogen cyanide, a known emission from these facilities. The proposal acknowledges that "the EPA collected HCN emissions data from six major source HWC liquid fuel boilers in the January 2024 emissions testing request, and HCN was detected in 76 percent of emissions test runs. The smallest boiler, which is also equipped with a wet scrubber that uses NaOH [sodium hydroxide] in the scrubbing liquid, did not have any detectable HCN emissions." Despite these known emissions, EPA proceeds to slice-and-dice the universe of liquid fuel boiler combustors into subcategories, on a pollutant-by-pollutant basis, and then concludes that no particular category has enough data and thus regulations are not warranted. EPA's actions here are illegal.

Hydrogen cyanide from these combustors is a systemic chemical asphyxiant. According to the U.S. Centers for Disease Control and Prevention ([CDC/NIOSH](#)), it interferes with the normal use of oxygen by nearly every organ of the body. Exposure to this air pollutant can be rapidly fatal. Hydrogen cyanide has "whole-body (systemic) effects, particularly affecting those organ systems most sensitive to low oxygen levels: the central nervous system (brain), the cardiovascular system (heart and blood vessels), and the pulmonary system (lungs)." Hydrogen cyanide is classified as a [chemical warfare agent](#).

EPA compartmentalizes the liquid fuel boiler combustors in different size categories ("capacity less than or equal to 50 MMBTU/hr, capacity greater than 50 MMBTU/hr but less than or equal to 250 MMBTU/hr, and capacity greater than 250 MMBTU/hr") and then claims the agency has insufficient data on which to regulate the combustors in the particular size categories. For example, EPA writes, "For units with a capacity that is less than or equal to 50 MMBTU/hr, the EPA has no data indicating that HCN is emitted because the boiler in this size category had no measurable emissions of HCN. Therefore, we are not proposing HCN emission limits for liquid fuel boilers with capacity less than or equal to 50 MMBTU/hr." That EPA's limited data does not show measurable emissions of HCN *does not excuse EPA* from setting standards.

There is no limit as to where such slice-and-dice regulatory exercises can take us – it's an approach long sought by polluters in a range of contexts (including the notorious Union Carbide Corporation in Institute, WV, which has divided itself into eight separate business units to avoid accountability) and which now EPA has started promoting (for example in the Zeldin EPA's proposed [Framework Rule for the Toxic Substances Control Act](#), which separates out each individual use of each chemical). Following the slice-and-dice playbook, EPA divvies up the nation's liquid fuel boiler facilities into multiple categories and then claims its hands are tied from imposing emissions standards, as there is not enough data on each subdivided category. Thus, the agency opens the doors wide to a toxic-pollution free-for-all, while punishing any existing facilities that have previously taken the initiative to install pollution control systems to lower their emissions.

Weak limits for HF and HCN, and sometimes none at all, as for 1-BP

EPA is required to propose Maximum Achievable Control Technology (MACT) emission limits for previously unregulated pollutants including hydrogen fluoride and hydrogen cyanide emissions.

The limits that EPA proposes, however, are so weak that all facilities can meet them with no additional pollution controls, making them almost meaningless. In justifying its approach, EPA blatantly violates the Clean Air Act and flouts years of DC Circuit Court precedent.

In addition, EPA says that, “consistent with EPA’s longstanding position,” it will exempt HF and HCN from area source requirements for hazardous waste combustors. The reasoning strikes us as backwards: there are gaping holes in the regulations and EPA says, essentially, “we’re not fixing them because nobody has fixed them before us.” The Clean Air Act requires EPA to set standards for these hazardous air pollutants.

With regard to the standards for HF and HCN *from HCl production furnaces*, EPA states that it surveyed the owners of two facilities (out of 17 HCl production furnaces). Neither of the two anticipates burning fluorine-containing materials, and neither found hydrogen cyanide in their test runs, *so EPA is not proposing any emissions limits*. EPA’s failure to solicit data from other facilities in the source category -- and to conclude, based on two out of 17 facilities, that no standards are needed – is arbitrary and capricious.

EPA uses similar reasoning for *lightweight aggregate kilns*, which it chooses not to regulate: “Although a January 2024 emissions testing request was issued to a company that owns and operates lightweight aggregate kilns, both kilns went out of service during the response period and, to the EPA’s knowledge, have neither begun operating again nor initiated RCRA closure. These are the only lightweight aggregate kilns in the source category. Because the EPA has no emissions data on which to base decisions about whether or how to regulate HF or HCN emissions from lightweight aggregate kilns, we are not proposing emission standards for HF or HCN emissions from lightweight aggregate kilns at this time.”

Going out of service for the duration of the EPA emissions testing period may be a winning lottery ticket for hazardous waste combustors releasing hazardous air pollution, as these sliced-and-diced two-unit source categories are awarded with *no standards at all*.

EPA also fails to set standards for 1-bromopropane, a volatile liquid solvent which EPA designated as a hazardous air pollutant in 2022. This was the first hazardous air pollutant to be added to EPA’s list since Congress provided the original hazardous air pollutant list in 1990. 1-bromopropane is linked to neurological, developmental, and reproductive harms and to cancer. When burned, the compound emits toxic fumes such as hydrogen bromide.

EPA’s refusal to set these and other standards is unlawful and arbitrary.

Startup, shutdown and malfunction (SSM)

The D.C. Circuit has affirmed that EPA has a nondiscretionary duty to establish, review, and *continuously apply* hazardous air pollutant standards ([Sierra Club v. EPA](#), D.C. Cir. 2008). Specifically, the court ruled that Clean Air Act emissions limits must be applied on a continuous basis during startup, shutdown, and malfunction events.

In the proposed rule, although EPA claims to eliminate the startup, shutdown, malfunction exemption, in fact the agency is only requiring facilities to have an “SSM plan” (describing what process they will follow during an SSM event) and a system to automatically cut off the feed of hazardous waste to the combustor during periods of SSM. Rather than having to comply with Clean Air Act section 112-compliant emission standards at all times, as the law requires, facilities would merely have to comply with their *SSM plan*. EPA’s approach is insufficient and unprotective. Just as next week’s New Years’ resolutions may not all come to fruition, industrial polluters’ “plans” are just plans, counter to the Clean Air Act requirement that emissions standards must apply continuously. Having a process to follow during SSM is not the same as adhering to continuous numerical limits.

Work practice standards

The Clean Air Act allows EPA to promulgate “work practice standards” (e.g., operational procedures, equipment, and training requirements) in place of numerical emissions limits when it is “[not feasible](#) to prescribe or enforce a standard of performance,” typically when pollution cannot be captured by control equipment, and when continuous air monitors or other measurement devices are not available. However, the Act makes it clear that numerical limits are the preferred method. Despite these limitations, EPA proposes “work practice standards” in place of numeric limits throughout the proposal, including for startup, shutdown, malfunction events; for hydrogen fluoride emissions from major source hazardous waste combustor incinerators; and for major source liquid fuel boilers. Perhaps most absurdly, EPA proposes to allow cement kilns to comply with work practice standards for hydrogen fluoride by *doing nothing at all*. EPA’s over-reliance on work practice standards is inconsistent with Clean Air Act requirements.

Lead emissions

Another serious concern involves **lead, a persistent and bioaccumulative toxicant** for which there is no safe level of exposure, and which is particularly harmful to infants, children, and the developing fetus. The nation’s hazardous waste combustors release at least 4,000 lbs of lead each year. Yet shockingly, EPA assigns a health risk level of *zero* to these emissions. EPA does not even try to assess the risks to surrounding communities from lead, including the known neurological, hematological, and immune effects on children (including significantly decreased IQ), and the hematological, cardiovascular, reproductive, and renal effects on adults.

EPA simply claims that lead levels from these combustors are beneath what’s required by the current-but-decades-out-of-date National Ambient Air Quality Standard (NAAQS) for Pb, and therefore the pollution is acceptable. But EPA does nothing to evaluate or quantify the actual threat from lead, and in any case, it is *relying on the wrong test*: the NAAQS only require an “adequate margin of safety,” which is a much lower level of protection than the “ample margin of safety to protect public health” mandated for hazardous air pollutants under section 112(f)(2) of the Clean Air Act.

Other methodological misgivings

EPA's use of data (or lack thereof) and modeling approaches raise many questions, for example about the agency's **heavy reliance on surrogate chemicals as a proxy** for the direct measurement of hazardous air pollutants from hazardous waste combustors. In particular, EPA's attempt to justify its use of surrogates to regulate PAHs and PCBs is scientifically and legally indefensible and is not grounded in evidence.

In addition, EPA **claims that the actual emissions from hazardous waste combustors** are much lower than the allowable emissions. This is highly doubtful. One reason is EPA's heavy reliance on emissions factors in its pollution modeling (which assume equipment is operating perfectly and conditions are normal) rather than actual monitoring data. In real life, the emissions from malfunctions, "upsets," and so-called accidental (but predictable and preventable) releases are often far more consequential than the releases from normal operations. Yet EPA consistently ignores these malfunction events. A hazardous waste combustor operating when its pollution controls are not working properly can emit toxic chemicals at levels at least 100 times greater than the pollution levels it is allowed to emit.

A recent evaluation by [ProPublica](#) of EPA air monitoring data from a range of sectors showed that, in virtually every facility, actual emission levels were far more (up to 30 times higher) than facilities had estimated and reported to EPA. Likewise, [researchers from Johns Hopkins University](#) measured ethylene oxide levels in air at the fence line of petrochemical polluters across Louisiana's Cancer Alley and found that actual EtO emissions exceeded self-reported data, sometimes by as much as 20 times. Ethylene oxide is one of the many potent carcinogens that may be released by hazardous waste incinerators. It is not clear how EPA means to justify its claims that hazardous waste combustion source category actual emissions are much lower than allowable emissions.

We also question how EPA **combines data to water down the required standards**. We see this, for example, when EPA mixes data from wet and dry kilns. The wet kilns don't burn so well, as it is near impossible to burn water, so they drag down the averages. Their lesser standards must not be used to reduce the emissions standards for dry kilns.

Combined impacts (aggregate and cumulative risks)

Most of the nation's 163 hazardous waste combustor units are embedded in giant petrochemical facilities, besieging communities with a multitude of dangerous chemicals *all at once*. Moreover, many of these heavily polluting industrial facilities have more than one hazardous waste combustor. For example, INV Nylon Chemicals in Victoria County Texas, owned by Koch Industries, has six combustors, while Eastman Chemicals in Kingsport, Tennessee, has seven. Many facilities have four or five combustors, including Clean Harbors in El Dorado Arkansas, FutureFuel Chemical in Batesville Arkansas, BASF Corporation in Geismar Louisiana, BASF Corporation in Palmyra Missouri, Blue Cube Operations in Freeport Texas, Lyondell Chemical Company in Channelview Texas, and Goodyear Tire and Rubber in Beaumont Texas.

Babies, children, and all people living in surrounding communities are forced to breathe not only the emissions from multiple hazardous waste incinerators but also the hazardous air pollution from the entire complex, as well as that from co-located sources. People have no choice but to breathe multiple hazardous air pollutants at once, including lead, arsenic, cadmium, and hexavalent chromium.

Despite the multitude of petrochemical pollution sources in each location, spewing out a full menu of toxic chemicals, the EPA makes the assumption that people are only exposed to one pollutant at a time, from one source, a modeling approach that severely downplays the risks that people are facing. EPA's decision to assess each chemical risk separately, when it knows that multiple hazardous air pollutants are released together, is unlawful and arbitrary. As a result of this tunnel vision, EPA concludes that each and every toxic exposure is "acceptable." The agency fails to consider the aggregate harms from multiple sources of the same chemical, and the cumulative harms from many different chemicals at once.

Protecting the health of children and of all people

The Clean Air Act requires EPA to promulgate risk-based standards to reduce the maximum individual lifetime cancer risk to less than 1 in 1 million. Yet EPA insists that it can use a maximum individual lifetime cancer risk of 100 in 1 million. This directly contradicts section 112(f)(2) of the Act and the Supreme Court finding in [Loper Bright](#) that EPA's interpretation must reflect the best reading of the statute, which it does not. EPA wants to allow 100 times more cancers than what is permissible under the Clean Air Act. In practice, the risk is likely far higher given EPA's use of misleading assumptions and faulty, cherry-picked, and incomplete data.

In addition, the proposed rule states that it is not subject to Executive Order 13045 (Protection of Children from Environmental Health Risks and Safety Risks) "because it is not a significant regulatory action under section 3(f)(1) of Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children."

We beg to differ. Fetuses, infants, children are extremely sensitive to toxic chemical exposures, as demonstrated by [numerous scientific studies](#). Adult exposures can harm unborn children too, resulting in low birth weight, preterm birth, small-for-gestational-age babies and other adverse outcomes. The law is clear, that EPA must focus on protecting the most-exposed and the most vulnerable, with specific attention to mutagenic, teratogenic, neurotoxic and reproductive effects. Yet EPA's methodology downplays the exposures to babies and children from lead, chromium, and other toxic chemicals – including through soil ingestion, dermal exposures, and breast milk consumption – and underestimates the extreme vulnerability during fetal development, infancy, and child development.

The provisions in this proposal contradict the requirements of the Clean Air Act, are arbitrary and capricious, and will put our nation's children in danger, for the reasons outlined above. We urge EPA Administrator Lee Zeldin to start from the beginning and to develop a rule that actually protects our children, our families, and all people.

Respectfully submitted,

Cynthia Palmer, JD, MPH
Senior Analyst, Petrochemicals
Moms Clean Air Force

Dominique Browning
Director and Co-founder, Moms Clean Air Force
Vice President, Environmental Defense Fund