July 7, 2023

The Honorable Michael S. Regan
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20004

Re: New Source Performance Standards for the Synthetic Organic Chemical Manufacturing Industry and National Emission Standards for Hazardous Air Pollutants for the Synthetic Organic Chemical Manufacturing Industry and Group I & II Polymers and Resins Industry; EPA-HQ-OAR-2022-0730

The undersigned health, medical, health care and nursing organizations appreciate the opportunity to provide comment on the proposed updated standards to reduce health risks from the chemical manufacturing industry. These standards have the potential to dramatically reduce cancer risk for communities located near certain facilities, helping to deliver on the promise of President Biden's Cancer Moonshot Initiative. We appreciate EPA's decision to propose updates to the existing standards in light of the new information about the risks posed by ethylene oxide (EtO) and chloroprene. We urge the agency strengthen the standards and quickly finalize them.

Emissions Reductions

We support stronger standards for the synthetic organic chemical manufacturing industry, including reducing leaks of volatile organic compounds (VOCs), and the group I and II polymers and resins industry. We also support stronger standards for ethylene oxide (EtO) and chloroprene emissions from many of these sources, for stricter emissions monitoring requirements, and for removing startup, shutdown and malfunction exemptions. We applaud EPA's work to require emissions reductions that would dramatically reduce the risk of cancer from air toxics emissions in communities near chemical manufacturing facilities.

EPA's Regulatory Impact Analysis notes that rules would result in between $6.3 and $62 million in benefits in 2024 – but that only includes the estimated reduced health harms due to reduced ozone pollution from lower VOC emissions. EPA does not monetize the additional impacts of

reducing air toxics emissions for any of the other health harms avoided, including cancer cases. This means that the benefits are a dramatic undercount.

Health Risks

In the Regulatory Impact Analysis, EPA identifies the myriad health risks associated with the air toxics emissions that this rule would further reduce. Ethylene oxide can cause eye, skin and respiratory tract irritation, nausea and central nervous system depression from short-term exposure and cancer from long-term exposure. Chloroprene can cause a range of short-term health effects, including respiratory irritation, heart palpitations and chest pains, headache and corneal harm, and over the long-term can cause changes in the nervous, cardiovascular and immune systems.[1] Benzene can cause irritation, headaches and unconsciousness from acute exposure and blood disorders from chronic exposure, including blood cancers. 1,3-Butadiene is a human carcinogen and may cause additional health harms. Ethylene dichloride can cause nervous system, liver, kidney, respiratory and cardiovascular harm. Vinyl chloride causes central nervous system effects in the short term and central nervous system and liver harm in the long term, including liver cancer. Chlorine causes lung damage and other harms from high levels of acute exposure, with additional respiratory harms from long-term exposure. Maleic anhydride causes irritation in the short-term and chronic bronchitis over the long term. Finally, acrolein can cause upper respiratory tract irritation in the short-term and long-term effects include respiratory congestion. Some of these chemicals have not yet been assessed for human carcinogenic exposure.[2]

We also appreciate the additional limits on dioxins, which can cause cancer, reproductive and developmental harm, immune system damage and more, and on furans.[3]

In addition to causing direct health harm from both acute and chronic exposure, volatile organic compounds also contribute to the formation of ground-level ozone pollution. Ozone, or smog, can worsen asthma, aggravate existing lung and heart problems, increase hospital visits, and contribute to low-birth weight (a leading cause of infant death) and premature death. It is also linked to premature birth which is a leading cause of infant death.

The proposal cites EPA's 2020 Ozone Integrated Science Assessment (ISA) to note the health effects of ozone pollution. We note that many of our organizations have highlighted deficiencies with the 2020 ISA. EPA did not consider all relevant studies in the scientific literature, limiting its review of research to only studies on locations in the U.S. and Canada, while dismissing well-conducted and scientifically robust studies from the rest of the world. The agency also relied overly on controlled human exposure studies at the expense of epidemiologic studies. Because controlled human exposure studies look at the impact of pure ozone on healthy young adults, they do not provide a full picture of impacts of ozone on vulnerable and sensitive groups in a real-world setting, likely underestimating health effects from ozone. As a result, we strongly disagreed with EPA's decision in the 2020 ISA to downgrade causality determinations for

[1] U.S. EPA. "Regulatory Impact Analysis for the New Source Performance Standards for the Synthetic Organic Chemical Manufacturing Industry and National Emission Standards for Hazardous Air Pollutants for the Synthetic Organic Chemical Manufacturing Industry and Group I & II Polymers and Resins Industry." 2023.
[2] U.S. EPA. "Regulatory Impact Analysis."
[3] EPA. "Learn about Dioxin." https://www.epa.gov/dioxin/learn-about-dioxin

cardiovascular effects and all-cause mortality effects from short-term ozone exposures from "likely causal" in the 2015 review to "suggestive of, but not sufficient to infer."

EPA's Process

We appreciate EPA's continued work to determine whether an unacceptable risk exists for lifetime cancer risk, to write rules that ensure an ample margin of safety and to consider the health effects on the maximally exposed individual. The populations our organizations serve – including people with lung disease, children, people with heart disease and others – are typically at higher risk of health harm from air pollution generally. Further, our organizations place a priority on ensuring the Biden administration meets its goals on improving environmental justice, ensuring that people who live near these facilities do not continue to face overlapping health inequities that increase their overall risk.

We urge the agency to use a much stronger figure of 1 in 1 million as the benchmark for acceptable cancer risk, compared to the current level of 100 in 1 million used in EPA's Integrated Risk Information System (IRIS).

We further appreciate that EPA's approach weighs cancer risk alongside other non-cancer health effects as well as the uncertainties of risk estimates. We also appreciate the agency's consideration of cumulative risk, or an individual's total exposure to hazardous air pollutants in addition to considering hazardous air pollutant (HAP) emissions risk by source-category. This understanding is critical for capturing the impact that exposure to a nearby source adds on top of an existing HAP burden. It is also key for capturing environmental injustices in exposure – if individuals are already living with underlying HAP exposure different from other communities, additional chemical exposure from a nearby facility could cause health harms that they may not in other contexts, especially for non-cancer health risks. Our organizations strongly agree with the recommendations of the Science Advisory Board that Residual Risk and Technology Assessments should be presented in the broader context of aggregate and cumulative risks.

We note EPA's stated limitations of not quantifying HAP risk from facilities beyond the source category under review or mobile sources, among others. We urge EPA to build on the approach in this analysis in further reviews to better capture the cumulative picture of HAP exposure from other sources under the agency's regulatory jurisdiction.

Fenceline Monitoring

We support the requirements for equipment leaks and fenceline monitoring. The inclusion of fenceline monitoring for facilities that work with six key air toxics, including EtO and chloroprene, is an important step to protect the health of nearby communities. We urge EPA to consider expanding the air toxics under consideration to include as many facilities in the source category as possible, given the array of health effects of additional pollutants.

We also urge EPA to increase the reporting requirements of data from the fenceline monitoring. The proposal requires facilities to submit data on a quarterly basis; we urge the agency to take all possible steps to require this data to be reported more frequently, and for the public to have access to it in realtime. While we appreciate the provision that data would be made available to the public through EPA's website, this data is far less useful when posted 45 days after the end of the previous quarter. The public needs access to current emissions data whenever possible to take steps to protect health from harmful emissions levels.

Finally, we encourage EPA to consider lowering the action levels. Currently, our understanding is that the action levels represent a level of 3 times the smallest unit that monitoring technology could detect (based on technology at the time this convention was established.) This is not a health-based metric, and there is no guarantee that emissions lower than this level do not cause health harm.

Conclusion

Our organizations greatly appreciate EPA's work to proactively issue this proposal reflecting the current science on cancer risk from ethylene oxide and chloroprene, the emissions reductions that could be achieved under the standards and the consideration of cumulative hazardous air pollutant impact in EPA's analysis. We urge the agency to strengthen the rule further and quickly finalize it.

Signed,

Allergy & Asthma Network
Alliance of Nurses for Healthy Environments
American Lung Association
Asthma and Allergy Foundation of America
Children's Environmental Health Network
Climate Psychiatry Alliance
Medical Society Consortium on Climate and Health
National Association of Pediatric Nurse Practitioners