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EPN Comments on Proposed Amendments to 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

Docket No: EPA-HQ-OAR-2022-0730

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Founded in 2017, the Environmental Protection Network (EPN) harnesses the expertise of more than 550 former Environmental Protection Agency (EPA) career staff and confirmation-level appointees from Democratic and Republican administrations to provide the unique perspective of former regulators and scientists with decades of historical knowledge and subject matter expertise.

EPN is pleased to comment on EPA's proposed amendments to the New Source Performance Standards (NSPS) and to the National Emission Standards of Hazardous Air Pollutants (NESHAP) (more commonly referred to as the Hazardous Organic NESHAP or "HON") for the Synthetic Organic Chemical Manufacturing Industry (SOCMI), and the NESHAP applying to the Group I and II Polymers and Resins Industries (P&R I and P&R II).

EPA's proposals for actions to reduce volatile organic compounds and air toxics, including strengthening standards for ethylene oxide and chloroprene emissions, will help in reducing significant health risks for people residing in the environs of the approximately 200 HON facilities and the one facility in the Neoprene Source Category within P&R I facilities. The estimated inhalation cancer risks, resulting in large part from a revised risk assessment using EPA's recent revised cancer unit risk estimates (UREs) for ethylene oxide and chloroprene, are among the highest we have ever seen in a residual risk action.

The actions taken under EPA's proposal would reduce EPA's determination of the risks associated with these facilities from "unacceptable" to "acceptable." "Unacceptable" risks are generally those that exceed one hundred in a million, i.e., one in ten thousand, but according to EPA, the "100 in 1 million" threshold is no "bright line" and EPA's determinations are dependent on the situation being evaluated. The proposal also would reduce the risks associated with facilities whose baseline risks are already "acceptable."

- Thus, for HON facilities, all of the estimated 87,000 people living within 10 km (6 mi) of facilities associated with unacceptable cancer risks to ethylene oxide of 2,000 in 1 million (near 8 HON facilities, located in Texas and Louisiana) would be living in a post-control environment having acceptable risk, i.e., no greater than 100 in 1 million. Second, the proposal would significantly reduce the number exposed to risks greater than 50 in 1 million from 342,000 people (near 21 facilities) to 29,000 (near 13 facilities). Thirdly, it would reduce those exposed to risks greater than 1 in 1 million from 2.8 million people to 2.5 million people (near 111 facilities).[1]

- For the Neoprene Production source category, all of the estimated 2,100 people living within 5 km of one facility associated with unacceptable risks of 500 in 1 million would be reduced to an

[1] Federal Register, Vol. 88, No. 79, pp 25816-25818, Tables 31, 32, and 33.

> acceptable level, i.e., no greater than 100 in a million. Second, the proposal would significantly reduce the number exposed to risks greater than 50 in 1 million from 13,000 to 727 people. The estimated 29,000 people exposed to risks of 1 in 1 million would remain the same.[2]

While the proposed actions would bring significant emission and risk reductions, the proposal recognizes that the resulting risks associated with these facilities, although "acceptable," remain relatively high for many people residing near the facilities. (For example, although not so stated in the proposal, the estimated post-control risk of 100 in 1 million, although "acceptable" appears to be borderline acceptable.) However, the proposal states that "[f]or the SOCMI source category, no other control options were identified beyond those proposed to reduce risks to an acceptable level."[3] That is, the most stringent technological options known had been applied in developing the present proposals and that EPA can do no more with control technologies until information becomes available on new control technologies and their associated costs. (We note that while cost does not have to be considered in evaluating options for reducing unacceptable risks, cost is an important factor when considering reductions of risks that are acceptable.) Thus, EPA's proposal requests additional information be provided on these topics.[4] We support EPA's continuing effort to reduce emissions and risks at these facilities.

We support EPA's proposal for a fenceline monitoring requirement for facilities emitting ethylene oxide, chloroprene, and four other HAPS (benzene, 1,3-butadiene, ethylene dichloride, and vinyl chloride) to ensure these fugitive emissions remain in compliance with emission standards or achieve even lower levels. This requirement will help industry quickly identify and take corrective actions where needed. Moreover, the proposal would ensure transparency by releasing the information to the public on a continuing basis, thereby helping the public to continually monitor the situation. A fenceline monitoring requirement is potentially very important for this rulemaking: as noted earlier, EPA's analysis indicates that compliance with the proposed standards will result in estimated risks for various facilities that are borderline acceptable (see comment above). In the absence of a fenceline requirement, given these are fugitive emissions and difficult-to-model concentrations, there would be a potential for risks to reach unacceptable levels in some instances. As discussed, this proposal builds on the current successful fenceline monitoring of benzene levels at petroleum refineries that reportedly has resulted in a 30% reduction of benzene fenceline concentrations over the past four years.[5]

We also support the careful consideration being given to EPA's proposal to set the chloroprene and ethylene oxide fenceline action levels below modeled fenceline concentrations for the two HAPs. The proposed action levels, "set at the minimum concentration that can be measured with reasonable certainty," are reportedly designed not only to assure compliance with emissions standards but also to help address *whole facility risks,* i.e., risks associated with that same facility that could be covered by other rules, by ensuring this rule's covered facilities achieve additional HAP reductions by applying *work practice standards* to further control identified sources of fugitive emissions, such as pressure relief devices or maintenance events.[6] We understand that this notion of considering reductions of whole -facility risk beyond compliance with emission standards in determination of an action level reflects a departure from the rationale for the application of fenceline monitoring in the MACT program. Thus, we suggest that further details of the

[2] Federal Register, Vol. 88, No. 79, pp 25191-25192, Tables 35, 36, and 37.
[3] Federal Register, Vol. 88, No. 79, p 25122.
[4] Federal Register, Vol. 88, No. 79, p 25196.
[5] Federal Register, Vol. 88, No. 79, p 25142.
[6] Federal Register, Vol. 88, No. 79, p 25145.

rationale considered in this instance be provided, as well as the discussion of the overall implications of such for EPA's Residual Risk Program.

Relatedly, this proposal does not acknowledge and does not determine whether there are populations that are exposed to ethylene oxide due to proximity to both HON facilities and commercial sterilization facilities. We recommend the agency include discussion of that possibility and, if such populations exist, that it determine risks and risk reductions that take both sources into account. Multiple source exposures could change the associated risk from "acceptable" to "unacceptable."

We additionally recommend EPA consider increasing its ongoing funded research to establish more robust measurements and monitoring methods for ethylene oxide and other priority HAPs, especially related to detection limits and temporal resolution.[7]

Finally, we suggest that consideration be given to modifying EPA's general policy of undertaking Residual Risk assessments only once, at the time of the first technology review, with subsequent reviews of MACT rules including only the technology reviews. The Notice claims it has no statutory mandate to conduct rounds of risk reviews, and we take no issue with that assertion. But, as demonstrated in this case, health assessment values, including cancer unit risks (UREs), Inhalation Reference Concentrations (RfCs), and Oral Reference Doses (RfDs) for various HAPs are continually being updated and sometimes, as in this case, these updates can dramatically change the risks estimated earlier for a source category. Therefore, we suggest that the agency *routinely* consider the Integrated Risk Information System (IRIS) updates[8] for the HAPs in the forthcoming MACT rules to be reviewed and evaluate the need for a revised risk assessment each time. This will allow for their timely use in rulemaking.

In sum, the proposed regulation, with its combination of standards and fenceline monitoring program, reflects an important step in reducing human health risk associated with the subject facilities. We support these actions and urge EPA to continue to find ways to further reduce the risks from these facilities.

[7] EPA. Measurement and Monitoring Methods for Air Toxics and Contaminants of Emerging Concern in the Atmosphere. EPA Science to Achieve Results (STAR) Request for Applications (RFA). March 25, 2021.

[8] IRIS provides health effects information for HAPs and other pollutants, including health assessment values such as UREs, RfCs, and RfDs.