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National Emission Standards for Hazardous Air Pollutants: Hydrochloric Acid Production Residual Risk and Technology Review

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The Environmental Protection Network (EPN) is an organization comprised of over 400 EPA alumni volunteering their time to protect the integrity of US EPA, human health and the environment. We harness the expertise of former US EPA career staff and confirmation-level appointees to provide an informed and rigorous defense against current Administration efforts to undermine public health and environmental protections. We have the following comments on the proposed amendments to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Hydrochloric Acid (HCl) Production source category.

On February 4, 2019 EPA published in the Federal Register proposed amendments to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Hydrochloric Acid (HCl) Production source category. The proposed action includes a summary of the results of the residual risk and technology reviews (RTRs) conducted as required under the Clean Air Act (CAA) as a predicate to establishing or amending a NESHAP. Our comments do not address the specific analyses or conclusions associated with the HCl Production source category, which are addressed by other commenters, but rather the procedurally flawed and substantively inappropriate request for comment on the risk value associated with ethylene oxide (EtO), an air toxic which is not emitted by HCl Production sources.

In conducting an RTR, EPA examines the risk from the source category being examined and also the risk from the entire "facility" in which the source category under consideration for regulatory action is sited. The "facility" includes all hazardous air pollutant (HAP)-emitting operations within a contiguous area and under common control. In this case, it meant characterizing HAP emissions from HCl production facilities, as well as emissions of HAP from all other emission sources at the "whole facility."

Data compiled from the 2014 National Emissions Inventory (NEI) identified two HAP in the emissions from the HCl production facilities (HCl and chlorine gas). Neither of these substances are known, probable or suspected carcinogens, but would be respiratory irritants, if inhaled. A Hazard Index was derived for chlorine but not for HCl.

For the "whole facility" assessment, EPA identified an additional three HAP to be of concern either as an inhalation cancer risk (EtO and 4,4'-methylenedianiline) or a chronic non-cancer risk (trichloroethylene)(see table entitled "Risk Summary for the Hydrochloric Acid Production Source Category" on page 6 of the FR notice). There appears to be at least one questionable omission in this Risk Summary. It is unclear why trichloroethylene was not included in the list as a risk driver for cancer (as it was for non-cancer effects). It is considered to be a known human carcinogen by all routes of exposure, based upon robust set of human

epidemiology and animal studies. An Individual Unit Risk (IUR) has been calculated. Perhaps, the estimated risk did not reach the 1-in-a-million level for inclusion, but this documentation could not be found in the RTR.

The FR notice notes that the maximum facility-wide cancer maximum individual risk (MIR) is 600-in-1 million (or 6-in-10,000), which puts it above the presumptive limit on MIR of approximately 1-in-10 thousand. The estimated MIR is driven mainly by EtO emissions from a variety of industrial processes, *none of which are part of this (HCl production) source category* (emphasis added). Nevertheless, EPA is requesting feedback on this risk assessment of EtO, specifically the use of the risk factor, IUR, developed in the Integrated Risk Information System (IRIS) review completed in 2016 in the calculation of the MIR.

It is inappropriate for EPA to use this CAA Section 112 rulemaking to seek comment about the toxicity of EtO or the IRIS review for that chemical. First, the source category under consideration, hydrochloric acid production, does not emit EtO. Second, a Section 112 RTR is not the appropriate regulatory venue to take comment on a toxicity determination made through an entirely different process. In 2016, EPA completed a review of EtO under the IRIS process and, as noted above, established a new risk factor based on up to date scientific information about the health effects of the chemical. https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/1025_summary.pdf. Any request for comment on the results of that 2016 review should be taken through the IRIS process.

Furthermore, EPA should certainly use the 2016 IUR in its risk calculations for EtO now and in any future regulatory decisions dependent upon that risk assessment.

If this request for comment on the 2016 IUR reflects an intention to revisit its derivation and calculation, we emphatically maintain that this is unwarranted. The IRIS hazard assessment which includes this calculation was completed after an extensive development period, going through a rigorous internal and external peer review, including by the Science Advisory Board in a public setting. We are not aware of any new information that would warrant either a reclassification of carcinogenic potential, a recalculation of the IUR, or reconsideration of any aspect of the recently completed review at this time.

The 2016 IRIS review concluded that EtO is significantly more toxic than previously thought. Facilities that emit EtO--especially those located in or near residential communities--are now coming under intense scrutiny. As former EPA employees, we understand that as scientific information improves about different chemicals, the agency may need to pay more attention to source categories that previously were not considered high priority. Congress understood this too, as it included iterative regulatory processes in the CAA. New activities in a situation like this may include air quality monitoring or modeling, communication with neighboring communities, discussions with industry, consideration of regulatory and nonregulatory options. In this case, in addition to the monitoring and other actions EPA is taking, the agency has an opportunity ready at hand to re-examine the NESHAP for source categories that do emit EtO (as opposed to HCl Production, which does not).

We agree with EPA's intent to pursue other actions with respect to EtO, and urge the agency to move quickly. EPA states in this notice that it intends to: (1) review CAA regulations for facilities that emit EtO—starting with air toxics emissions standards for miscellaneous organic chemical manufacturing facilities and commercial sterilizers; and (2) get additional information on EtO emissions. We urge EPA to move forward expeditiously to review and update, in light of the new risk factors, the following rules: Commercial Sterilizers (last reviewed in 2006), Miscellaneous Organic Chemical Manufacturing (last reviewed in 2006), Synthetic Organic Chemical Manufacturing (last reviewed in 2006), and Hospital Sterilizers (last reviewed in 2007).