



Administrator Andrew Wheeler
U.S. Environmental Protection Agency
1200 Pennsylvania Ave, N.W. Washington, DC 20460

Re: National Emissions Standards for Hazardous Air Pollutants: Hydrochloric Acid
Docket ID No. EPA-HQ-OAR-2018-0417

Ethylene oxide is a common, highly hazardous and explosive industrial chemical linked to breast cancer and immune system cancers like non-Hodgkin lymphoma and lymphocytic leukemia¹. In 2016 EPA's Integrated Risk Information System (IRIS) finalized its re-evaluation for the ethylene oxide toxicity assessment. IRIS found ethylene oxide to be **30x more potent for causing cancer** than in its original assessment.

IRIS, which is housed in the EPA's Office of Research and Development (ORD), is tasked with providing independent and impartial hazard assessments for chemicals.² The IRIS program utilizes a rigorous and systemic peer-review process that results in final assessments published years after the initial draft. The IRIS review for ethylene oxide took over ten years for EPA to complete and included public comment, interagency review, and scientific peer review by EPA's Scientific Advisory Board. The IRIS value is final and represents the best available current science on the cancer risk of ethylene oxide.

EPA's Office of Air and Radiation (OAR) Office of Air Quality Planning and Standards (OAQPS) may not question or evaluate a health risk value in a source-focused proposal because the duty to evaluate the basis for the health-risk value falls solely on the scientists with the Office of Research and Development's IRIS program – which is necessarily separate from the policy and rulemaking processes in order to keep health standards objective and science-based.

OAQPS must use the 2016 IRIS risk value for ethylene oxide to assess cancer risks in this rulemaking and every other rulemaking. It is the best available science and EPA has no lawful or scientific ground for reconsidering or ignoring it. EPA's own scientists in the Office of Research and Development concluded in 2016 that "confidence in the hazard characterization of ethylene oxide as 'carcinogenic to humans,' which is based on strong epidemiological evidence supplemented by other lines of evidence, is high".³ For OAQPS to even be taking comments on the IRIS value through this source-specific rulemaking is entirely improper. EPA may not ignore the facts about the cancer risk of ethylene oxide simply because they are inconvenient to some industries.

The 2014 National Air Toxics Assessment shows that 58 EPA monitoring tracts in 18 different counties across 12 states, including Illinois have ethylene oxide air emissions at levels that pose cancer risks higher than 1 in 10 thousand people. This is far higher than the 1 in 1 million that is supposed to trigger federal regulatory action under the Clean Air Act.

¹ US EPA, *Hazardous Air Pollutants: Ethylene Oxide, Background Information on Ethylene Oxide*.
<https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/background-information-ethylene-oxide>

² US EPA, *Basic Information About the Integrated Risk Information System*.
<https://www.epa.gov/iris/basic-information-about-integrated-risk-information-system>

³ US EPA, *Evaluation of the Inhalation Carcinogenicity of Ethylene Oxide (page 5)*
https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/1025_summary.pdf



As is too often the case, many of the communities most negatively impacted by the health impacts of ethylene oxide are majority low income and people of color communities. Communities like Waukegan, North Chicago, Park City, and Gurnee.

Further, exposure to ethylene oxide at a young age and/or throughout one's lifetime increases risk even more. This proves what our community already knew--that vulnerable residents like children are disproportionately impacted by ethylene oxide in the air. According to EPA's own statements:

*The greatest risk is for people who have lived near a facility releasing ethylene oxide into the air for their entire lifetime. For a single year of exposure to ethylene oxide, the cancer risk is greater for children than for adults. This is because ethylene oxide can damage DNA. For everyone, including children, risks would decrease with decreased exposure.*⁴

As EPA notes above, "risk would decrease with decreased exposure". While this seems obvious, it is not currently being implemented in any meaningful way. The 2018 report *Life at the Fenceline: Understanding Cumulative Health Hazards in Environmental Justice Communities* makes recommendations for reducing the risk of chemical disasters in Environmental Justice communities. These recommendations include requiring facilities, such as those manufacturing or storing large amounts of ethylene oxide, to switch to inherently safer chemicals and processes; this would have the additional benefit of reducing cancer risk by removing the source of the risk.⁵

EPA's mission is to protect human health and the environment. Protecting health and the environmental means using the best, most current scientific information available. EPA should be using the 2016 IRIS cancer risk value for ethylene oxide in this rulemaking for the hydrochloric acid source category, as well as every other source category, and working to aggressively reduce cancer risks in all communities, starting in those with the highest cancer risk. The Clean Air Act provides EPA with this authority under section 112 and the general duty clause, and we urge you to use it to protect the health of our disproportionately impacted communities. In addition to its carcinogenicity, ethylene oxide presents additional non-cancer health risks and catastrophic risks in the event of an unplanned incident.

In closing, I call on EPA to do its job and "protect health and the environment". This starts with OAQPS using the 2016 IRIS cancer risk value for ethylene oxide in this rulemaking, as well as every future rulemaking. It is the duty of EPA and OAQPS to impartially use the best available science in planning, permitting and rulemaking. I also strongly encourage EPA to take immediate steps to mitigate the unacceptable cancer risk from ethylene oxide to communities around the United States, and to begin looking at cumulative health risk of all air pollution to communities in Lake County, Illinois.

⁴ US EPA, *Hazardous Air Pollutants: Ethylene Oxide, Frequent Questions on Ethylene Oxide*.
<https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-ethylene-oxide>

⁵ *Life at the Fenceline: Understanding Cumulative Health Hazards in Environmental Justice Communities*
<https://new.comingcleaninc.org/assets/media/documents/Life%20at%20the%20Fenceline%20-%20English%20-%20Public.pdf>