



At a Glance

Why We Did This Project

While conducting an audit of the U.S. Environmental Protection Agency's actions to address air toxics emissions through its residual risk and technology review program, the EPA's Office of Inspector General identified an urgent matter related to whether the EPA had informed the public about health risks from exposure to ethylene oxide emissions. Therefore, we are issuing this management alert so that the EPA can address this matter while our overall audit work continues.

Ethylene oxide is a gas used to make other chemicals that are needed to manufacture a variety of products and to sterilize medical equipment. Studies show that breathing in elevated ethylene oxide levels over many years can lead to lymphoid cancers in males and females and breast cancer in females. In December 2016, the EPA revised its characterization of the chemical to "carcinogenic to humans."

This report addresses the following:

- *Improving air quality.*

Address inquiries to our public affairs office at (202) 566-2391 or OIG_WEBCOMMENTS@epa.gov.

List of [OIG reports](#).

Management Alert: Prompt Action Needed to Inform Residents Living Near Ethylene Oxide-Emitting Facilities About Health Concerns and Actions to Address Those Concerns

What We Found

Through its National Air Toxics Assessment, the EPA identified areas where exposure to ethylene oxide emissions could contribute to an elevated estimated lifetime cancer risk equal to or greater than 100 in one million, a risk level that the EPA generally considers not sufficiently protective of health. These emissions primarily come from chemical manufacturing plants and commercial sterilizers that sterilize medical equipment.

The EPA needs to inform residents who live near facilities with significant ethylene oxide emissions about their elevated estimated cancer risks so they can manage their health risks.

The EPA has prioritized activities to more fully assess ethylene oxide emissions and the associated health risks to the public near 25 high-priority facilities. These activities include communicating with facilities and states about gathering emissions information and communicating with elected officials about the National Air Toxics Assessment results. While the EPA or state personnel, or both, have met with residents living near nine of the 25 high-priority facilities, communities near 16 facilities have yet to be afforded public meetings or other direct outreach to learn about the health risks and actions being taken to address those risks.

The OIG did not identify any specific statutory, regulatory, or policy requirements for the EPA to provide the public additional information regarding its preliminary determination that certain ethylene oxide-emitting facilities may present health risks to surrounding communities. However, the EPA's mission statement includes working to ensure that "[a]ll parts of society ... have access to accurate information sufficient to effectively participate in managing human health and environmental risks." Thus, the Agency should work to ensure that the health risks and actions that the EPA is taking to address those risks are directly and promptly communicated to residents living near all the high-priority facilities.

Recommendations and Planned Agency Corrective Actions

We recommend that the Agency provide residents in all communities near the 25 high-priority ethylene oxide-emitting facilities with a forum for an interactive exchange of information with EPA or state personnel regarding health concerns related to exposure to ethylene oxide. In its response to our draft report, the Agency proposed an alternative recommendation with corrective actions that focused on completing more refined investigations of risk prior to conducting significant public outreach. We do not believe that the Agency should delay providing forums for interactive outreach with residents in these communities. Therefore, our recommendation is unresolved pending receipt of an acceptable corrective action plan with milestones from the EPA.