

Evaluation of Ethylene Oxide in Outdoor Air Near Medline Industries and Vantage Specialty Chemicals Lake County, Illinois

The Lake County Health Department (LCHD) asked the Agency for Toxic Substances and Disease Registry (ATSDR) to evaluate outdoor EtO air sampling data and determine if breathing EtO concentrations near Medline Industries and Vantage Specialty Chemicals could be a potential health risk for Lake County residents.

This fact sheet

- summarizes the findings and recommendations of ATSDR's health consultation report released for public comment.
- explains how to access ATSDR's educational resources for community members and clinicians to learn more about EtO exposures and health effects.
- tells how to submit public comments on the report.

The full health consultation report is available at [Illinois | Public Assessment & Health Consultation | ATSDR \(cdc.gov\)](https://www.illinois.gov/public-assessment-and-health-consultation/at-sdr/cdc.gov)



Vantage Specialty Chemicals



Medline Industries

What did ATSDR find about EtO exposure near Vantage and Medline?

- ATSDR cannot rule out the possibility that breathing EtO, a colorless and tasteless gas in air, for many years, may contribute to a small increase in lifetime risk of certain lymphoid cancers and breast cancer for the following groups of people near Medline and Vantage:
 - ◆ People who currently live within 0.7 miles of Vantage or Medline.
 - ◆ People who lived within 0.7 miles of Medline in the past, prior to the installation of new emissions controls in March 2020.
 - ◆ People who work within ¼ mile north or east of Vantage.
- EtO concentrations measured in the air near Medline and Vantage are elevated above background EtO concentrations measured in areas of Lake County away from any known sources of EtO.
- Changes in pollution controls at Vantage during air sampling and challenges in measuring low levels of EtO cause ATSDR to have some uncertainty about the calculated lifetime excess cancer risk estimates.
- People who live or work near Medline and Vantage are not expected to have short- or long-term, noncancer health effects. This means breathing EtO in the air near Medline and Vantage is not expected to cause other illnesses.



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What did ATSDR find about background EtO exposure in Lake County?

- EtO concentrations measured at sites in Lake County, including near Medline when the facility was closed, were similar to background levels observed across the United States.
- Lifetime excess cancer risk from EtO exposure for people living or working in other parts of Lake County removed from Medline or Vantage is similar to EtO-related cancer risk for people living or working in other areas without a known EtO source.

What does ATSDR recommend?

Based on ATSDR's findings that EtO exposure from the facilities is ongoing and may pose an increased cancer risk for people, ATSDR recommends that,

- Illinois EPA and the two facilities investigate potential sources of EtO emissions that may affect outdoor EtO air concentrations at the closest residential areas and next to businesses. Further, ATSDR recommends that additional air sampling is conducted at Vantage to better characterize long-term EtO exposure.
- U.S. EPA continue to work to:
 - ♦ improve analytical methods with lower detection limits so that EtO can be accurately measured at lower concentrations and health risks evaluated both near industrial sites and in background air.
 - ♦ better understand EtO concentrations in background outdoor air and sources of EtO in outdoor air in order to accurately estimate exposure to EtO.

Which cancers are caused by breathing EtO?

Breathing EtO, over many years, may cause cancer. Studies of workers exposed to high levels of EtO, over a long period of time, found that female workers were more likely to develop breast cancer. Male workers were more likely to develop certain lymphoid cancers (i.e., non-Hodgkin lymphoma, also known as non-Hodgkin's lymphoma or NHL, myeloma, and lymphocytic leukemia).

Who do I ask if I have health concerns or questions?

ATSDR recommends you talk with your doctor about your health concerns related to EtO exposure.

How can I get more information on EtO?

- Everyone can:
 - ♦ use [ATSDR's Toxic Substances Portal](#) to learn about EtO.
 - ♦ share ATSDR's guidance for health care professionals with their doctors
- Health care professionals can:
 - ♦ read the [ATSDR Clinician Brief: Ethylene Oxide](#) or watch the [ATSDR Clinician Overview: Ethylene Oxide](#) to learn about exposure recognition, patient management, and risk reduction counseling.

How do I submit public comments on the report?

Please submit comments to ATSDR's record center through email at:

ATSDRRRecordsCenter@cdc.gov or in writing.

Please address written comments to

Agency for Toxic Substances and Disease Registry,
Attn: Records Center, 4770 Buford Highway NE, MS S106-5
Atlanta, Georgia 30341

ATSDR will issue a final version publishing any public comments and ATSDR's response.

You can learn about ATSDR and what it and its state partners are doing to protect people from EtO at the following websites:



ATSDR

- [Agency for Toxic Substances and Disease Registry \(cdc.gov\)](https://www.cdc.gov/atsdr)



ATSDR Reports

- [Health Consultation: Evaluation of Ethylene Oxide Concentrations in Outdoor Air Near Sterigenics \(cdc.gov\)](#)
 - ◆ [Evaluation of Ethylene Oxide Fact Sheet \(cdc.gov\)](#)



Illinois Department of Public Health Reports

- [Cancer Incidence Near Two Facilities Utilizing Ethylene Oxide, Lake County, Illinois, 1998-2017](#)