

Summary of U.S. EPA's Risk Assessment of Ethylene Oxide Emissions from the Sterigenics Commercial Sterilizer in Willowbrook, Illinois

About U.S. EPA's risk assessment:

U.S. EPA used the same, standard methods that we use when we conduct risk assessments for regulations to assess risk from lifetime exposure to ethylene oxide emissions from the Sterigenics Commercial Sterilizer in Willowbrook, Illinois. The assessment:

- For people living near the facility, assumes people are exposed to ethylene oxide 24 hours a day, 365 days a year for 70 years (to represent lifetime exposure)
- For people working near, but not in, the facility, assumes assumed people were exposed for 8.5 hours a day, five days a week, 50 weeks a year for 25 years.
- Estimates the risk of getting cancer that is *in addition* to people's overall risk of getting cancer for other reasons.
- Focuses on the *risk from ethylene oxide emissions* from the Sterigenics facility; it does not address comprehensive risk from all pollutants and all air pollution sources
- Projects risk going forward. It does not estimate past risk.
- Provides general estimates of risk to *populations*. It cannot predict any one person's risk of developing cancer.
- Is more likely to over-estimate risk than underestimate risk due to what we call 'health-protective assumptions
- The **full risk assessment report is available at** www.epa.gov/il/risk-assessment-report-sterigenics-facility-willowbrook-il

What we assessed

U.S. EPA assessed the risk of getting cancer from lifetime exposure to ethylene oxide emitted from the Sterigenics Willowbrook facility.

We looked at two scenarios:

1. A scenario focused on what risks would be if the facility was operating -- after the back vent was controlled and before the Illinois EPA issued a seal order preventing the facility from using ethylene oxide.
2. An example future scenario, called the "illustrative future case." This scenario looked at what future risks could be if the facility was more highly controlled.

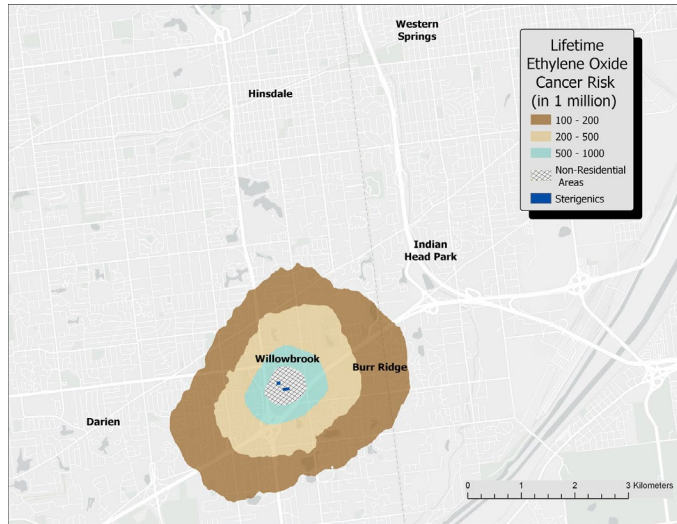
For each scenario, U.S. EPA estimated risk for **people who live in the area**, including communities in Willowbrook, Burr Ridge, Hinsdale, Darien and Indian Head Park. We also estimated risk for **people who work close to the facility** (but not at the facility).

What we found

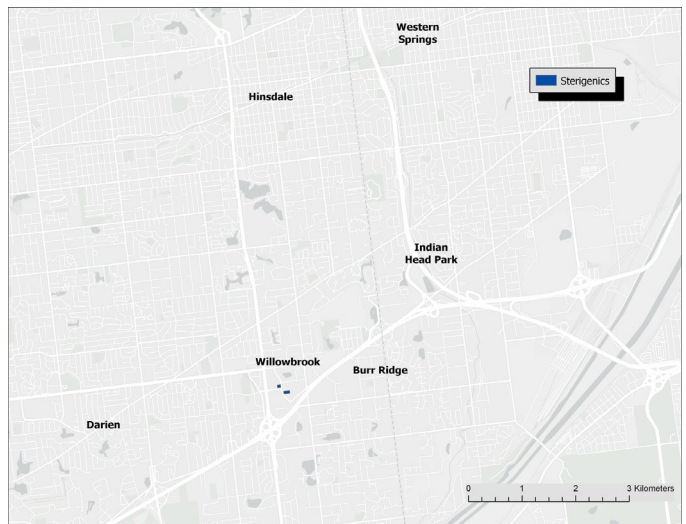
- **Estimated risks would be below 100 in 1 million – and potentially as low as 1 in 1 million -- if the facility was more highly controlled.**
 - A 1-in-a-million risk means that 1 person out of a million people who were breathed air containing ethylene oxide for a lifetime could develop cancer as a result of that exposure.

- For **residential areas**, the estimated risks from lifetime exposure while the facility was operating ranged from less than 100 in 1 million to 1,000 in a million in areas closest to the facility. The assessment estimated that *future* risks would be below 100 in million – and potentially as low as 1 in 1 million -- if the facility was more highly controlled.

Estimated cancer risk in residential areas based on operations before seal order, and reflecting emission controls installed in Summer 2018

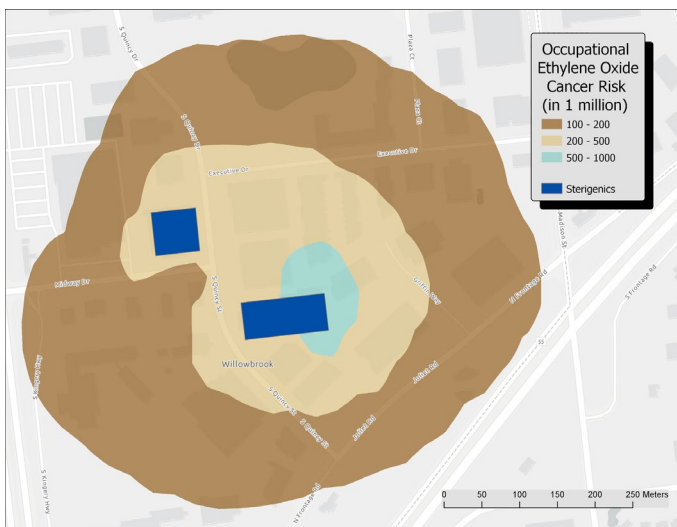


Illustrative future case: estimated cancer risk in residential areas if the facility were highly controlled



- For **areas where people work near the facility**, the estimated risks while the facility was operating ranged from 200 in 1 million to 1,000 in a million just outside the facility. Estimated *future* risks would be below 100 in million – and potentially as low as 1 in 1 million -- if the facility was more highly controlled.

Estimated cancer risks for people working near the Sterigenics facility, based on operations before seal order, and reflecting emission controls installed in Summer 2018



Illustrative future case: estimated cancer risks for people working near, but not at, the Sterigenics facility if the facility were highly controlled



