



Facts and Frequently Asked Questions about Ethylene Oxide

Recently, the U.S. EPA issued its latest National Air Toxics Assessment, a screening tool to help identify areas with air emissions that may warrant further study. As part of that process, the EPA reassessed its view of the risk associated with ethylene oxide (EO). This material is consumed at our Gurnee, Illinois, facility where low levels of EO are emitted as part of the production of every-day household items like soap and shampoo.

As outlined below, Vantage has moved to address concerns about EO emissions and takes this matter very seriously – not only because we have been a longstanding corporate resident of Gurnee, but because many of us also call this community home for our families and ourselves.

Above all else, Vantage is committed to ensuring the health and safety of our employees, the neighboring communities, and the environment surrounding our production facilities.

VANTAGE'S EMISSIONS ARE MUCH LOWER THAN POSTED ON THE EPA'S DATABASE

Prior to 2017, Vantage reported its emissions based on EPA-approved modeling that used default emission values. This method — based on assumptions rather than actual measurements — substantially overestimated emissions. In 2017, we implemented an EPA-approved protocol for measuring emissions based on actual measurements. We have submitted updated, actual emissions values for 2010-2016 for EPA review. These revised values show that emissions were more than **80% lower** than previously reported.

WHAT VANTAGE IS DOING TO FURTHER REDUCE ITS LOW EO EMISSIONS

During the production of many household and industrial products, a liquid form of EO is combined with other raw materials in a controlled, closed process. A very small amount of EO is subsequently captured and sent to customized emissions-control equipment (known as a scrubber). There the EO is converted to glycol (often used to make antifreeze) and sent to a recycling center. Although this process captures most of the EO, a very small amount passes through the scrubber. In addition, extremely small amounts of EO can escape as the material moves through equipment components such as flanges, valves, and pumps. These are called fugitive emissions.

To reduce our emissions further below permitted limits, we have launched two projects:

1. Adding an additional scrubber to eliminate stack emissions; and

2. Identifying valves, joints, or pipes in the plant that may allow small amounts of EO to escape to further reduce any fugitive emissions.

We also plan to conduct air monitoring at the perimeter of our Gurnee property to establish the effectiveness of our control systems.

With these added steps, we expect Vantage's EO emissions will be further reduced by up to 90 percent.

We continue to cooperate with local, state, and federal authorities and intend to remain an active partner and trusted community member as this process proceeds. This is why we've developed the following FAQs that we will update as often as possible to continue to provide information as it becomes available.

Frequently Asked Questions

Q. What is ethylene oxide and what are its uses?

A. EO is a gas that has two main commercial uses: 1) To make other chemicals that produce a range of common consumer and industrial products, and 2) To sterilize devices, such as specialty medical and dental equipment. At Vantage, we use EO to make other ingredients for use in a variety of industries, including food and baking ingredients, personal care and beauty products, textile manufacturing, lubricants, and many more. We do this in a closed, controlled process that limits EO emissions.

Q: What are the testing and emission controls currently in place at Vantage?

A: The Gurnee site uses emission control equipment specifically designed to destroy EO and minimize any emissions that may be released. The current (wet) scrubber destroys the EO in the air, resulting in a usable glycol liquid, which is recovered and sent to a recycling center. Although this scrubber destroys most of the EO, we will be adding an additional (dry) scrubber that destroys any of the remaining EO. With this action, we will reduce our current—and already low— EO stack emissions by more than 99 percent.

Our Gurnee site also employs on-site alarms for EO detection to warn of a potential release or malfunction, and we use a third-party monitoring service to test "fugitives" on a monthly basis, which meets the strictest of EPA requirements.

Q: What information have you shared publicly about your facility's emissions?

A: Our emissions data, which we regularly report to regulators, is publicly available online through the [EPA's website](#). We are actively cooperating with regulatory agencies to provide information about our operations and controls. We want to be an active partner and trusted community member. This is why we are committed to addressing any questions communities and area organizations may have about the safety of our operations and what steps we're taking to further reduce our EO emissions.

We have recently submitted revised emissions values to the U.S. EPA based on actual testing data—instead of historical data based on theoretical models—which show reductions by as much as 80 percent in some years. We expect these values will be reflected in the EPA’s next update, which is expected in March 2019.

Q: Has Vantage tested or will the company be testing the air surrounding the Gurnee facility since the new EPA map was released?

A: We are working with both the US and IL EPA, preparing to conduct “fence line” testing in the area around our property line in early 2019.

Q: When will those results be available for review?

A: Vantage will provide updated information on timelines and additional data as it becomes available.

Q. Why have the ethylene oxide results in the EPA’s National Air Toxics Assessment (NATA) changed from the previous NATA?

A. The EPA updated its cancer risk calculations to reflect a new, more conservative estimation of risks associated with EO. As a result of this update, the latest NATA issued in 2018 estimates elevated risks driven by ethylene oxide from sources that the EPA previous to 2015 had deemed acceptable. This does not mean there is more EO in the air. The assessment reflects the EPA’s evolving views about the risk from long-term exposure to EO.