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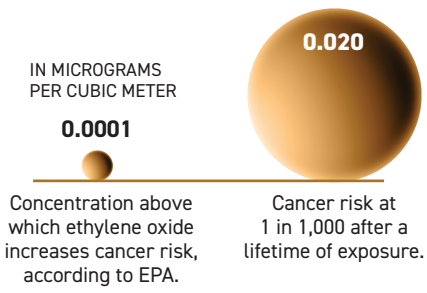
EPA detects high levels of a carcinogenic gas in U.S. ambient air

BY PATTERSON CLARK, POLITICO PRO DATAPOINT

EPA data from 18 monitoring stations across the country reveals ambient air concentrations of ethylene oxide that are thousands of times higher than levels determined by the agency to pose elevated risks for cancer. EPA said "there is no immediate, short-term risk," as the data covers only a six-month period.

Ethylene oxide, or oxirane, is used to manufacture plastics and antifreeze and to sterilize medical equipment. Its ether-like odor is not detectable by the human nose until it reaches concentrations of 430,000 micrograms per cubic meter.

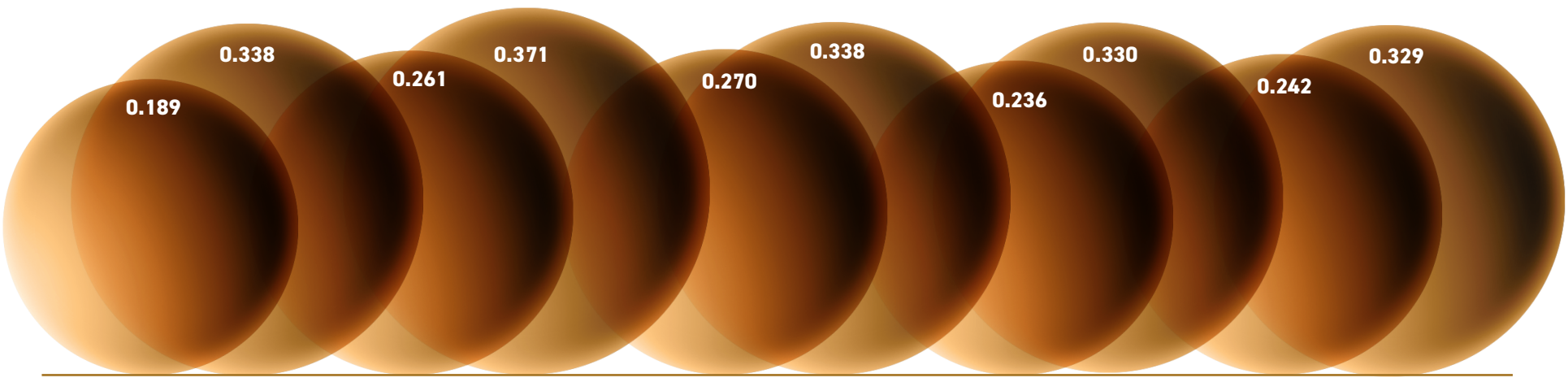


Cross country ambient air concentrations of ethylene oxide

Readings from National Air Toxics Trends stations and Urban Air Toxics Monitoring Program stations

October 1, 2018 – March 31, 2019

IN MICROGRAMS PER CUBIC METER, Relative concentrations depicted by **volumes of spheres**



Profile of a major emitter: Ethylene oxide ambient air concentrations in Willowbrook, Illinois

A Sterigenics medical sterilization facility, operating within a mile of about 20,000 residents, annually vents thousands of pounds of ethylene oxide into the surrounding air — in compliance with environmental permits. In May 2018, at 26 residential and commercial locations in the neighborhood of the the facility, EPA collected 12-hour samples (for average concentration readings) and brief "grab" samples. In 2018, the U.S. Department of Health and Human Services determined that residential exposure for 33 years over a 78-year lifetime raised cancer risk to 64 cancers per 10,000 people. Sterigenics announced it would upgrade its facility to reduce EtO emissions by 90 percent, but by September 2019, Sterigenics said it would be moving from the area.

IN MICROGRAMS PER CUBIC METER; Relative concentrations are depicted here by volumes of spheres.

* Geometric mean

Sources: EPA, Wolfram Alpha, Great Lakes Center for Children's Environmental Health, HHS, POLITICO Pro report by Annie Snider