THE CHALLENGES

Of Ethylene Oxide Air Sampling

American Chemistry Council

We support strong, science-based regulations that are protective of human health and the environment and continue to work to improve the quality of air in our communities. We understand the concerns people have with the air we breathe, and our members work diligently to adhere to all applicable emission standards set by state and federal regulators.

We also support efforts to get a more accurate picture of the quality of our air; however, ethylene oxide presents a unique set of technical challenges that must be addressed to make any monitoring data credible and relevant.

EPA Data on National Air Toxics Trends and Urban Air Toxics monitoring sites[1]

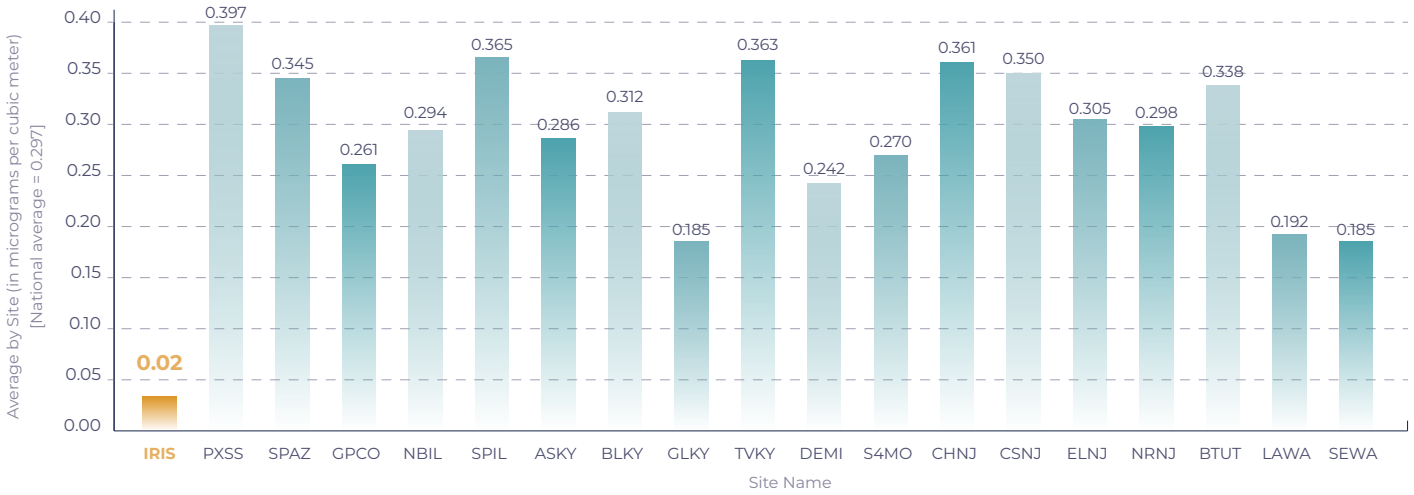
Ethylene oxide is present in the environment and is created by various sources, including vehicle exhaust, plant and soil metabolism, and fruit ripening.

For instance:

- The EPA's IRIS value is actually lower than current techniques can accurately measure.
- According to EPA, "We can't measure (yet) down to the 100 in a million level (0.02 ug/m3). We are operating at the edge of science!"
- EPA reported background levels (levels found in ambient air at locations that are not near industrial sources) of EO are much higher than the IRIS value. This can lead to uncertainty about what the source is, even if accurately measured.

To capture reliable data, any monitoring program for ethylene oxide must use analytical methods able to accurately distinguish ethylene oxide from similar chemical compounds. To properly account for potential ethylene oxide source contributions the ambient air monitoring program needs to include meteorological data at the monitoring site. We believe it is critical to address these issues as regulators and facilities both seek to improve understanding of ethylene oxide emissions to air and air quality more generally.

Ethylene Oxide Ambient Concentrations at National Air Toxics Trends Stations and Urban Air Toxics Monitoring Program stations October 1, 2018 – March 31, 2019 from the EPA[2]



We will continue to work with state and federal officials to protect the public health and our environment

Learn more at americanchemistry.com/ethyleneoxide

202212-105

1. https://www.epa.gov/sites/default/files/2019-11/documents/map_of_natts_uatmp.pdf
2. https://www.epa.gov/sites/default/files/2019-11/documents/data_summary_stations.pdf