

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

## Division of Air Resources

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[www.dec.ny.gov](http://www.dec.ny.gov)

Mr. Paul Hancock  
Co-chair  
Democratic Socialists of America  
Southern ADK branch  
14 Hudon Ave., #206  
Glens Falls, NY 128021

Dear Mr. Hancock,

I am in receipt of your February 23, 2022, letter requesting increased monitoring and regulation of ethylene oxide emissions from the Sterigenics facility in Kingsbury. My staff and I reviewed your letter and are aware of the permitting requirements and recent stack testing results for this facility.

We agree that ethylene oxide is toxic and because of this we adopted US Environmental Protection Agency's (USEPA) stringent unit risk estimate for our acceptable off-site air concentrations. We refer to these concentrations as annual guideline concentrations. Ethylene oxide is also on our list of high toxicity air contaminants (HTACs) and DEC's air toxics regulation (6NYCRR Part 212) requires facilities to demonstrate that offsite concentrations of HTACs do not exceed DEC's short-term (SGC) and annual guideline (AGC) concentrations. The AGC for carcinogens such as ethylene oxide, is established at a level in air that is associated with an estimated excess lifetime human cancer risk of 1-in-a-million. Under the 1990 Clean Air Act, the acceptable cancer risk used by the USEPA to make regulatory decisions regarding the need for further air pollution reductions from sources or to identify significant concerns from ambient air monitoring data is 100-in-a-million. DEC's risk management level is more conservative than USEPA's.

DEC's Part 212 regulation allows us to impose stricter controls on ethylene oxide sterilizers than the federal requirements in USEPA's National Emission Standards for Hazardous Air Pollutants (NESHAP). Ethylene oxide sterilizers have been controlled in New York State before the USEPA adopted the NESHAP in 1996. New York's regulation is more stringent than the NESHAP by requiring additional controls on emissions not covered by the NESHAP. Part 212 also requires facilities to conduct air dispersion modeling to demonstrate that offsite air concentrations are below the State's acceptable health-based AGCs.

USEPA's NESHAP requires 99.0% control efficiency for this source category and DEC's regulations require conditions in the facility's air permit to monitor the performance of the pollution control equipment to ensure this requirement is met. Sterigenics has an



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acid scrubber on the sterilizing chamber and a catalytic oxidizer to control emissions at the back vent and aeration room. Recent test results (2021) at the facility demonstrate the pollution controls on the back vent, aeration room, and sterilizing chamber achieve control reductions of 99.77, 99.87, and 99.994%, respectively. The highest exhaust release is from the sterilization chamber and Sterigenics routinely tests these controls and DEC personnel oversee these tests. USEPA is working on more requirements, but this facility is already in compliance with what we expect the USEPA to implement and achieves a higher level of control than required by the NESHAP.

In 2019, USEPA began the process of updating the NESHAP for ethylene oxide commercial sterilizers. They issued information requests to all facilities subject to the NESHAP to gather data to better understand the emissions sources, measurement and monitoring techniques, and available control technologies and their associated efficiencies. USEPA is also working to improve the ambient air measurement method for ethylene oxide. When the revisions to the NESHAP are released, we expect it to include information about fugitive emissions from facilities operations and requirements to reduce those emissions. The NESHAP will require risks to be below 100-in-a-million. DEC's regulation applies a more stringent risk management level and will require emissions from the facility to be below 10-in-a-million with the goal of achieving 1-in-a-million if control technologies are available for this lower level. In 2023, the facility will undergo a permit renewal. At that time the facility will be required to conduct a toxic impact assessment and demonstrate that offsite concentrations from facility emissions meet DEC's SGC and AGC.

With regards to cancer risks around the facility, as you mention in your letter, ethylene oxide is a carcinogen and is associated with increased risk of lymphohematopoietic cancers (including non-Hodgkin lymphoma, myeloma, and lymphocytic leukemia) and, for females, breast cancer. We reviewed the cancer incidence data provided by the New York State Department of Health at the census tract level. The census tract where the facility is located (tract ID 36115080300, Washington County), shows a lower-than-expected rate of cancer for non-Hodgkin lymphoma and female breast. Since the facility is near the border of Warren County, we looked at the cancer rate in the census tract nearest the facility (tract ID 36113070601). The number of observed cancers for non-Hodgkin lymphoma and female breast, are higher than expected. It's difficult to attribute the higher-than-expected numbers of cancers for the census tract in Warren County. The facility does not have a large stack and we would expect any potential impact from the emissions to be localized. The winds for this area are predominantly from the south and north directions, and rarely from the east. Additionally, the Warren County census tract is large since this is a rural area and would include many other sources of exposure. Lastly, there are many other risk factors associated with these cancers. More detailed information on exposures and risk factors are available on the NYSDOH's website.

Since Sterigenics is a well-controlled facility and regular testing at the facility demonstrates compliance with the requirements in USEPA's NESHAP and DEC regulations, we don't see the need for ambient air monitoring outside the facility at this time. We will continue our stringent oversight of the facility to ensure it meets state and federal standards that are protective of public health and the environment.

Thank you for forwarding your concerns about Sterigenics to our attention. If you have any additional questions about Sterigenics, please contact Randi Walker at [randi.walker@dec.ny.gov](mailto:randi.walker@dec.ny.gov) or 518-402-8402.

Sincerely,

A handwritten signature in black ink, appearing to read "Christopher M. LaLone".

Christopher M. LaLone, P.E.  
Director, Division of Air Resources

c: R. Ruvo  
M. LaFarr  
R. Walker  
P. Sierzenga  
M. Sundberg