

Ethylene Oxide Updates for the Temple Terrace Community

Temple Terrace, FL
November 2, 2023



Aaryn Jones

**EPA Region 4
Emerging Contaminants
Coordinator**



Carol Kemker

Acting EPA Region 4
Deputy Administrator



June 13, 2023 Meeting

1 Risk from EtO is too high for workers and community members.

2 EPA proposed actions to reduce this risk and we wanted to hear from you.

3 Public comment period closed on June 27, 2023.



Website to learn more: <https://www.epa.gov/eto>

Why we are here today

1

Review what we shared in June.

2

Provide updates from our partners.

3

We want to give you an opportunity to ask questions.



Website to learn more: <https://www.epa.gov/eto>

Tony Toney

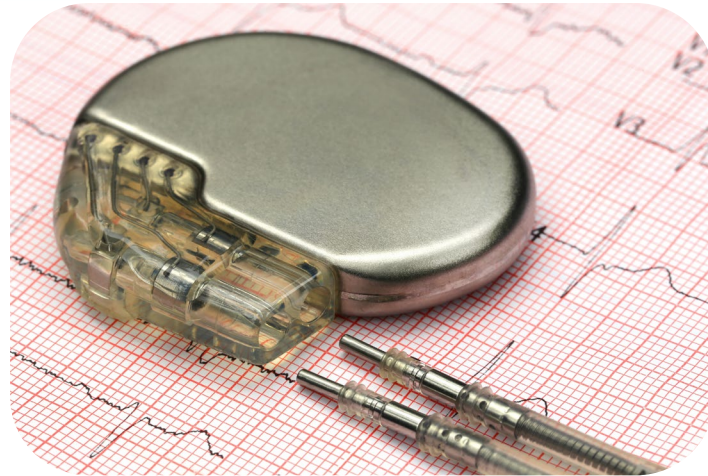
**EPA Region 4
Acting Air and Radiation
Division Director**



What is Ethylene Oxide?

- **Gas**
- **Colorless**
- **Flammable**
- **Odorless**

*(in concentrations
we see in communities)*



EtO Uses

- **Sterilizes**

- Medical Equipment
- Spices
- Other Items

- **Makes Other Products**



Current knowledge suggests these risks are not a concern

No indication of cancer risk:

- From soil or water
- Acute or emergency health impacts
- From consumer use of products made with or sterilized with EtO
- EtO does not last long in the environment



Over your lifetime

Breathing in EtO over many years can increase risk of breast cancer and some blood cancers.



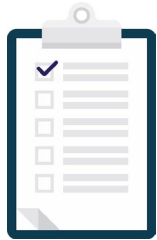
Special Considerations about Risk



Workers at sterilizer facilities may be exposed at higher levels.



Children and babies may be at higher risk.



EPA is taking actions to protect these populations.

Madeline Beal

Senior Risk Communication Advisor
Office of the Administrator
U.S. EPA Headquarters



Understanding Risk

Communities:

1. How close?
2. How much?
3. How long?

Workers:

1. How much?
2. Protective measures?
3. How long?



Actions to Reduce Risk:

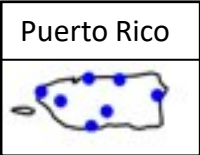
1. Reduce EtO coming out of facilities.
2. Reduce risk when EtO is used as a pesticide.
3. Partnerships to reduce risk.



Risk Reductions Through the Clean Air Act

The Clean Air Act allows EPA to set emission standards to protect communities from air toxics like EtO.





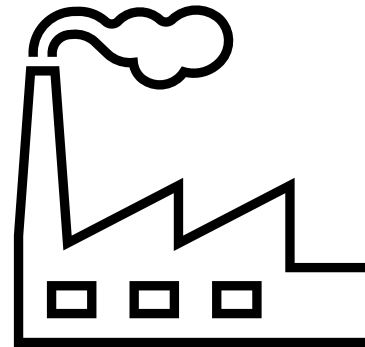
86 commercial sterilizers in the United States

80% reduction with proposed rules.

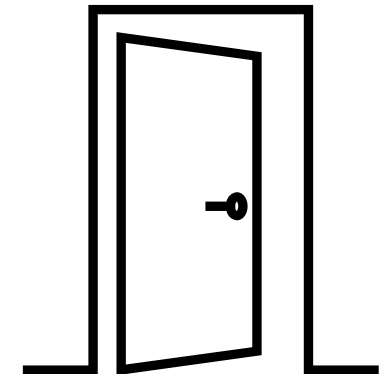
Where EtO Comes from at the Facility

There are two types of EtO emissions from facilities:

Stack
Emissions



Fugitive
Emissions



Reducing Risk and Increasing Accountability under the Clean Air Act

1. Capture and control fugitive emissions.
2. Tougher standards for stack emissions.
3. Increased accountability through new source monitoring requirements.



Actions to Reduce Risk:

1. Reduce EtO coming out of facilities.
2. Reduce risk when EtO is used as a pesticide.
3. Partnerships to reduce risk.



Pre-Action Risk Analysis

- Risk is high (1 in 17) for workers who handle EtO.
- Potential risk for workers in EtO facilities even if there is no direct handling of EtO.
- There are also risks of concern for others who might work or attend schools or daycare close to these facilities.



How EPA Will Reduce Risk Through FIFRA

- 1. Reduce amount of EtO Used**
- 2. Reduce worker exposure**
- 3. Increase required PPE and monitoring**
- 4. Require use of alternatives, where possible**
- 5. Require new controls in healthcare facilities**

EPA is proposing two new sets of health protections under existing laws to reduce exposure to EtO in and near sterilization facilities:

EPA Actions

EtO Source:



Health Care Sterilizers



Commercial Sterilizers

Proposed protective standards under the nation's pesticide control law.

Proposed rule for commercial sterilizers to reduce EtO emissions under the Clean Air Act.

Protected Populations:



Workers



Communities

Timeline for Clean Air Act & FIFRA Actions

Proposal (Clean Air Act) and Proposed Interim Decision (PID for FIFRA) made on April 13, 2023

Public comment period closed June 27, 2023

Final rule (Clean Air Act) and Interim Decision (FIFRA) expected within 1 year of comment period's closure

Expect implementation of Clean Air Act proposal 18 months after final rule

FIFRA PID implementation expected 1 to 5 years after Interim Decision

Actions to Reduce Risk:

1. Reduce EtO coming out of facilities.
2. Reduce risk when EtO is used as a pesticide.
3. **Partnerships to reduce risk.**



Hastings Read

Deputy Director

Division of Air Resource Management
Florida Department of Environmental
Protection



Tony Toney

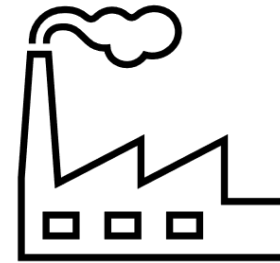
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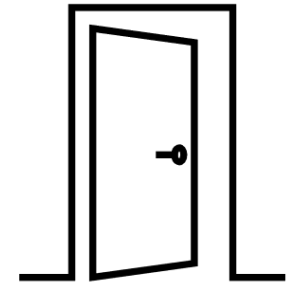
How EPA Models Risk

- **Collect latest data**
 - Facility's EtO use and emissions
 - Weather patterns
 - Surrounding neighborhood
- **Assume the highest exposure possible**
 - 24 hours/day
 - 7 days/week
 - 70 years
- **Calculate how many people out of one million have increased risk from maximum exposure to this one chemical**

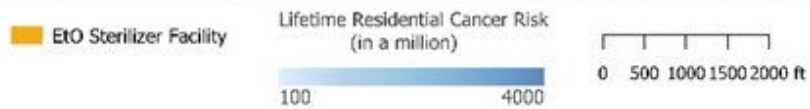
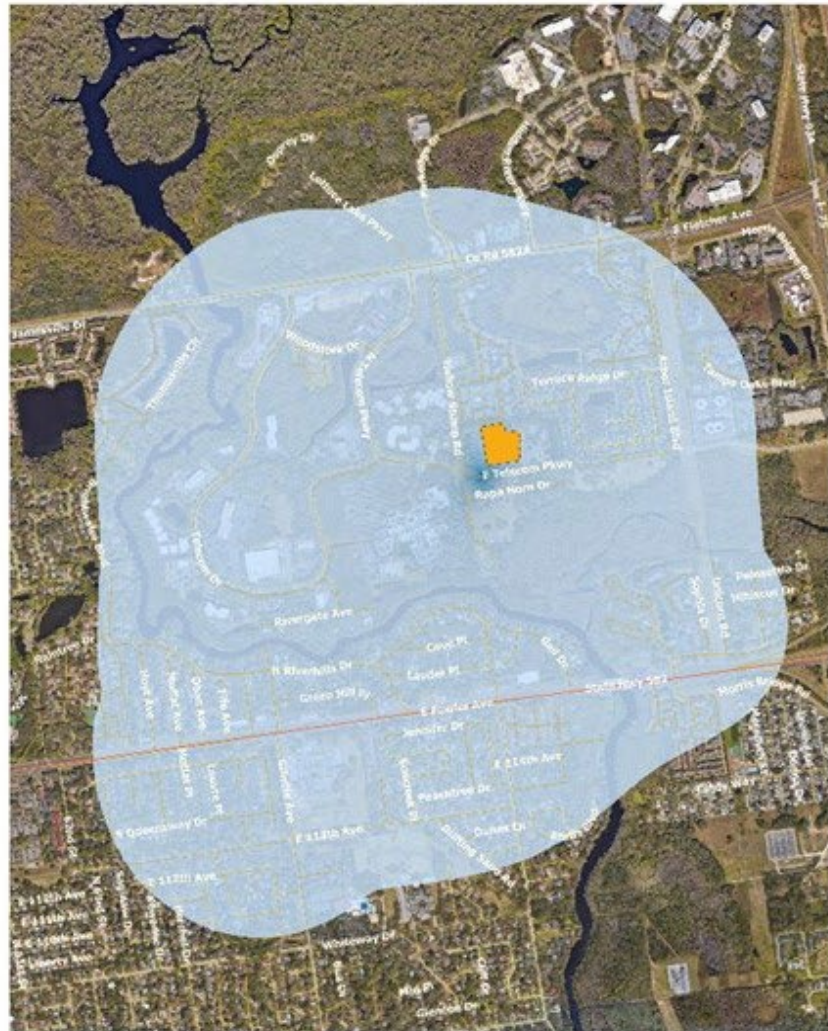
Stack
Emissions



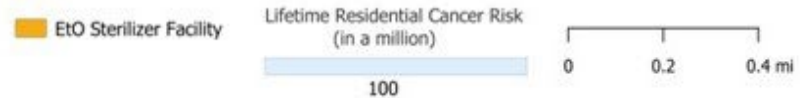
Fugitive
Emissions



Lifetime Residential Cancer Risks – EtO Sterilization American Contract Systems – Temple Terrace, FL



EPA Modeled Risk Map – BEFORE
installation of air pollution control devices



EPA Modeled Risk Map – AFTER
installation of air pollution control devices

Carol Kemker

Acting EPA Region 4
Deputy Administrator



**Reducing EtO coming
out of facility is
the best way
to reduce risk to
communities.**



Key Points



- 1. EPA has learned that EtO is potentially causing risk to communities and workers.**
- 2. We have proposed comprehensive solutions to reduce this risk.**
- 3. We collected public comment on these solutions and are working to finalize the actions.**
- 4. In the interim, actions have been taken to reduce the EtO emissions prior to finalizing the rule.**

Email at:
Region4EtO@epa.gov
if you have additional
questions



Contact us:

Email:
Region4EtO@epa.gov

Resources and Ways to Stay
Informed:

Facility-Specific Webpage:
www.epa.gov/fl/temple-terrace-fl-american-contract-systems

EPA EtO Webpage:
www.epa.gov/eto

The screenshot shows the EPA website header with the logo and navigation menu. The main content area is titled "EPA in Florida" and "CONTACT US". The headline is "Temple Terrace FL American Contract Systems". Below the headline, there is a paragraph about American Contract Systems, Inc. (ACS) and a press release from July 25, 2023. A green call-to-action button says "Sign Up to Learn More". Below that, there is a link to "Learn more about ethylene oxide risks from some commercial sterilizers". At the bottom, there is a light blue box with the text "What EPA is Doing to Address Ethylene Oxide".

The screenshot shows the EPA website header with the logo and navigation menu. The main content area is titled "CONTACT US" and "Hazardous Air Pollutants: Ethylene Oxide (EtO)". Below the headline, there is a large image showing a yellow hard hat and various mechanical parts. A dark blue call-to-action box with white text says "Proposed Actions to Reduce Ethylene Oxide Risks". Below this, there is a paragraph about EPA's proposed health protections. At the bottom, there is a blue button with white text that says "Learn more about these actions".

LeAnn Bing

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<https://www.pehsu.net/region4.html>



ATSDR
AGENCY FOR TOXIC SUBSTANCES
AND DISEASE REGISTRY



PEHSU
Pediatric Environmental
Health Specialty Units

- **ATSDR Clinician Brief**
- **ATSDR Toxicological Profile for Ethylene Oxide**
- **Chemicals, Cancer and You**

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