

**SOUTH MEMPHIS****Scientists gauge Mallory Heights' cancer risk from EtO**

By [Keely Brewer](#), Daily Memphian

Updated: February 07, 2023 1:15 PM CT | Published: February 07, 2023 12:42 PM CT



**Vera Holmes (left) president of the Mallory Heights CDC, talks during a January Mallory Heights CDC meeting at the South Branch Library to inform residents about their cancer risk from Ethylene Oxide emissions from Sterilization Services of Tennessee. (Brad Vest/The Daily Memphian)**

Ethylene oxide — or EtO — accounts for more than 80% of the total cancer risk near Mallory Heights, according to the Union of Concerned Scientists.

The nonprofit research and advocacy group based at the Massachusetts Institute of Technology shared that finding in a report released Tuesday, Feb. 7. There are about 500 EtO-emitters nationwide, and the Union of Concerned Scientists

focused on roughly 100 residential communities, including Memphis, that will be impacted by upcoming regulations from the Environmental Protection Agency.

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### Memphis facility should reduce cancer-causing emissions, City Council says

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Darya Minovi, author of the report, said the Union of Concerned Scientists' analysis answered a key question: How much is EtO contributing to the total cancer risk from toxic air pollutants?

“We’re only seeing part of the picture,” Minovi said. “And the part that we’re seeing is not a pretty picture.”

#### **Sterilization Services of Tennessee**

- In operation at 2396 Florida St. since the late 1970s
- Sterilizing medical equipment
- One of the companies three locations; the others are in Atlanta and Richmond, Virginia
- EtO emissions have already been reduced at one of the parent company's other facilities

The lifetime cancer risk for those residents living closest to Sterilization Services of Tennessee's South Memphis facility is 2,000 in a million. That's in addition to residents' risk of developing cancer for reasons other than EtO exposure.

Along the outer boundaries of the impacted area, that risk falls to about 100 in a million, which still meets the EPA's benchmark for unacceptable risk.

Sterilization Services did not respond to requests for comment for this story.

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### Cancer-causing chemical endangering Memphis due to EPA's inaction, lawsuit alleges

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The company is complying with current EPA emissions regulations. But, the EPA hasn't updated its regulations since before 2016, when it learned that EtO is 60 times more toxic when inhaled than previously understood. The EPA's current rules also don't account for fugitive emissions — the air that escapes through vents, doors

and other openings.

**“** *We’re only seeing part of the picture and the part that we’re seeing is not a pretty picture.* **”**

**Darya Minovi**  
Union of Concerned Scientists

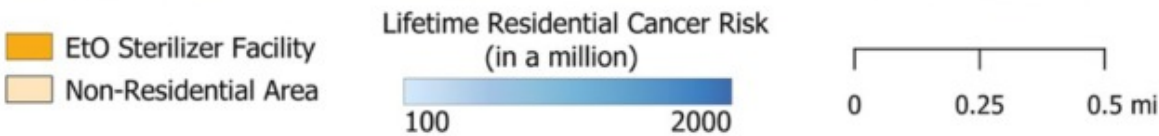
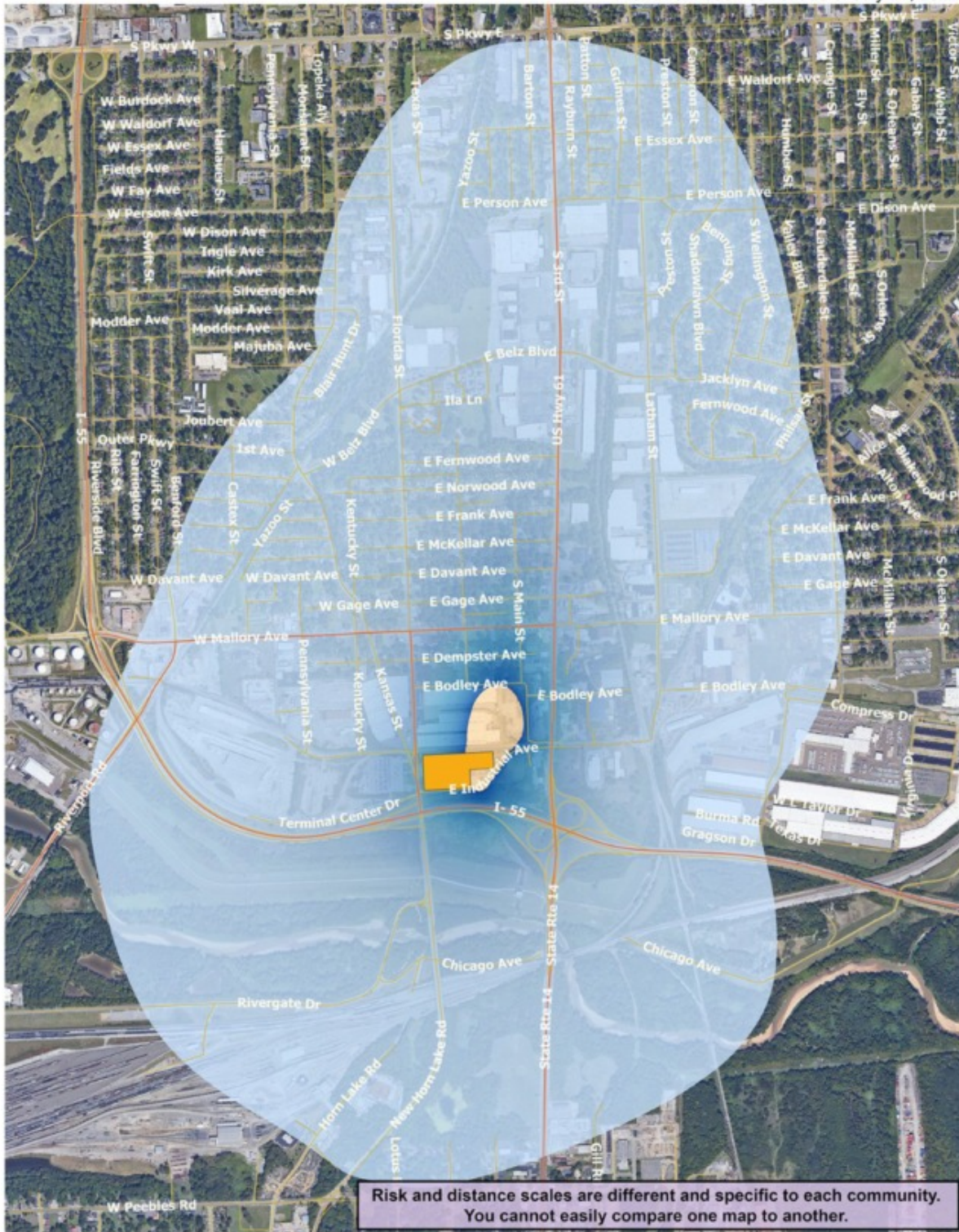
The Union of Concerned Scientists is one of five plaintiffs suing the EPA for allegedly missing regulatory deadlines.

The group filed suit in the District of Columbia in December along with California Communities Against Toxics; Clean Power Lake County; Rio Grande International Study Center; and the Sierra Club; since then, the Union of Concerned Scientists have been working on a report about the communities living near facilities that emit EtO.

Chunrong Jia is a University of Memphis professor who specializes in air pollution, risk assessment and environmental health disparities. By looking at the cumulative lifetime cancer risk from individual pollutants, he said scientists can glean how much one chemical is contributing to overall risk.

### Lifetime Residential Cancer Risks - EtO Sterilization Sterilization Services of Tennessee, Memphis, TN

Risk information current as of July 27, 2022.



This map shows EPA's estimates of lifetime cancer risks from EtO near Sterilization Services of Tennessee in Memphis. (Courtesy United States Environmental Protection Agency)

Near Mallory Heights — more specifically, in the census tract where Sterilization Services of Tennessee is located — EtO contributes to 82% of the total cancer risk, according to the report. Risk level indicates someone's probability of developing cancer, but Jia said it's important to remember that risk assessments can't determine causality between chemical exposure and a cancer case.

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### Health Department launches first specific cancer-cluster study

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“This is a really tricky aspect of public health science and epidemiology,” Minovi said. “Unless you do a randomized controlled trial, you can not necessarily draw a direct line between a pollutant and a health outcome.”

And, of course, a trial that exposes people to a known carcinogen would be highly unethical, she said. That makes risk assessments their best bet.

### **Who's most at-risk?**

There are about 130,000 people who live within five miles of Sterilization Services of Tennessee and about 180 schools and child care centers in that area, which Minovi said is important since young children are more susceptible to carcinogens.

Of the Memphis population within five miles of Sterilization Services of Tennessee, about 87% are people of color, and more than half are considered low-income. Both figures are 20% higher than the Shelby County average.

That trend extends beyond Memphis. The average proportion of people of color in all communities surveyed in the study was about 10% greater than the U.S. average.

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### EPA is monitoring possible cancer-causing emissions in Southwest Memphis

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“We've found a very troubling and, unfortunately, not very surprising trend in that people of color, in particular, are disproportionately being exposed to ethylene oxide from commercial sterilizers,” Minovi said.

This report focuses on the cancer risk associated with EtO, but Minovi said the EPA must remember that people aren't exposed to one pollutant from one facility at a time. In reality, Jia said people are exposed to many stressors and risk factors: environmental pollutants, poverty, lifestyle, crime and health care access, to name a few.

“Unfortunately, what this analysis did find is just affirming what so many advocates have been talking about for decades,” Minovi said. “Communities of color continue to be treated as sacrifice zones.”

Sterilization Services has locations in Memphis, Atlanta and Richmond, Virginia. The director of EPA's air and radiation division confirmed that the company has voluntarily reduced its emissions for at least one of its other locations but not its Memphis facility.

The Shelby County Health Department is conducting its first cancer cluster study in response to EtO concerns — something that Jia said should become routine.

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### TVA's coal ash cleanup site in Memphis on 'most contaminated' list

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In the meantime, the Southern Environmental Law Center is petitioning the Shelby County Health Department to exercise its emergency powers and force the Memphis facility to reduce EtO emissions or discontinue operations.

“Nobody should be forced to live next door to an industrial facility that recklessly emits toxic, cancer-causing pollution,” said Amanda Garcia, director of the Southern Environmental Law Center's Tennessee office. “The Shelby County Health Officer not only can act but *must* act to protect South Memphis families.”

The Southern Environmental Law Center sent the petition, filed on behalf of Memphis Community Against Pollution, to the health department's Dr. Bruce Randolph on Tuesday, Feb. 7 — two weeks

after the Memphis City Council passed a resolution calling on the facility to voluntarily reduce its emissions and four months after EPA held community meetings in Memphis.

“Since then, the Shelby County Health Department has yet to update the impacted community members about the status of Sterilization Services of Tennessee or engage with us in a meaningful way,” said KeShaun Pearson, MCAP board president and cofounder. “South Memphis residents deserve to breathe clean air, and we demand immediate action from the Shelby County Health Department.”



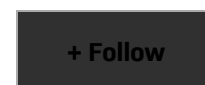
**KeShaun Pearson**

#### TOPICS

**STERILIZATION SERVICES OF TENNESSEE**   **ETHYLENE OXIDE**   **MALLORY HEIGHTS**  
**ENVIRONMENTAL PROTECTION AGENCY**

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### Keely Brewer

Keely Brewer is a Report for America corps member covering environmental impacts on communities of color in Memphis. She is working in partnership with the Ag & Water Desk, a sustainable reporting network aimed at telling water and agriculture stories across the Mississippi River Basin.