

Dear District 68 Board of Education members ("School Board") and Oak Grove administrative staff ("Administration"),

We, District 68 residents, are concerned about the health risks posed to the children of this community by Medline's emission of ethylene oxide ("EtO"). Although this topic has been discussed at prior School Board meetings and some information recently has been posted to the school's website, we are submitting this letter and its attachments to more comprehensively update the School Board and Administration and to formally ask you to take additional actions.

Ethylene Oxide Background and Risks

Ethylene oxide is an odorless gas which is used to sterilize materials and produce some consumer products. Medline uses it to sterilize medical equipment. According to the EPA, "[e]vidence in humans indicates that long-term exposure to ethylene oxide increases the risk of cancers of the white blood cells, including non-Hodgkin lymphoma, myeloma, and lymphocytic leukemia. Studies also show that long-term exposure to ethylene oxide increases the risk of breast cancer in females."

<https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-health-information-about-ethylene-oxide>

Children are particularly vulnerable to ethylene oxide. For a single year of exposure to EtO, the cancer risk is greater for children than for adults. According to the EPA, EtO is "60 times more toxic to children and 30 times more toxic to adults" than previously estimated.

<https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-health-information-about-ethylene-oxide#children>

Recently passed legislation prohibits NEW ethylene oxide medical sterilization facilities from opening within 10 miles of a school or park. Medline, located at 1160 S. Northpoint Blvd., sits approximately 2.5 miles from Oak Grove.

Medline is in the process of installing additional controls and has committed to limiting its emissions to 150 pounds per year (a decrease from approximately 3000 pounds reported in 2014). While these measures are a step in the right direction, Medline must switch to safer alternative methods of sterilization. Currently, there is no level set by the EPA "for ethylene oxide below which the air quality is considered OK."

<https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-basic-information-about-ethylene-oxide>

Moreover, EtO is extremely dangerous not only as an emitted gas but as a stockpiled chemical. It is a main component in thermobaric and fuel air explosive weapons used by the US military. Any accident in handling or transporting this material could be devastating. This risk is not theoretical. Accidents have occurred in California in 2004 and Indiana in 1997, among others.

<https://www.csb.gov/csb-issues-final-report-in-2004-explosion-at-sterigenics-international-facility-in-ontario-california-notes-lack-of-engineering-controls-understanding-of-process-hazards/>;
<https://archive.epa.gov/emergencies/docs/chem/web/pdf/acrapac.pdf>.

In addition, Dr. Dylan Burdette, who has a doctorate in biochemistry and molecular biology, recently issued an article on the risks facing Lake County in the event of an explosion related to the use of EtO. This article estimates numerous casualties and injuries as well as significant damage to property.

https://cleanpowerlakecounty.org/2019/06/24/ethylene-oxide-poses-explosion-risks-in-lake-county/?fbclid=IwAR2ZVe4MUbu99SzdaF_LuvVVgQE5C2wLV6aq668IKlwDrcv38v4PWBpW2oo

Testing Results

This summer, initial air testing was conducted, the cost of which was split equally among Waukegan, Gurnee and Lake County. The results of these tests were alarming. The EPA considers 0.02 ug/m³¹ as the actionable level for ethylene oxide. The highest amount observed by Medline was 10 ug/m³, which is 500 times the actionable limit. Additional readings included 6.8 ug/m³, 5.8 ug/m³ and 5.38 ug/m³. These measurements were picked up by the testing canister located near Pulaski Road and S. Shields Drive in Waukegan. This testing location sits southwest of Medline. Oak Grove School also sits southwest of Medline. Additional testing will take place later this year. <https://www.lakecountyl.gov/4188/EtOMonitoring-Results>;
https://www.epa.gov/il/ethylene-oxide-emissions-frequent-questions?fbclid=IwAR1tei6mhX8Lntkr7y6_toFXTMPPrzdGP6atlwhik0SIIdxG3XZGc6ZSDIh0

Alternatives

Recent decades have seen an emergence of alternative sterilization options, including peracetic acid; radiation (gamma and electron beam); vapor-phase hydrogen peroxide; plasma (hydrogen peroxide); hydrogen peroxide and ozone; and nitrogen dioxide. In fact, many hospitals, including the entire Advocate system, have successfully moved away from the “use of ethylene oxide due to its cost, inefficiency, and toxicity.” In the area of disposable sterilization where EtO remains a major player, there are viable alternatives, including gamma radiation, which is utilized about 40 percent of the time.

https://www.isms.org/Membership/Annual_Meeting/resources-lateA/.

Ethylene Oxide is Not a Political Issue

We understand that some school districts have deemed this issue to be a political one and therefore declined to take action or get involved. We want to thank the Oak Grove School Board and the Administration for posting a link to the EtO testing results on Lake County’s website. However, we believe the school can do more and ask you to consider the following:

¹ ug/m³ is micrograms per cubic meter of air

1. School districts have taken action beyond what Oak Grove has done so far. For instance, the Waukegan School Board issued a resolution in connection with this very issue on April 9, 2019 (Attachment A). In addition, the Superintendent of Gower School District issued a lengthy statement in February 2019 on the issue of EtO in DuPage County (Attachment B).

2. This district has been effective in engaging public officials in the past on other important issues. For instance, area Superintendents, including Dr. Lemon, wrote a letter to Illinois state officials urging them to end the state budget impasse and improve the state's education funding formula (Attachment C). We are confident that Dr. Lemon would be equally as effective in engaging local and state representatives on the EtO issue as well.

3. Above all else, this is a health and safety issue for our children. It is one of the School Board's and Administration's basic responsibilities to ensure that Oak Grove is a safe place for its students. We know you take this job very seriously and hope that you will consider taking the actions we have set forth in the next section.

How Can the School Board and Administration Help?

1. Continue to officially inform (and periodically, update) all Oak Grove parents and guardians of the EtO risk in this community either through Board action or through the Administration or both. Of particular importance is to let the community know about an upcoming **Lake County EtO Townhall Meeting on October 2, 2019 at 6:30 p.m.** at the College of Lake County, Grayslake Campus Auditorium. The Illinois EPA, Agency for Toxic Substances and Disease Registry, Illinois Department of Public Health and Lake County Health Department will be in attendance.

2. Draft a resolution on this issue showing your support for additional air testing in Lake County and urging Medline to adopt safer alternative methods of sterilization.

3. Reach out to Mayor Wysocki and the Village Trustees on this issue. The Mayor and Trustees are currently considering whether to conduct air testing in Green Oaks. Oak Grove's support of this testing would be very valuable.

4. Reach out to state officials and encourage them to take swift action on EtO in order to mitigate the risk to the Oak Grove community.

5. Consider what measures the school can take to limit the amount of EtO in the building including, but not limited to, installing a more robust air filtration system and air purifiers. A school in Georgia dealing with similar issues has taken such measures.

https://www.mdjonline.com/news/air-monitors-installed-around-sterigenics-plant-to-test-ethylene-oxide/article_754dfe8e-d0a8-11e9-b02c-3fa60a7f7ccd.html?fbclid=IwAR1GlsyHkLHrloQ0eLq3MmMzla_w_Ue1e_YH3YhWQY2iyUBMIF4RMeTQgik

6. Post the attached flyer about EtO to Oak Grove's Virtual Backpack (Attachment D). This document is being submitted with this letter in accordance with a School Board member's suggestion at the April 29, 2019 Committee of the Whole Meeting.

Conclusion

Thank you for your consideration and we look forward to hearing the Board's discussion of this very important issue at the September 24, 2019 meeting.

Best regards,

Concerned Residents of School Board District 68

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Ahmed Ijaz
Gunn Johnsson
Jorgen Johnsson
Mary Crain
Jeff Crain
Elizabeth Grote
Jonathan Grote
June O'Donnell
Sean O'Donnell
Randi Muzumdar
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Srirama Krishna Reddy
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