



HYDROGEN SULFIDE AND LANDFILLS FREQUENTLY ASKED QUESTIONS

What is hydrogen sulfide?

Hydrogen sulfide is a colorless gas which often smells like rotten eggs. It only takes a very small amount for people to be able to smell hydrogen sulfide. You may have smelled hydrogen sulfide near manure pits, coastal mud flats at low tide, or near pulp and paper mills. Hydrogen sulfide can also come from the breakdown of waste materials in a landfill.

How might I be exposed to hydrogen sulfide if I live near a landfill?

The breakdown of waste materials in a landfill can make hydrogen sulfide gas. Once released into the air at the landfill, hydrogen sulfide can be carried by wind to the surrounding area. The amount of hydrogen sulfide present in the air at nearby homes and businesses can quickly change with changes in wind direction and weather. Landfills that take wastewater treatment plant sludge or construction materials like wallboard or sheetrock are more likely to make hydrogen sulfide gas.

How can hydrogen sulfide harm my health?

Breathing low levels of hydrogen sulfide may cause headache, nausea, and irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some individuals with respiratory problems, such as people with asthma. If you live near a landfill and experience these symptoms in response to breathing air that smells like rotten eggs, you should discuss your health symptoms with your primary health care provider. You should also contact the landfill owner or operator to report your odor complaint. Give them information about the type of odor, when the odor occurred, and how long the odor occurred so they can respond accordingly.

How can I know if I am being exposed to hydrogen sulfide?

If you live near a landfill, the rotten egg smell can mean that you may be breathing hydrogen sulfide. Some people can smell hydrogen sulfide at very low levels (10 parts per billion). Others may not notice the smell.

It is possible to measure hydrogen sulfide in the air at low levels. Landfill operators can use instruments to continuously measure the hydrogen sulfide levels in the air on the landfill property. There are also portable instruments that can be moved to different locations to measure hydrogen sulfide levels over short periods of time. The Department

of Environmental Protection has used these instruments to test air levels at places near landfills.

Are there health guidelines for hydrogen sulfide levels in the air?

State and federal agencies have made guidelines for levels of hydrogen sulfide in air where there is low risk of having an adverse health effect. In general, the guidelines show that hydrogen sulfide levels in the air need to be above 30 parts per billion before someone may have health effects such as headaches, nausea, eye irritation, and discomfort for people with asthma. Since some people can smell the odor of hydrogen sulfide at air levels of 10 parts per billion or even lower, they may smell the odor before it could impact their health.

If you would like to know more about health guidelines for hydrogen sulfide, you can contact a toxicologist at the Maine Center for Disease Control and Prevention at 866-292-3474 (toll-free in Maine), 207-287-4311, or Maine Relay 711.

How can hydrogen sulfide be controlled in the landfill environment?

Hydrogen sulfide and other landfill gases can be controlled by installing an active gas management system that pulls out and burns the landfill gas. Hydrogen sulfide emissions can also be reduced by decreasing the amount of sulfate containing wastes entering the landfill, and by applying certain cover materials such as soil amended with lime and fine concrete.

How can I learn more about hydrogen sulfide?

- For more information on the health effects of hydrogen sulfide: Agency for Toxic Substances and Disease Registry:
<https://wwwn.cdc.gov/TSP/ToxFAQs/ToxFAQsDetails.aspx?faqid=388&toxid=67>

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