1,4-Dioxane in Drinking Water Information and Guidance for Residents

Industrial Excess Landfill Superfund Site
Uniontown, Ohio July 2023

For public health information on 1,4-dioxane, please contact:
Ohio Department of Health
Health Assessment Section
(614) 728-9452
BEH@odh.ohio.gov

For questions about private water systems or alternate drinking water systems, please contact:
Ohio Department of Health
Private Water Systems Program
(614) 644-7558
BEH@odh.ohio.gov

For latest updates on the IEL site and the Superfund process, including private well sampling, please contact:
U.S. EPA
Aaron Green, Remedial Project Manager
Green.Aaron.M@epa.gov
(312)353-4633
-or-
Ruth Muhtsun, Community Involvement Coordinator
muhtsun.ruth@epa.gov
(312) 886-6595

For questions specific to Stark County residents, contact:
Stark County Health Department
Paul DePasquale, Director of Environmental Health
(330) 451-1462
depasqualep@starkhealth.org

For questions specific to Summit County residents, contact:
Summit County Public Health
Ali Rogalski, Water Quality Manager
(330) 926-5639
arogalski@schd.org

What is currently being done at the Industrial Excess Landfill (IEL) site?
The U.S. Environmental Protection Agency (EPA) is working with the Agency for Toxic Substances and Disease Registry (ATSDR), Ohio Department of Health (ODH), Stark County Health Department, and Summit County Public Health to sample private water wells for 1,4-dioxane in the groundwater at the Industrial Excess Landfill (IEL) Superfund Site, and in the groundwater west and northwest of the site. Of the 110 private wells sampled, a mix of 35 primary and secondary use (e.g., irrigation) wells had detections of 1,4-dioxane. To date, 33 homes have been connected to municipal water and additional connections are underway. More information about site activity can be found at U.S. EPA Industrial Excess Landfill Superfund Site Profile (epa.gov/superfund/industrial-excess-landfill).

What is 1,4-dioxane?
1,4-dioxane (also called dioxane) is a man-made, liquid chemical used as an industrial solvent and laboratory material. It dissolves easily in water and is odorless and tasteless. At IEL, 1,4-dioxane entered and spread through the groundwater around the landfill site. Residents nearby may be exposed by drinking contaminated water from their private water wells.

How can 1,4-dioxane affect my health?
Exposure to high levels of 1,4-dioxane through drinking contaminated water or inhaling vapors can cause liver and kidney damage. Breathing in low levels of 1,4-dioxane (such as from spray or vapors from contaminated water) for just minutes can irritate the eyes and nose. Animal studies have shown that rats and mice who drank 1,4-dioxane in water over their lifetime developed cancer of the liver and nose. Being exposed to 1,4-dioxane does not necessarily mean you will have health effects.

Should I have myself tested for 1,4-dioxane?
Testing for 1,4-dioxane is typically not recommended since it leaves the body within one to two days of exposure. This makes it difficult to get an exact measurement of the amount you have been exposed to. This test also would not tell your medical provider much about your current or future health. EPA classifies 1,4-dioxane as “likely to be carcinogenic (cause cancer) in humans” so it is important to tell your healthcare provider about your exposure and to attend regular preventive health visits so that health problems can be detected early.

What are the recommendations for residents with 1,4-dioxane contamination in their private drinking water?
Residents who have 1,4-dioxane in their private drinking water wells at levels greater than 0.46 parts per billion should immediately stop using the water for drinking, making ice, cooking, mixing baby formula, and providing it to pets. The well should be appropriately sealed, and the residents should be switched to a safe, alternate source of drinking water. Residents should consult with their local health department to determine what alternative drinking water supplies may be available and/or feasible for their specific property.

How can I get my well tested if I live outside of EPA's investigative area?
If your home is not within the focused area of investigation that will be tested, but you still want your private water system tested, please contact the Stark County Health Department or Summit County Public Health for more information. It is likely that homeowners will have to pay a fee to have their water sampled.

Resources for Residents
For additional information, please visit:

- ATSDR 1,4-Dioxane ToxFAQs at atsdr.cdc.gov for information on 1,4-dioxane exposure and health effects.

- EPA Industrial Excess Landfill Superfund Site Profile (epa.gov/superfund/industrial-excess-landfill) for information and updates on the IEL Superfund Site including EPA's investigation area.

Resources for Physicians

- Physicians may refer to the ATSDR 1,4-Dioxane Medical Management Guidelines at cdc.gov for information on health effects, prehospital management, emergency management, etc.

- The Environmental Health and Lead Clinic at Cincinnati Children's Hospital can help answer questions regarding concerns for children who may have been exposed to 1,4-Dioxane.