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# EPA Begins Groundwater Investigation for 1,4-Dioxane

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**Industrial Excess Landfill Superfund Site**  
Uniontown, Ohio

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## **For more information**

If you have questions, comments or need more information about the Industrial Excess Landfill site contact these EPA team members:

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U.S. Environmental Protection Agency will oversee the sampling of 1,4-dioxane, or also referred to as dioxane, in the groundwater at the Industrial Excess Landfill Superfund site, and in the groundwater in the neighborhood west of the site this spring. Groundwater is a term that refers to underground supplies of water. EPA regularly monitors the site to ensure the cleanup continues to protect people and the environment. During the most recent two-year groundwater sampling event conducted by the potentially responsible parties, or PRPs, the presence of 1,4-dioxane was confirmed. Additional groundwater sampling will be conducted at on-site monitoring wells, and off-site temporary and residential wells located west of the site and in the direction of groundwater flow. This sampling is being conducted to determine the size of the dioxane plume west of the site. The data will be used to perform a risk assessment and allow EPA to determine if any further cleanup actions are necessary.

## **What is 1,4-dioxane, or dioxane?**

Dioxane is a widely used, synthetic industrial chemical present in many goods, including paint strippers, dyes, greases, antifreeze, and in some consumer products like deodorants, shampoos and cosmetics. It was heavily used in the past as a solvent stabilizer in the manufacturing industry and is commonly found at groundwater sites contaminated with chlorinated solvents. Dioxane is also known as an emerging contaminant. An emerging contaminant is generally defined as a contaminant that has a potential for adverse health effects, has no published cleanup standards, and lacked adequate science in the past to confidently detect and measure. These types of contaminants often escaped early detection because they were either not on a target list of pollutants to monitor or analytical instruments and methods available at the time were not sensitive enough to detect them.

As the analytical tools EPA uses improves, dioxane is being found in the groundwater at sites throughout the country. In 2012, dioxane was introduced as a contaminant under the third Unregulated Contaminant Monitoring Rule of the Safe Drinking Water Act. EPA has classified dioxane as likely to be cancer-causing to humans.

A federal drinking water standard for dioxane has not yet been established. However, since the early 1990s, residents near the IEL site have been connected to municipal water. EPA continues to work with the Stark County Health Department to confirm that there are no private wells near the site being used as a drinking water supply. No known exposures to the contaminated groundwater are occurring.



*Industrial Excess Landfill Superfund site location map. The site boundaries are outlined in blue.*

### **Next Steps**

Currently, a workplan is being developed for EPA’s review and approval. After the workplan is approved, crews will mobilize to the site to conduct groundwater sampling. **If you are a Uniontown resident who received this fact sheet in the mail and have a private well on your property, please contact EPA to discuss well use and the need for potential sampling.**

Once EPA determines the extent of contamination in groundwater, a risk assessment will be conducted to determine whether dioxane concentrations pose a current or potential risk to residents living near the site. The

agency will review the results of the investigation and risk assessment and evaluate if changes to the current cleanup plan for the site are needed.

### **Additional Site Activities**

The PRPs continue to monitor the groundwater and landfill gas both on and off the site. Monitored natural attenuation, or MNA, which uses natural processes such as decay, dilution and evaporation to clean up groundwater contaminants, continues to address the contamination of volatile organic compounds at the site effectively.

However, additional assessments are on-going to determine the effectiveness of MNA for metals. The 2017 and 2019 groundwater monitoring data indicates that volatile organic compounds and metals were not detected above cleanup standards in off-site groundwater monitoring wells established in the 2002 Record of Decision Amendment, or ROD Amendment. A Record of Decision, or ROD, is a document that explains EPA's selected cleanup remedy for a site. A ROD amendment is a modification of the cleanup decision. The PRPs are collecting additional samples to help EPA evaluate the effectiveness of MNA as a cleanup option for metals in the groundwater. The effectiveness of MNA for 1,4-dioxane at this site will also be evaluated.

Ongoing landfill gas monitoring has shown increasing methane concentrations at potentially explosive levels in the subsurface at isolated areas within the site's boundary. There is no indication that methane is migrating off-site through the subsurface and has not been detected in ambient air sampling locations. At EPA's direction, the PRPs expanded the fence line at the site to deter trespassing in the area where methane fluctuates in the subsurface, protect the on-site monitoring wells and vents, and to meet height requirements. The PRPs are finalizing a comprehensive landfill gas evaluation report that will be submitted for Agency review. The evaluation will determine the amount of landfill gas being produced; determine what may be contributing to the increasing methane concentrations; and recommend additional actions to prevent migration of landfill gas into the surrounding EPA owned parcels that are a part of the site. In the meantime, the PRPs continue to monitor methane on a weekly basis to ensure no off-site migration is occurring. They are also conducting non-methane volatile organic compound sampling in the subsurface and ambient air this winter and summer to confirm that the 2005 risk assessment that determined there is no unacceptable risk is still valid.

## **Site History**

The Industrial Excess Landfill Superfund site is a 30-acre mixed-waste landfill located in a mixed residential, agricultural, commercial and light industrial area in Uniontown, Ohio. Prior to 1966, the landfill property was used for sand and gravel mining. In 1966, the mining and excavation pit was converted into a landfill, which operated until 1980. During this time, IEL received industrial waste, primarily from the rubber industries in Akron, Ohio. An estimated 780,000 tons of solid waste and 1 million gallons of liquid waste were dumped on the ground and into an on-site evaporation lagoon. The landfill also accepted waste from hospitals,

septic tank cleaning firms, and the local public. Landfill operations at the site ceased in 1980.

EPA conducted several investigations at the site from 1984-1988. During sampling, hazardous substances were discovered in several private drinking water wells near the site attributed to the IEL. EPA installed air strippers to remove vinyl chloride from the residents' well water. In 1987, EPA issued a ROD to connect homes downgradient of the landfill to an alternate water supply. In 1993, Stark County issued a resolution that ordered the abandonment of all private wells in the alternate water supply area.

EPA issued a second ROD for the site in 1989 that called for the construction of a low-permeability landfill cap at the site. The 1989 ROD also required additional groundwater data to be collected to design a groundwater pump and treat remedy.

In 2002, EPA issued a ROD amendment to change the selected remedy from a low-permeability cap to an enhanced vegetative cover. EPA collected groundwater data that indicated that the number and concentration of groundwater contaminants had decreased. The 2002 ROD amendment also included using MNA to clean up on- and off-site groundwater contaminants. The 2002 selected cleanup also required the installation of new wells and upgrading or abandoning other wells as needed; installation of perimeter fencing; implementation of deed restrictions; maintaining an alternate water supply; and conducting additional design studies. Construction of the selected cleanup plan was completed in 2004 by the PRPs.

# Industrial Excess Landfill Superfund Site

## Investigation Update

### Details Inside

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**INDUSTRIAL EXCESS LANDFILL SUPERFUND SITE:  
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