

Frequently Asked Questions



U.S. DEPARTMENT OF
ENERGY

Legacy
Management



Mound, Ohio, Site

A CERCLA/RCRA site

Frequently asked questions about vapor intrusion assessment being conducted at the Mound, Ohio, Site (now known as the Mound Business Park).

What is vapor intrusion?

Vapor intrusion happens when there is movement of vapor-forming chemicals from any subsurface source into an overlying building through cracks in basements and foundations, utility pipes, or other underground corridors as shown in the figure below.

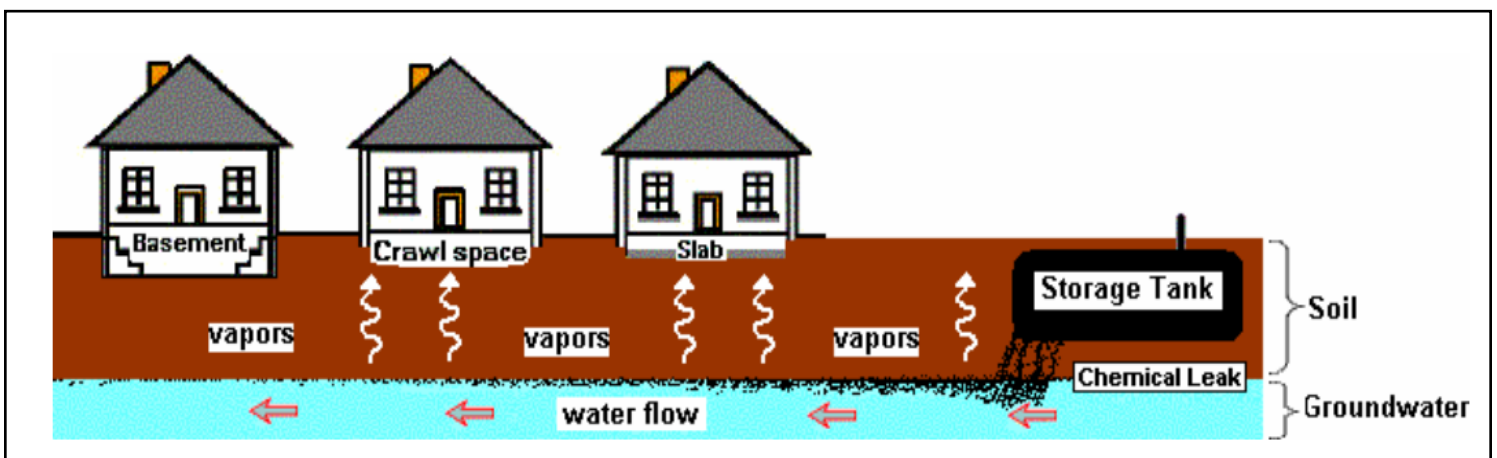
Was vapor intrusion evaluated during the site cleanup?

The U.S. Department of Energy (DOE) remediated the Mound site to U.S. Environmental Protection Agency (EPA) industrial- or commercial-use standards, according to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requirements and Mound-specific cleanup criteria in place at that time. The science on vapor intrusion has continually evolved and has led to EPA updating its guidance on toxicity and volatile organic compound (VOC) modeling

for the vapor exposure pathway. This update resulted in lower acceptable-VOC indoor air levels. This new guidance was directed at sites under EPA jurisdiction, including CERCLA sites like the Mound site. Since this EPA guidance was developed after all CERCLA Records of Decision for the Mound site were approved and all required remedies were functioning as intended, the vapor intrusion pathway was not evaluated.

Why is this vapor intrusion assessment happening now?

The CERCLA process includes a five-year review for sites where hazardous substances remain above levels that would permit unrestricted use — such as the Mound site — where property can only be used for industrial or commercial purposes. Five-year reviews provide CERCLA sites and EPA an opportunity to evaluate the remedy implementation and performance to determine whether it continues to protect human health and the environment. Five-year reviews also evaluate whether new information has come to light that could call into question remedy protectiveness, such as changes in



regulatory requirements or guidance. During the 2016 CERCLA five-year review, EPA directed DOE Office of Legacy Management (LM) to assess the potential for exposure to vapor intrusion at the Mound site. LM evaluated current and historical data to determine if further assessment was required. The *Final Vapor Intrusion Assessment: Phase I Preliminary Screening and Conceptual Model for the Mound, Ohio, Site* ([lmpublicsearch.lm.doe.gov/sitedocs/mnd%201012.pdf](https://publicsearch.lm.doe.gov/sitedocs/mnd%201012.pdf)) was published in 2019. The report identifies areas at the Mound site where soil-gas and groundwater sampling will be conducted. Depending on the weather, sampling will begin in 2023 and continue throughout the year.

What are the vapor intrusion health effects?

Potential health effects vary based on the chemical vapor type, but could only be a potential concern if vapor concentrations are higher than levels set by EPA guidelines and there is a pathway into a nearby building. LM is collecting additional data to ensure human health and the environment remain protected.

What does vapor sampling look like?

LM will have field crews that operate a Geoprobe rig (photo) to drill holes in the ground at certain locations to allow sampling. After samples are collected, sampling equipment will be removed, and the ground hole will be filled with bentonite clay. LM expects that field crews will perform sampling over a four to six week period.



Typical equipment (pickup truck with drill rig attachment known as a Geoprobe rig) used for collecting soil gas samples at the Mound site.

Who is involved with or overseeing the LM vapor intrusion assessment?

LM is leading the vapor intrusion assessment. EPA, Ohio EPA, and Ohio Department of Health are overseeing LM's work performance and are involved with all vapor intrusion assessment processes. EPA and Ohio EPA review and approve all LM sampling plans, methods, data, and reports.

What are the steps in LM's vapor intrusion assessment at the Mound site?

- Analyze current and historical site data to identify areas that require additional investigation to determine if vapor-forming chemicals are present, and if so, at what concentration.
- Conduct soil-gas and groundwater sampling, based on the sampling plan approved by EPA and Ohio EPA.
- Evaluate sample data to determine next steps.
 - If vapor-forming chemical concentrations in the soil-gas and groundwater are below EPA guideline levels, no further action is required.
 - If vapor-forming chemical concentrations in the soil-gas or groundwater are above EPA guideline levels, LM will evaluate whether there are potential pathways into any nearby building and whether areas inside the building may require sampling.
 - If there are no nearby buildings, LM will determine if vapor-forming chemical concentrations in the soil-gas or groundwater could potentially impact future buildings at the Mound, Ohio, Site.
- Provide a draft report on assessment results to the regulators and publish a final report to the CERCLA Administrative Record that is available on the LM Mound website (www.energy.gov/lm/mound-ohio-site).

Where can I find more information on vapor intrusion?

The following EPA and Ohio Department of Health websites contain additional information on vapor intrusion:

- www.epa.gov/vaporintrusion.
- odh.ohio.gov/wps/portal/gov/odh/know-our-programs/health-assessment-section/resources/chemical-factsheets.

Who can I contact for more information on the LM vapor intrusion assessment and sampling?

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CONTACT INFORMATION

IN CASE OF AN EMERGENCY AT THE SITE,
CONTACT **911**

LM TOLL-FREE EMERGENCY HOTLINE:
(877) 695-5322

Site-specific documents related to the **Mound, Ohio, Site**, are available on the LM website at www.energy.gov/lm/mound-ohio-site.

For more information about LM activities at the **Mound, Ohio, Site**, contact:

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