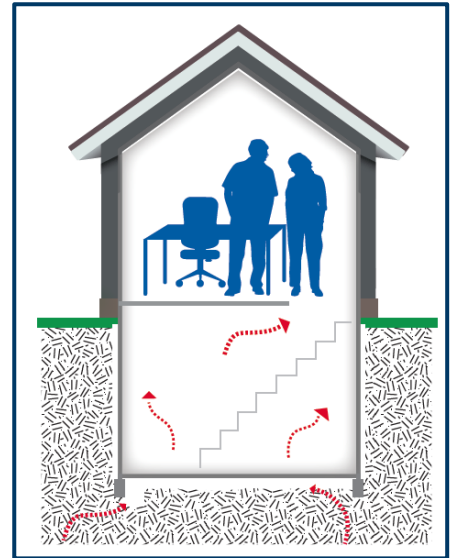


What is Vapor Intrusion?

COMMERCIAL PROPERTY OWNER

Chemicals that have been spilled or dumped on the ground can pollute soil and groundwater. Volatile organic compounds (VOCs) are chemicals that easily evaporate into air. VOCs that evaporate from polluted soil and groundwater can create chemical vapors underground. If these vapors move and come in contact with a building, they may enter through cracks in the foundation, around pipes, or through a drain system. The VOCs can then contaminate indoor air. This process - when pollution moves from air spaces in soil to indoor air - is called vapor intrusion.

The VOCs found most often during vapor intrusion investigations in Minnesota are the industrial degreaser trichloroethylene (TCE), the dry cleaning solvent tetrachloroethylene (perchloroethylene, PCE), and components of petroleum. Examples of properties that can be sources of these VOCs are industrial manufacturers, dry cleaners, and metal plating shops.



What is the purpose of a vapor intrusion investigation?



Buildings are investigated for vapor intrusion to determine if there is any risk for chemical vapor entry or a potential health concern. Usually, the amount of chemicals that enter a building from contaminated soil vapor is not a health concern for most people. However, even small amounts of some contaminants may pose a health concern for sensitive individuals, especially for **women who are pregnant or may become pregnant**. If you are a sensitive individual who regularly occupies a building where vapor intrusion may be occurring, please notify the Minnesota Department of Health (MDH).

What happens if vapor intrusion is suspected?



Vapor intrusion is investigated by collecting environmental samples to look for chemicals and the amounts present. If chemicals are present near buildings, it may be necessary to collect samples of sub-slab soil vapor or indoor air. Sub-slab samples are collected by drilling a small hole through the foundation to collect a sample of soil vapor from beneath the building using special equipment similar to the photo here.



What is done to reduce vapor intrusion and improve indoor air quality?

If soil vapors under your building are found at levels that indicate a concern, a mitigation system (most commonly a sub-slab depressurization system) may be needed to vent vapors from beneath the foundation to the outside air. These are the same systems commonly used to keep radon from entering buildings. Other approaches, such as adjusting building pressurization or HVAC controls, may also be effective in some cases.

Is my drinking water affected?

Vapor intrusion is often associated with contamination of shallow groundwater or soil. Municipal drinking water usually comes from deep wells or surface water and is routinely tested for contamination to ensure it meets standards. If you use a private well for drinking water and your property is undergoing a vapor intrusion investigation, contact MDH for more information.

For questions or information

About site investigations, sampling, mitigation systems

Contact the Minnesota Pollution Control Agency by phone at 651-757-2040 or by email at vaporinfo.pca@state.mn.us.

[MPCA Managing vapor intrusion](https://www.pca.state.mn.us/air-water-land-climate/managing-vapor-intrusion)

(<https://www.pca.state.mn.us/air-water-land-climate/managing-vapor-intrusion>)

About vapor intrusion and health, radon, drinking water

Contact MDH by phone at 651-201-4897 or by email at health.hazard@state.mn.us.

[MDH Vapor Intrusion](https://www.health.state.mn.us/communities/environment/hazardous/topics/vaporintrusion.html)

(<https://www.health.state.mn.us/communities/environment/hazardous/topics/vaporintrusion.html>)