

Vapor Intrusion



What you need to know about Vapor Intrusion:

Vapor Intrusion occurs when vapors from volatile chemicals in contaminated soil or ground water migrate through subsurface soils and/or preferential pathways (such as underground utilities) and impact the indoor air quality of any overlying buildings.

What chemicals might be entering my home and where would they come from?

Volatile Organic Compounds (VOCs) are one group of chemicals that easily become gases which can migrate through the soil and enter buildings. Some examples include: petroleum products (gasoline or diesel fuel) and solvents for dry cleaning and industrial uses.

The most common vapor intrusion cases involve petroleum spills/leaks from underground storage tanks at gas stations. These cases are usually accompanied by a petroleum odor. Solvents from other commercial and industrial sites usually do not have a detectable odor. VOC releases are not immediately discovered until after the contamination has had time to migrate through the soil.

What are the health concerns with vapor intrusion?

The health effects from chemical exposures vary based on the individual exposed and the chemical involved. When chemicals build up in indoor air, some people will experience eye and respiratory irritation, headache, and/or nausea. These symptoms are temporary and should go away when the person is moved to fresh air. Usually, health officials are most concerned about low level chemical exposures over many years, as this may raise a person's lifetime risk of developing cancer.

Resources:

Interstate Technology and Regulatory Council – Vapor Intrusion Overview:

<https://www.itrcweb.org/Team/Public?teamID=22&teamID=22>

State of Michigan Department of Environmental Quality - Overview:

http://www.michigan.gov/deq/0,4561,7-135-3311_4109_66336---,00.html

State of Michigan Department of Environmental Quality - Guidance Document:

http://www.michigan.gov/documents/deq/deq-rrd-VIGuidanceDoc-May2013_422550_7.pdf

State of Michigan Department of Environmental Quality - Information Contacts:

http://www.michigan.gov/documents/deq/deq-rrd-TAPS-ContactInformation_448484_7.pdf

The United States Agency for Toxic Substances and Disease Registry - Overview:

https://www.atsdr.cdc.gov/docs/vapor-intrusion_508.pdf

The United States Agency for Toxic Substances and Disease Registry – Investigating Vapor Intrusion:

<https://www.itrcweb.org/Team/Public?teamID=22&teamID=22>