

DUPONT POMPTON LAKES WORKS FACT SHEET



SOIL VAPOR Pathway

What is Soil Vapor?

Soil vapor is gas that has escaped from soil or from chemicals dissolved in groundwater. This vapor can rise through soil, much the way radon does. Soil vapor can be tested for chemicals similar to the way that soil and groundwater can be tested.

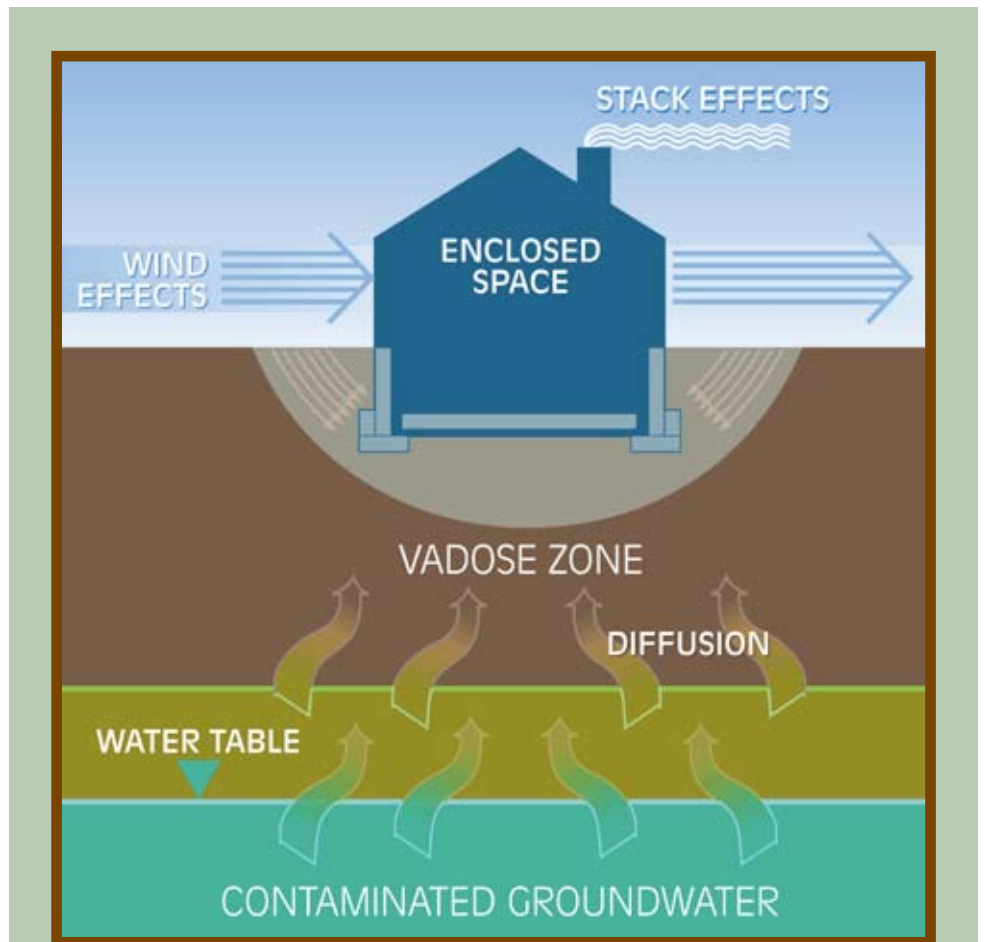
What is Vapor Intrusion?

Soil vapor may enter a building through foundation cracks, sump pump wells, or openings in the basement where utility pipes enter. The process of soil vapor entering a building is known as vapor intrusion.

How is Vapor Intrusion Discovered?

Volatile compounds are chemicals that evaporate at relatively low temperatures. If volatile compounds are found in groundwater, then the groundwater test results are evaluated. If groundwater test results collected on public property exceed regulatory screening criteria at certain locations, then soil vapor samples are collected on public property at those locations.

If soil vapor test results collected on public property exceed regulatory screening criteria at certain locations, then sub-slab samples are recommended by the US Environmental Protection



*This drawing shows the vapor pathway. There are many factors that can affect whether and how much vapor may enter a building, including: **the soil type underneath the building, building size and construction, the building ventilation, amount of fresh air that enters, the difference in pressure inside and outside the building (also known as the “stack effect”), weather and other factors.** If groundwater is the source of contamination, the depth to groundwater and contaminant levels in groundwater are also factors.*

(continued)

Dupont_PLW_fs_SoilVaporPathway_2-2010.indd

FOR MORE INFORMATION | Pompton Lakes Works Remediation Project Information Center | (973) 492-7729 | 223 Wanaque Avenue, Pompton Lakes, NJ 07442

www.pomptonlakesworks.com

SOIL VAPOR Pathways *(continued)*

Agency (EPA) and the New Jersey Department of Environmental Protection (NJDEP) to be collected beneath nearby buildings.

Indoor air samples are not recommended by EPA and NJDEP as a first step, because many household products, such as cleaning fluids or lawn products, contain the same types

of chemicals found in the groundwater. These products may emit vapors that could affect the test results.

If sub-slab samples exceed regulatory screening criteria, then indoor air sampling is recommended. If vapor intrusion is found to be occurring, the installation of a vapor mitigation system is recommended by EPA and NJDEP.

WHAT HAPPENS IF A PROBLEM IS FOUND?

The most common solution is to install a vapor mitigation system, similar to a radon system. This system removes soil vapor from below the basement or foundation before it enters the home. Soil vapor is then vented outside of the home. The system uses minimal electricity and does not affect heating and cooling efficiency. It also prevents radon from entering the home – *an added benefit*. Once the source of the vapors is eliminated (for example, after the contaminated groundwater is cleaned up), the system should no longer be needed.



Indoor air samples are not recommended by EPA and NJDEP as a first step, because many household products, such as cleaning fluids or lawn products, contain the same types of chemicals found in the groundwater.