

**Local Roots** >> **Global Reach**

# Legal Issues for Addressing Vapor Intrusion

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# Overview

- Legal Requirements for Due Diligence
- New Requirements of ASTM E1527-13
- Legal effect of pre-2013 NFR Letters in Illinois
- How to handle VI in the context of a transaction

## Legal Requirements for Vapor Intrusion

**Q. Is investigation of vapor intrusion “legally” required?**

**A. It depends on where you are, and the definition of “legally.”**



## Legal Requirements for Vapor Intrusion

- In Illinois, as with most states, an environmental investigation of ANY kind is not required under state law in order to transfer real estate.
- Thus, private parties are generally free to buy and sell real estate, even if there are known environmental problems, without doing an investigation of any type.
- Note that in some states such as Michigan and Connecticut, there are more stringent rules regarding the level of environmental investigation needed under state law.

## Legal Requirements for Vapor Intrusion

- However, if you are going to do a Phase I, under ASTM E1527-13, considering vapor intrusion risk is now specifically required.
- ASTM E1527-13 is a professional standard, not a legal standard.
- But, because completing an ASTM-compliant Phase I is the most common method for completing “All Appropriate Inquiry” under CERCLA and 40 CFR 312, to enable certain defenses under CERCLA...

*.... we can say that considering the vapor intrusion pathway is “legally” required if one wants to be able to assert CERCLA liability defenses in the future.*

## Updated ASTM Standard – E1527-13: Vapor Intrusion Now an Included Pathway

- Consideration of the vapor intrusion pathway is now explicitly required (but use of ASTM E 2600-10 not mandated).
- Prior versions of E1527 noted “indoor air quality” as a non-scope consideration, which some interpreted as investigation of vapor intrusion.
- The (entirely) new definition of “migrate” refers to movement of hazardous substances or petroleum in any form including “vapor in the subsurface.” (sec. 3.2.56)

## Updated ASTM Standard – E1527-13: Vapor Intrusion Now an Included Pathway

**ASTM 1527-13: Section 3.2.56** *migrate/migration*—for the purposes of this practice, “migrate” and “migration” refers to the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface. See Note 4.

NOTE 4—Vapor migration in the subsurface is described in Guide E2600; however, nothing in this practice should be construed to require application of the Guide E2600 standard to achieve compliance with all appropriate inquiries.

## Updated ASTM Standard – E1527-13: Vapor Intrusion Now an Included Pathway

- Thus – “All Appropriate Inquiry” is not achieved unless vapor intrusion risk is addressed in the Phase I.
- Industry anticipated this change for several years, and many consultants already were adding VI investigation to the Phase I scope anyway.
- This will likely increase average costs of due diligence as more Phase IIs are recommended to investigate potential VI issues.
- Will likely increase in time to address VI and may require an extension to the due diligence period.



## Legal Requirements for Vapor Intrusion

**Q. How else might investigation of vapor intrusion be “legally required?”**

**A. In Illinois (and many other states), consideration of the vapor intrusion pathway is now specifically required to obtain closure of the site through an NFR/NFA Letter.**

On May 16, 2013, the Illinois Pollution Control Board added the indoor inhalation exposure route to Illinois EPA’s risk-based cleanup methodology called the Tiered Approach to Corrective Action Objectives, 35 Ill. Adm. Code 742 (TACO). These amendments were effective on July 15, 2013.

## Legal Requirements for Vapor Intrusion

- Thus, in Illinois while deciding to enroll a site into the state voluntary Site Remediation Program (SRP) is by definition “voluntary,” once that is done, it is “legally” required to address the indoor inhalation pathway in order to obtain an NFR Letter.
- Note that while the SRP itself is voluntary, commonly a sale/purchase agreement may obligate either buyer or seller to obtain an NFR Letter as part of the transaction. Therefore, there can also be a legal contractual obligation to consider the vapor intrusion pathway in order to fulfill a contractual commitment to obtain the NFR Letter.

## Legal Requirements for Vapor Intrusion

**Q.** So, speaking of NFR Letters, is my pre-2013 NFR Letter still “legally sufficient”?

**A.** Again, it depends on the definition of “legally.”

# Legal Requirements for Vapor Intrusion

- IEPA has indicated that in general, it has no intention of re-opening older NFR Letters on its own.
- So, technically a pre-2013 NFR letter is still ‘legally sufficient’ to provide all of the protections and benefits that are enumerated in the Illinois Environmental Protection Act and in the NFR Letter itself.

## Legal Requirements for Vapor Intrusion

- However, buyers need to beware that because pre-2013 NFR Letters were not required to consider vapor intrusion, such concerns may exist on the property.
- Thus, buyers are well-advised in the course of their due diligence not to blindly rely on a representation that “the property is fine because it has an NFR Letter.”

## Legal Issues for Vapor Intrusion – Closing the Deal

- Once a Vapor Intrusion (VI) problem is identified and investigated, what then?
- Typically such issues are more often identified and confronted in the context of a transaction, rather than an enforcement action.
- Typical Transactions:
  - Selling a property
  - Buying a property
  - Financing a property
  - Buying or selling a business that happens to include real property.

## Legal Issues for Vapor Intrusion – Closing the Deal

- Evaluating a VI problem / costs
- Cleanup before closing or after?
- Who will have the responsibility?
- Will an NFR/NFA Letter be obtained?
- How can you insure cleanup will be done?
- Escrows/holdbacks/baskets/caps
- Indemnities
- Insurance
- Vapor Mitigation

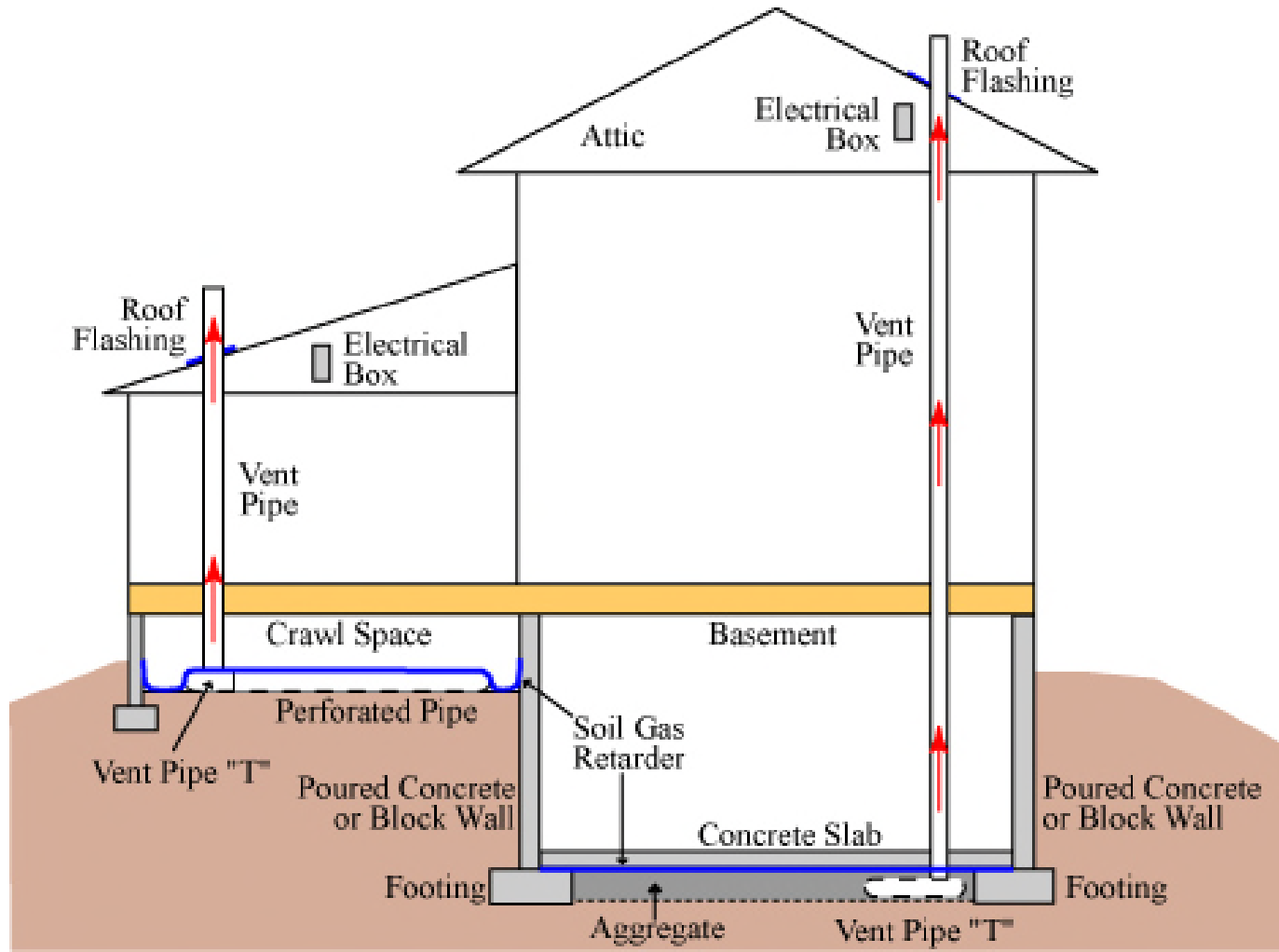
# Vapor Intrusion – Mitigation

## Passive Vapor Intrusion Mitigation Methods:

- Sealing openings involves filling in cracks in the floor slab and gaps around pipes and utility lines found in basement walls. Concrete can be poured over unfinished dirt floors.
- Installing vapor barriers involves placing sheets of “geomembrane” or strong plastic beneath a building to prevent vapor entry. Vapor barriers are best installed during building construction, but can be installed in existing buildings that have crawl spaces.
- Passive venting involves installing a venting layer beneath a building. Wind or the build-up of vapors causes vapors to move through the venting layer toward the sides of the building where it is vented outdoors. A venting layer can be installed prior to building construction as well as within existing buildings. It is usually used with a vapor barrier.

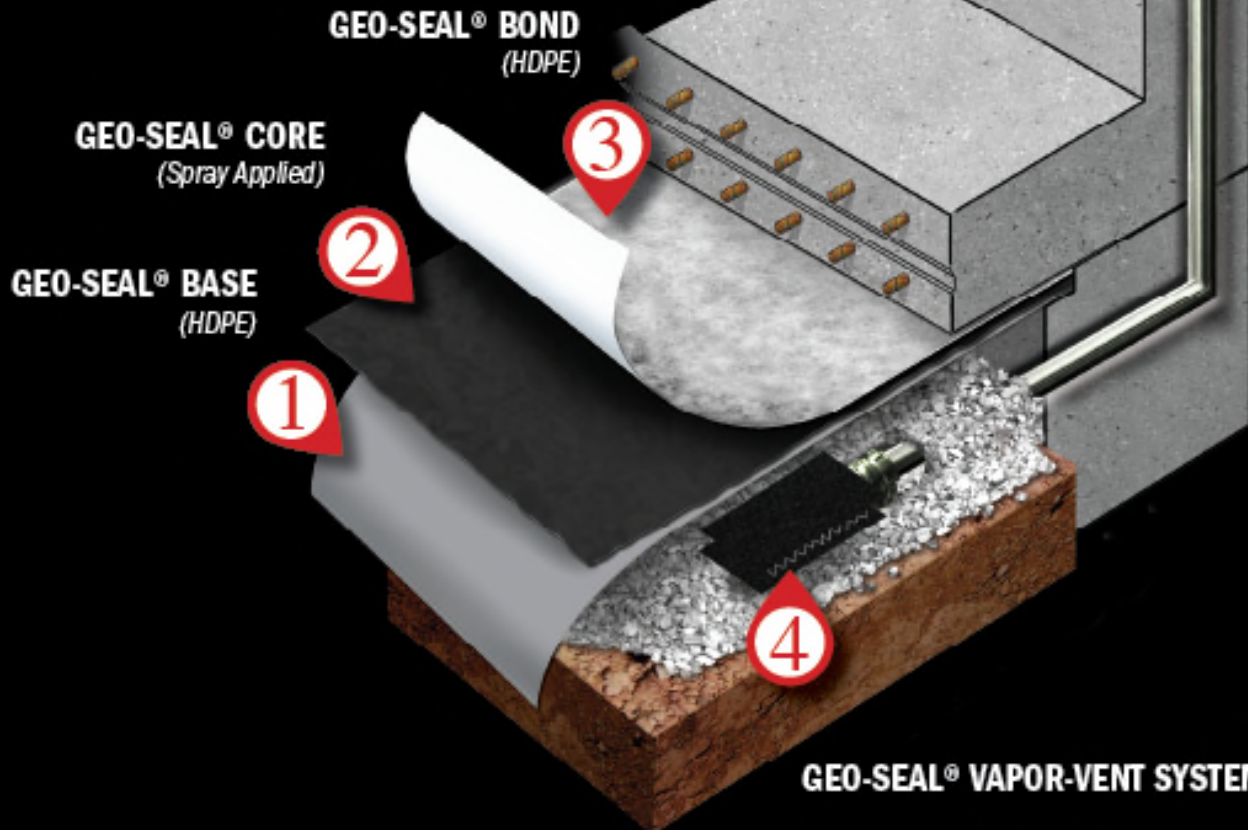


# Vapor Intrusion – Mitigation



# Geo-Seal<sup>®</sup>

Vapor Intrusion Barrier







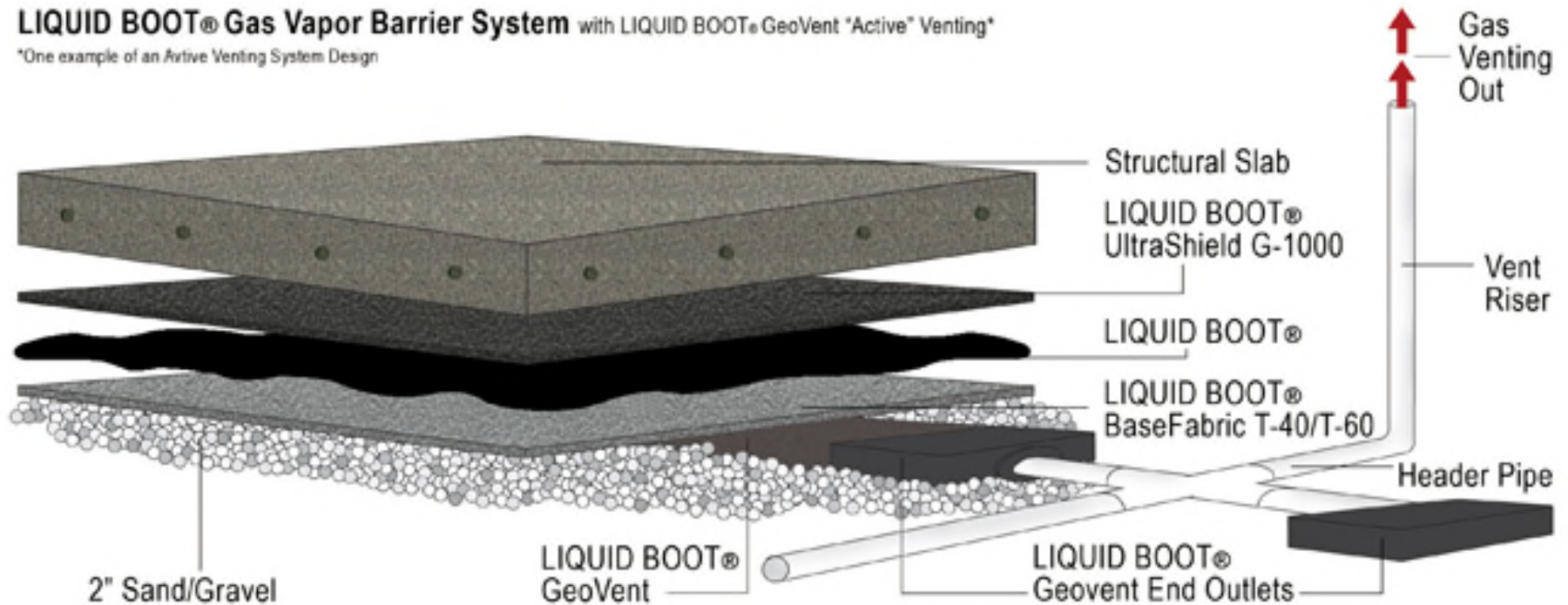






## LIQUID BOOT® Gas Vapor Barrier System with LIQUID BOOT® GeoVent "Active" Venting\*

\*One example of an Active Venting System Design









# Vapor Intrusion – Mitigation

## Active Vapor Intrusion Mitigation Methods:

- Sub-slab depressurization (SSD) involves connecting a blower (an electric fan) to a small suction pit(s) dug into the slab in order to vent vapors outdoors. (Most common method.)
- Building over-pressurization involves adjusting the building's heating, ventilation, and air-conditioning system to increase the pressure indoors relative to the sub-slab area. This method is typically used for office buildings and other large structures.

\*Note that active systems require ongoing operation and maintenance (O&M) costs.

# Typical fan and vent pipe





# Effect of the New IL Standard and Regulations

- Increasing General Awareness
- Sites closed using less strict cleanup standards due to groundwater ordinances/municipal setting may have a proportionally higher VI risk if re-opened
- Deal Delays and Timing Issues
  - VI issues can take longer to evaluate and resolve
  - VI can have seasonal fluctuations
  - If VI mitigation requires perpetual maintenance, when is site considered “closed” for purposes of indemnification agreements?
  - PR with tenants/residents or offsite company

# Effect of the New IL Standard and Regulations

- Increased environmental sensitivity for leased facilities with potential worker exposure risks from vapors.
- Alternative to sampling: Preemptive engineered solutions may be more cost effective and protective than uncertain sample results. May also reduce potential reporting requirements or risk of voiding 'no look provisions.'
- Consideration of preventative engineered barriers in new construction in the event of future risk exposure to vapor intrusion.

# Recent U.S. EPA Updates

- U.S. EPA continues to be active in refining and updating its vapor intrusion rules and technical guidance.
- U.S. EPA recently submitted a draft rule to the White House OMB focused on adding consideration of the vapor intrusion pathway to the Hazard ranking Scoring (HRS) system for National Priority List (NPL) Superfund Sites.
- U.S. EPA also recently published new technical guidance for performing vapor intrusion assessments:
  - “Technical Guide for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites,” EPA 510-R-15-001, June 2015
  - “OSWER Technical Guidance for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air,” OSWER Publication 9200.2-154, June 2015





***Thank You!***

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