

ASTM E 2600-08 Vapor Intrusion Standard: Experience in the U.S. Marketplace

by

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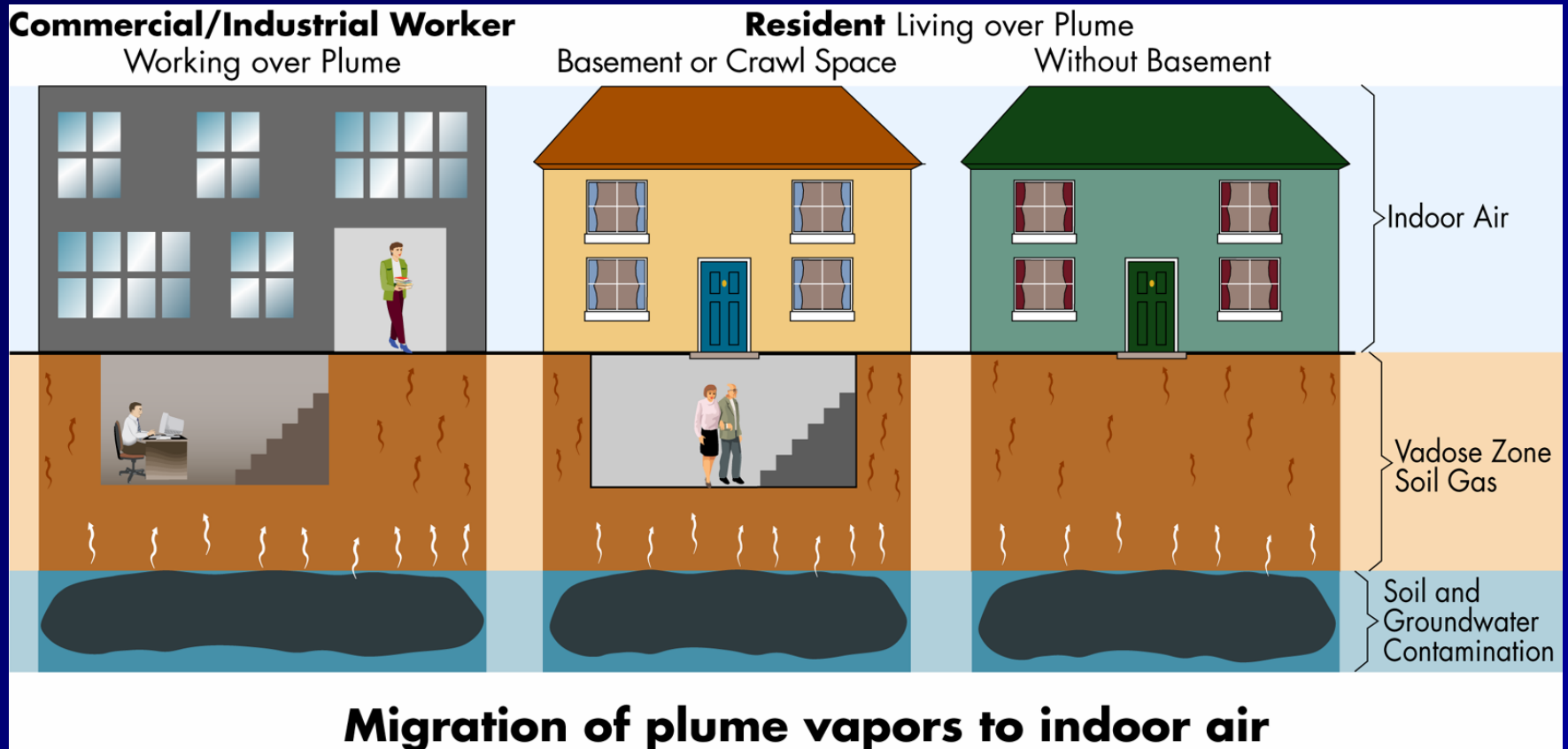
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Overview

- **What is VI**
- **Why did the industry need a standard**
- **What the ASTM Standard says**
- **Where should VI be considered**
- **Experience in the U.S. marketplace**
- **Conclusions**

What is vapor intrusion?





Why did the CRE industry need it?

Vapor Intrusion was fast becoming the next “hot” issue

- In 2002 EPA published VI guidance
- In 2004, 7 states had regulatory VI guidance
- In 2008, 26 states had regulatory VI guidance
- VI class action lawsuits escalating
- VI litigation against EPs escalating
- More and more states re-opening closed sites where the VI pathway was not considered
- EPA has made VI a priority

**The principal stakeholders in
commercial real estate transactions
now had concerns...**

Prospective Property Owners

- **Is VI covered in the Phase I scope of work?**
- **Could the site with an NFA be re-opened?**
(State regulators concerned about VI are re-opening previously closed sites and requiring further investigation)
- **Will tenants or employees be exposed?**
(Everyone wants to work in a safe environment)

Prospective Property Owners cont'd

- **Could there be future liability?** (*Numerous toxic tort suits, arising from tenants or other third parties, are already in the courts – Brown Group, Redfield, CO; IBM, Endicott, NY; GE, Fort Edward, NY, etc.*)
- **Can tenants use VI to break a lease?**
- **Could the property be de-valued due to VI stigma?**

Phase I Environmental Consultants

- **Is VI part of a traditional ASTM Phase I?** (*The ASTM E 1527 Phase I standard is not clear*)
- **For an AAI-compliant Phase I, must VI screening be included for a client to maintain all available defenses to CERCLA liability?** (*Phase Is are driven by CERCLA and CERCLA includes hazardous substance releases to soil, groundwater and air*)
- **Can EP be sued for not including VI screening in the Phase I?** (*Dozens of consultants have already been sued for not considering VI in their Phase I*)

Lenders

- Will VI cause an adverse impact on property (collateral) value?
- Will VI have a potential negative impact on borrower's creditworthiness and ability to repay loan?
- Will lender have potential foreclosure complications due to a possible VI problem on the property?

ASTM E 2600-08 Standard

- *First two tiers are SCREENING TIERS designed to identify if a potential vapor intrusion condition (pVIC) exists – the ASTM standard is prescriptive here*
- *Third tier is an INFORMATIONAL TIER identifying a “toolbox” of approaches to assess whether vapor intrusion results in an indoor air quality level that can threaten human health – the ASTM standard directs the user to follow appropriate and applicable government guidance and regulation*
- *Tier four is an INFORMATIONAL TIER identifying general mitigation alternatives– the ASTM standard leaves selection of a mitigation alternative, if any, up to the client*

ASTM E 2600-08 Standard cont'd

■ *Tier 1 Screening*

- Non-invasive
- Are there sources on or near the target property that may have an impact?

■ *Tier 2 Screening*

- Can be invasive or non-invasive
- Non-invasive: Does a review of state regulatory files suggest volatiles coming off the plume are close enough to a structure on the target property to adversely impact indoor air?
- Invasive: Does soil gas testing suggest volatiles coming off the plume can adversely impact indoor air?

ASTM E 2600-08 Standard cont'd

- Objective of the screening is to identify if a potential vapor intrusion condition exists
- If a potential problem is identified in the Tier 1/Tier 2 screening:
 - may proceed to further investigation (Tier 3) or
 - pre-emptive mitigation (Tier 4) or
 - other alternatives (such as “killing the deal” or adjusting deal terms)

ASTM E 2600-08 Standard cont'd

- **Pre-emptive mitigation**
 - **avoids time-consuming and expensive Tier 3 VI assessment**
 - **allows the deal to be closed by adjusting the sales price to reflect the cost of installing a mitigation system (aka asbestos)**
 - **state regulatory agencies not usually involved**

Experience in the Marketplace

Experience in the Marketplace

- Principle *driving forces* for clients to take action are *liability and business risk concerns*
- VI screening generally recommended by EPs when:
 - potential on-site volatile contamination
 - on-site historical risk factors, and/or
 - nearby sources of potential volatile contamination

Experience in the Marketplace cont'd

- **Principal on-site and nearby uses driving VI screening:**
 - **current or former gas stations**
 - **current or former dry cleaners**
 - **current or former industrial activity**
 - **brownfield properties**
 - **former MGP sites**
 - **chlorinated solvent use**

Experience in the Marketplace cont'd

- **Most clients proceed to Tier 2 if a pVIC encountered in Tier 1 – in only 1 out of 10 cases did a client back out of the deal**
- **If a pVIC is found in Tier 2,**
 - **half the time the client will proceed to Tier 3**
 - **in 1 out of 4 cases the client will back out of the deal**
 - **in 1 out of 5 cases the client will proceed to install pre-emptive mitigation**

Experience in the Marketplace cont'd

- Typical Tier 1 screening is \$100 - \$400 and usually involves less than 4 man-hours
- Typical Tier 2 non-invasive screening is between \$500 - \$1,000 and usually involves less than 16 man-hours

Conclusions

- **The standard identifies once and for all an industry-recognized methodology to screen for a potential vapor intrusion problem in a real estate transaction**
- **The standard does not conflict with any federal or state VI assessment guidance, policy or regulation**
- **The screening methodology is not expensive and can be completed within the typical due diligence timeframe of a real estate transaction**
- **If a potential problem is encountered, the standard lays out a methodology that will still enable the deal to be closed if the parties so desire**

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