

# Management Alert

## New Guidance on Measuring Vapor Intrusion Risk Adds Additional Uncertainty to Environmental Assessment Process

A new industry guidance document on conducting assessment of vapor intrusion into structures adds an additional layer of complexity to environmental assessments in real estate transactions and other efforts to get state-approved determinations that no additional remediation is required

The guidance document, Standard Practice for Assessment of Vapor Intrusion into Structures on Property Involved in Real Estate Transactions, Standard E 2600-08, was issued by ASTM on March 3, 2008 ("Standard E 2600"). ASTM is an organization that develops procedures that often become "industry standards." This voluntary standard describes a four-step process intended to determine whether a significant "vapor intrusion condition" exists or may exist on a property that is the subject of a pending real estate transaction.

"Vapor intrusion" occurs when vapor – gases – from soil or groundwater contamination infiltrate a building. The resulting buildup of gases within the structure can represent a health threat to building occupants and have become an issue of increasing concern to federal

and state environmental regulators. Standard E 2600 is designed to define good commercial and customary practice for conducting a vapor intrusion assessment on a property involved in a real estate transaction. The Standard E 2600 assessment may be used as a supplement to the standard Phase I Environmental Site Assessment (ASTM Standard E 1527-05) or as a stand-alone investigation.

The quandary now facing those conducting Phase I Environmental Site Assessments is whether or not to perform this additional investigation. As discussed below, it may be difficult to demonstrate that a vapor intrusion condition does not exist at a property, and so once this particular can of worms is opened, it may not be possible to re-close the can. Under the commonly used ASTM Standard for Environmental Site Assessments (ASTM Standard E 1527-05), indoor air quality (of which vapor intrusion is an aspect) is a "non-scope consideration" not included in the standard Phase I assessment. On the other hand, state environmental regulators in particular are becoming increasingly concerned about the potential risks associated with vapor intrusion, and some states, such

as Illinois, are considering mandating assessment of risk of vapor intrusion as part of voluntary cleanup efforts. In addition, the discovery of a vapor intrusion condition may impose disclosure obligations on the property owner.

ASTM Standard E 2600 divides the vapor intrusion assessment into four “tiers” that are conducted in a stepwise fashion. Tier I is an initial screening, using existing information and data, to the extent possible, to eliminate vapor intrusion as a concern. If conducted as part of a standard Phase I Environmental Site, no additional information needs to be gathered. The Tier I analysis attempts to identify any suspect contaminated sites within one-tenth of a mile (for petroleum hydrocarbons) or one-third of a mile (for other contaminants of concern) of the subject property or within one-half to one mile upgradient of the subject property. Unlike a standard Phase I assessment, the vapor intrusion assessment focuses not on the property to be acquired, but on nearby and especially upgradient properties from which a contaminated plume may be migrating toward the site or releasing vapors that migrate onto the site. If such contaminated sites exist, the assessment next determines whether any contaminated plume exists within 100 feet (30 feet if dissolved petroleum hydrocarbons) of the nearest existing or planned structure on the subject property (or the property boundary if no structures exist or are planned). Finally, the assessment also looks at proposed use of the subject property, types of chemicals suspected to be present, groundwater flow direction, characteristics of existing or planned structures, vapor conduits, cleanup status of the source of contamination, and other factors.

The key aspect of this standard is that the environmental professional must conclude either (1) that no “potential vapor intrusion” condition is likely to exist, or (2) that a “potential vapor intrusion condition” exists; *i.e.*, unless the environmental professional can rule out the potential for a vapor intrusion condition, the professional must conclude that a “potential” condition exists, and further analysis is therefore required in order to eliminate that possibility.

If the environmental professional concludes that no potential vapor intrusion condition exists, the analysis is over and no further investigation is required. Otherwise, Tier II of Standard E 2600 includes the following tasks: gathering additional site-specific information, including soil, soil gas, and groundwater samples, to determine whether the contaminated plume has reached the subject property, whether chemicals of concern exist in the contaminated plume in concentrations likely to impact the subject property in excess of “risk-based concentrations” (as determined by applicable federal or state law). Again, if there is insufficient data to conclude that concentrations of chemicals will not be present, then it is “presumed” that a potential vapor intrusion condition exists. This presumption that a potential vapor intrusion condition exists unless it can be disproved is a continuing theme of Standard E 2600 and thus puts pressure on the client to either continue the investigation or mitigate a condition that may or may not be present.

Unless the Tier II analysis concludes that no vapor intrusion condition is present, Tier III of Standard E 2600 recommends more intensive on-site sampling to determine whether a vapor intrusion condition exists.

Alternatively, the user may elect to conduct indoor air sampling of any existing structures in order to prepare a health risk assessment; this alternative approach is of course not possible if buildings do not yet exist on the site, or if the site will be redeveloped with different structures in different locations.

The final tier of Standard E 2600 recommends various mitigation methods that a property owner might implement in order to mitigate any vapor intrusion pathway, either through institutional or engineering controls (e.g., vapor barriers) to interrupt the vapor intrusion pathway, or the use of “inherently safe building design,” such as ventilated parking under office use or open air first floor parking under residential use.

In sum, this new industry standard adds an additional, though optional, level of analysis to the current Phase I environmental assessment process, an analysis that may prove difficult to bring to a rapid and definitive conclusion. Nevertheless, prospective purchasers of real estate must now decide whether or not to add consideration of vapor intrusion to their customary pre-purchase environmental assessment.

If you have any questions regarding this Management Alert, please contact the Seyfarth Shaw attorney with whom you work, or any Environmental Safety and Toxic Tort attorney on our website, [www.seyfarth.com](http://www.seyfarth.com).

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