

## *Phase I Environmental Site Assessments and Soil Vapor Intrusion*

*by James A. Vroman*

For a number of years, the U.S. EPA and a growing number of state environmental agencies have expressed concern about the potential risks that Soil Vapor Intrusion ("SVI") may pose to human health and the environment. Several recent studies have indicated that soil or groundwater beneath building foundations, or behind foundation walls, which contain volatile contaminants, such as solvents or semi-volatile organic compounds, may be a health risk to those who work in the structures or facilities that the foundations support. These studies have established that vapors from the contaminants in the soil or groundwater have the potential to penetrate, or "intrude," the concrete of the foundation and collect and accumulate within the facility. Some of these studies have indicated that soils impacted with volatile compounds at low concentrations that do not create a groundwater "pathway risk" or a risk to people who are in an open air environment outside of a facility may, nevertheless, be a source of SVI and indoor air contamination.

The concern over SVI has emerged over the last few years. Indeed, the U.S. EPA only issued a draft guidance for evaluating SVI to indoor air in November 2002. 67 Fed. Reg. 71, 169, 33 ER 2625, Dec. 6, 2002. Recently, in October of 2007, California enacted an amendment to its California Superfund Act which requires, among other things, that the state develop "reasonable maximum estimates of exposure to volatile organic compounds that may enter structures..." The Illinois Environmental Protection Agency is currently evaluating proposed SVI screening standards that it can incorporate into the regulations that govern Illinois' Voluntary Site Remediation Program.

In response to this growing regulatory concern over SVI, ASTM International, formerly known as the American Society for Testing and Materials, a voluntary standards development organization, on March 3, 2008, published a voluntary assessment protocol that environmental professionals can now use to evaluate the potential

at a property for indoor air contamination from SVI. The protocol, or standard, is known as ASTM E 2600, and it is to be a supplemental standard to the ASTM standard for performing a Phase I Environmental Site Assessment ("Phase I ESA") known as ASTM E 1527-05.

A party, typically a potential real estate buyer, or a lending institution for such a buyer, will retain an environmental professional to perform a Phase I ESA of the property to be acquired and the environmental professional will perform the Phase I ESA in accordance with the ASTM E 1527-05 standard. Such an assessment, however, did not include an evaluation of the potential risks of SVI. Indeed, until ASTM's promulgation of ASTM E 2600, the environmental professional had no industry-wide protocol to follow to evaluate the SVI potential that may exist at a property.

The evaluation process of ASTM E 2600 consists of four tiers. The first two levels are screening tiers, and the environmental professional

is to use them to evaluate the potential for SVI at a property. If the property has a low potential for SVI, the professional can so advise his/her client. If the risk for SVI is above the screening thresholds of the first two tiers, the professional and client should consider proceeding with tier three, which is a site-specific and comprehensive investigation of the property. The results of the investigation may lead to the implementation of tier four of the SVI assessment standard, which is to identify alternative mitigation measures that can be implemented to address the identified SVI risk.

ASTM did not incorporate its recently promulgated SVI assessment standard into its standard for a Phase I ESA. ASTM's assessment protocol for SVI is a supplement to the scope of a standard Phase I ESA. This means that a client will have to specifically request an

environmental professional, retained to perform a Phase I ESA, include an SVI assessment in the Phase I ESA, much as the client would do if he/she wanted the risks of mold, asbestos, or lead-based paint assessed.

The ASTM's decision to designate an SVI assessment under ASTM E 2600 as outside the scope of Phase I ESA performed under ASTM E 1527-05 raises an interesting question relating to the U.S. EPA's "All Appropriate Inquiry" rule. Under CERCLA, a buyer who discovers the property that he/she just purchased is contaminated may be able to avoid liability for the cleanup of the property if the party can establish that he/she is an "Innocent Landowner," i.e., someone who had no reason to know before acquiring title that the property was contaminated. To be an "Innocent Landowner," a buyer must have performed appropriate

due diligence on the property before acquiring title. The All Appropriate Inquiry rule specifies the nature of the assessment a party needs to perform to qualify as an Innocent Landowner. When the U.S. EPA promulgated its "All Appropriate Inquiry" rule, it explicitly represented that a Phase I ESA performed pursuant to ASTM E 1527-05 was an "All Appropriate Inquiry." See 40 C.F.R. Part 312. The question the Agency now must address is, can a Phase I ESA that does not include an SVI assessment qualify as an "All Appropriate Inquiry," particularly with the U.S. EPA's on-the-record determination that indoor air contamination from SVI can pose a risk to human health? The U.S. EPA was a member of the ASTM SVI task group and participated in the development of the SVI assessment protocol. A spokesperson for the U.S. EPA disclosed that the Agency has yet to review the final ASTM E 2600 standard.

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**For more information, please contact the following Jenner & Block attorney:**

**James A. Vroman**  
Partner  
Tel: 312 923-2836  
E-mail: [jvroman@jenner.com](mailto:jvroman@jenner.com)