

Sniffing Out Vapor Intrusion In Real Estate Deals

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In commercial real estate transactions, the preacquisition diligence process typically includes a review of potential environmental liabilities affecting the property. One issue that warrants close attention during environmental diligence is vapor intrusion. Understanding how vapor intrusion problems can impact your investment, and knowing how to manage and minimize the risks, is of paramount importance to the success of your deal.



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The term “vapor intrusion” refers to chemicals from contaminated soil or groundwater that evaporate and migrate through the air into a building above. Common sources of vapor forming chemicals include gas stations, dry cleaners and industrial facilities that use chlorinated solvents. In some cases, vapor intrusion may contribute to illness, odors or in rare cases, explosion. If vapor intrusion results in high concentrations of hazardous chemicals in indoor air, building occupants breathing in the chemicals may experience symptoms such as headaches or short-term memory lapses. There is a growing body of scientific research regarding the health risk of long-term exposure to hazardous chemicals in indoor air.

State and federal hazardous waste site cleanup programs have historically focused on soil and groundwater contamination. In recent years, environmental regulators have expanded their focus to vapor intrusion and its impact on human health. A variety of state and federal agencies have issued guidance specific to vapor intrusion. Vapor intrusion screening levels vary from jurisdiction to jurisdiction and there has been a proliferation of draft policies, raising significant questions regarding their application and enforcement. In some jurisdictions, vapor intrusion standards have become more stringent and regulators are seeking to reopen closed hazardous waste sites in order to assess potential vapor intrusion.

Recent publications by the American Society of Testing and Materials (ASTM) and the United States Environmental Protection Agency have attempted to address questions related to vapor intrusion. For purposes of environmental diligence, the November 2013 ASTM Standard E-1527-13, entitled “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process” expressly requires environmental professionals to consider potential impacts to indoor air caused by vapor migration. In the context of hazardous waste site cleanup, the EPA issued in June 2015 a “Technical Guidance for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air” and a companion “Technical Guidance for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites” (collectively, Technical Guidance) which recommend methods for

assessment and mitigation of vapor intrusion and include vapor intrusion screening levels.

Environmental Diligence Considerations

In order to qualify for liability protection under the Small Business Liability Relief and Brownfields Revitalization Act amendments to the Comprehensive Environmental Response, Compensation and Liability Act, prospective purchasers are required to conduct all appropriate inquiry into environmental conditions affecting real estate prior to acquisition and satisfy certain continuing obligations. The ASTM standard has been developed to satisfy the “all appropriate inquiry” standard under CERCLA. Although CERCLA does not directly apply to all transactions involving contaminated property, the ASTM Standard is the accepted standard of environmental diligence in the real estate industry.

The ASTM Standard requires an environmental professional conducting a Phase I Environmental Site Assessment to evaluate whether hazardous chemicals with the potential to form vapors may be present on or near a subject property. An initial evaluation is typically based on records of past and present chemical use, reported contamination, an inspection of buildings and an interview with the property manager. If the consultant identifies a source of vapor forming chemicals with potential to affect the property, a review of existing sampling data, if available, is advised.

For property with a potential vapor intrusion issue, the Technical Guidance provides a detailed framework for assessment of vapor intrusion, including collection of shallow groundwater, soil gas and indoor air data. However, the Technical Guidance is geared toward hazardous waste site cleanup and is not intended to apply to private parties conducting environmental diligence in the context of real estate transactions. Some of the Technical Guidance recommendations may be relevant to the diligence process, but many of the recommendations cannot be accomplished within the time constraints of a transaction. For example, the Technical Guidance recommends multiple rounds of sampling over a period of months or years to account for variable temperatures, weather and building conditions.

Limited data collection can be useful to rule out the possibility of vapor intrusion in the diligence context. If data collection is an option, prospective purchasers should work with an experienced environmental professional to develop an appropriate scope of work. Initial data collection may be accomplished in a period of weeks and include shallow groundwater, exterior soil gas or sub slab soil gas data. Data collection may involve coring through the floor of the building. It is generally not recommended to collect indoor air samples at the outset; weather conditions, the use of volatile chemicals in facility operations and the presence of volatile chemicals in building materials, furniture, carpets or paint can skew sampling results. In many transactions, data collection may not be feasible: a third party may deny access; the layout of the building may present physical constraints; or the seller may not agree to invasive testing or an extension of the diligence time period.

Mitigation Tools

If the possibility of vapor intrusion cannot be ruled out, engineering solutions are available to limit human exposure to potentially harmful vapors without addressing the underlying source of contamination. Mitigation measures may include sealing cracks in the building foundation, covering sumps, adjusting heat or ventilation, or installing a sub slab depressurization system (similar to a radon system) to prevent vapors from entering the building. Building owners should work with experienced professionals to design and install an appropriate system that takes into account building occupancy and structural considerations. Active mitigation measures such as a sub slab depressurization system require long-term operation and maintenance. For new construction, a sub slab vapor barrier may be

appropriate. As an alternative to extensive data collection, some property owners choose to undertake preemptive engineering measures.

In addition to practical engineering solutions, vapor intrusion risks can be managed by contractual risk allocation or environmental insurance. A purchaser can seek an indemnification from a seller with respect to existing environmental liabilities, including vapor intrusion. In some transactions, a specific representation regarding vapor intrusion may be appropriate. It is helpful to include references to indoor air and human health and safety in the environmental definitions in the purchase agreement.

Environmental insurance may be able to cover, among other things, the cost of assessment and mitigation of vapor intrusion, costs related to reopeners of closed hazardous waste sites and personal injury claims related to exposure to chemicals in indoor air caused by vapor intrusion.

Environmental Liability Considerations Specific to Vapor Intrusion

A Phase I Environmental Site Assessment may identify potential vapor intrusion risks affecting a property. However, the terms of a purchase agreement may limit a buyer's ability to complete a full assessment of potential vapor intrusion before closing. Prospective purchasers should be aware of the following liability issues specific to vapor intrusion:

- Environmental regulators may reopen a former hazardous waste site on or near the property and require the owner to assess or mitigate vapor intrusion. For example, the Department of Environmental Protection in Massachusetts has reviewed closure reports for over 1,000 TCE sites and identified approximately 200 sites for investigation of possible vapor intrusion. Even a property owner eligible for liability protection under CERCLA or state law would have a duty to cooperate with the investigation. It is unlikely that a property owner would be required to address underlying sources of contamination at a closed site; however, it is possible that a property owner could be required to install and maintain engineered controls to mitigate the impact of vapor intrusion.
- For properties with known vapor intrusion issues, institutional controls may apply. Examples of institutional controls include a deed notice with respect to contamination or an activity and use restriction. A restriction may require a property owner to operate a mitigation system and monitor indoor air.
- In order maintain eligibility for liability protection under CERCLA or other environmental statutes, a property owner may be required to comply with continuing obligations to mitigate environmental conditions. For example, a property owner may have a continuing obligation to operate and maintain a sub slab depressurization system, comply with information requests or provide notice to building occupants.
- The Technical Guidance and other regulatory standards require consideration of vapor intrusion risk related to future property use. Although vapor intrusion is not an immediate concern for undeveloped properties (since vapor forming chemicals are not migrating into a building and affecting indoor air inhaled by building occupants), vapor intrusion could impact future development plans. Engineered controls can be incorporated into building design.

- For industrial facilities, the use of vapor forming chemicals in manufacturing operations may complicate the assessment of vapor intrusion. It may be difficult to determine whether chemicals in indoor air originate from subsurface contamination or facility operations. The vapor intrusion screening limits in the Technical Guidance are more stringent than the occupational exposure standards established by the Occupational Safety and Health Administration, raising property-specific questions regarding the applicable standard.
- If vapor intrusion is a concern, the diligence process should include a request for information regarding air quality complaints from building occupants.

Conclusion

Prospective purchasers of commercial real estate should be sure to consider vapor intrusion during environmental diligence. If vapor intrusion is identified, the engineered solutions can be installed to prevent vapors from entering the building or reduce vapors to acceptable levels. These engineered controls must be operated and maintained over time. If the possibility of vapor intrusion is suspected but not confirmed, engineered controls can be installed as a preemptive measure. Prospective purchases can also seek to allocate the potential liabilities of vapor intrusion to the seller. Finally, environmental insurance may be available to manage the risk of vapor intrusion and other environmental liabilities.

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