

INSIGHTS

The Necessity of Evaluating Vapor Intrusion Risks during Environmental Due Diligence

Publications

Lesley A. Firestone

Association of Corporate Counsel

02.2019

Introduction

Vapor intrusion has emerged as an important legal, scientific, and policy issue over the last decade.[1] With this issue's growing importance, it is prudent for persons acquiring, leasing, or developing property to include an assessment of vapor intrusion risks into their environmental due diligence process and properly address any identified vapor condition. Property owners may face significant repercussions for the failure to identify the presence of and mitigate environmental and health risks associated with vapor intrusion. In addition to the loss of certain liability protections, landowners of contaminated properties will see a decline in property value along with a diminished use of the property.[2] The cost of retaining knowledgeable professionals, such as an environmental lawyer and consultant, to conduct a vapor intrusion analysis during the due diligence period is a slight price to pay when considering the decreased property value and potential liability under state and federal statutes.

- What is vapor intrusion?

Vapor intrusion is the migration of vapor forming chemicals from any subsurface source into an overlying building.[3] Volatile chemicals or petroleum products that are spilled or leaked from underground storage tanks can create off gases or vapors that can permeate the inside of buildings, such as office buildings, schools, and residences.[4] These vapors can infiltrate buildings by moving through the soil and seeping through cracks in the building's floor or walls, sewer lines, or other openings.[5] Gasoline, diesel fuel, dry cleaning solvents, and industrial de-greasers are the most commonly used products that cause vapor intrusion.[6] Individuals considering the purchase of current and former dry cleaners, gas stations, auto repair facilities, businesses that use solvents for degreasing or washing parts, landfills, and former gas plants should be especially cautious when undergoing due diligence because these properties pose the greatest risk of vapor intrusion.[7]

Vapor intrusion can pose a variety of health risks to a building's occupants. The severity of risk is dependent on a number of factors, including the type and concentration of chemicals, length of exposure, and the health condition(s) of the individual exposed.[8] Symptoms from acute exposure to vapor intrusion include minor discomfort from irritation of their eyes and respiratory

THE NECESSITY OF EVALUATING VAPOR INTRUSION RISKS DURING ENVIRONMENTAL DUE DILIGENCE

system, headaches, and nausea.[1] However, prolonged inhalation of chemical vapors over the course of several years may increase an individual's risk for cancer or other chronic disease.[2] In this context, it is important to mention that these vapors are typically odorless and undetectable without special testing equipment.

- Regulatory Framework

In 2002, the EPA published draft guidance regarding vapor intrusion, which was to act as a policy recommendation as to whether the vapor intrusion pathway posed an unacceptable health risk. This draft guidance remained in effect until 2015, when the EPA issued its final Technical Guide on vapor intrusion.[3] The Technical Guide represents thirteen-years of increased knowledge and understanding that enables the EPA to better evaluate and mitigate the vapor intrusion risks associated with the release of hazardous substances and chemicals. Additionally, the EPA added vapor intrusion to its Hazard Ranking System in 2017, which is a scoring system that the EPA utilizes to determine whether a site is eligible for inclusion on the National Priorities List.

Forty-two states and the District of Columbia have laws or regulations that incorporate requirements for the sampling of soil vapor to detect the presence of organic and manmade chemicals in the vapor intrusion pathway.[4] However, only twenty-seven states have issued guidance or passed standalone laws that address soil vapor intrusion.[5] While South Carolina has yet to pass any law that specifically addresses vapor intrusion, the Department of Health and Environmental Control has published a guidance document titled "Risk-Based Corrective Action for Petroleum Releases," to assist owners and operators of underground storage tanks to take corrective actions following the release of petroleum and related products.[6]

- Legal Framework

While a growing number of states are increasingly passing legislation to protect the environment, federal laws still have the potential to impose the greatest liability for the owners of, or those responsible for the release of hazardous substances. Liability for damages resulting from vapor intrusion may be imposed by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, commonly known as "Superfund" or "CERCLA,"[7] and the Resource Conservation and Recovery Act of 1976, commonly known as "RCRA"[8]. The Toxic Substances Control Act may also be a source of liability for properties contaminated with polychlorinated biphenyls.[9] This article will only focus on CERCLA liability, however, it is important to

understand that vapor intrusion conditions may also present risks and liabilities under other federal statutes, along with state and common law causes of action.

- CERCLA Liability

CERCLA authorizes the United States and private parties to initiate actions against a current or past owner or operator of a contaminated property for costs associated with its cleanup.[1] There are few statutory protections or defenses absolving property owners of liability because congress intended CERCLA to serve as a strong and powerful tool for state and federal governments to force the cleanup of toxic waste dump sites throughout the country.[2] However, amendments made in 2002 created certain "landowner liability protections" for property owners who meet specific statutory criteria.[3] A landowner must conduct what is

THE NECESSITY OF EVALUATING VAPOR INTRUSION RISKS DURING ENVIRONMENTAL DUE DILIGENCE

referred to as an “all appropriate inquiry” (“AAI”) in order to qualify for the defense of: (1) innocent landowner; (2) bona fide prospective purchaser; or (3) contiguous property owner.

- Evaluation of Vapor Intrusion Conditions During the Due Diligence Process

The AAI rule provides that a Phase I Environmental Site Assessment (“ESA”) prepared in accordance with American Standard for Testing and Materials (“ASTM”) Standard E1527-13[4] may be used to satisfy the statutory requirements for conducting AAI. ASTM Standard E1527-13 requires environmental consultants to assess the real or potential occurrence of vapor migration, which occurs when vapors from an on-site or off-site contaminant source impact the subsurface of the subject property.[5] Thus, in order to qualify for landowner liability protections under CERCLA, owners must evaluate vapor migration risks in a Phase I ESA.

Prior ASTM Standards were unclear whether a vapor migration risk assessment was necessary for a Phase I ESA, and Phase I ESA reports typically did not include such an assessment unless the client specifically requested it. This is important to note for lenders and owners who may have received a “clean” Phase I ESA report in the past under the old ASTM Standards. Now when loans are refinanced or a new Phase I ESA report is issued, landowners may come to learn that the soil on their property has concentration levels of contaminants that exceed screening levels for vapor intrusion.

If the findings of a Phase I ESA identify potential vapor intrusion concerns, Phase II testing may be needed in order to determine whether a potentially dangerous vapor condition exists. Because every property is unique, the scope and extent of the Phase II testing will vary depending on the on-site structure(s) and geography of the property. However, Phase II testing may incorporate indoor air quality sampling, subsurface soil borings, or the collection and analysis of soil gas samples on an undeveloped property or beneath an existing floor slab on a developed

property. Vapor conditions discovered during environmental due diligence may trigger “continuing obligations” and “reasonable steps” for the new landowner under CERCLA.

- Vapor Intrusion Post-Purchase Steps

CERCLA requires landowners to take certain post-purchase steps in order to maintain landowner liability protections, including taking “reasonable steps” to stop any continuing release, prevent any threatened future release, and prevent or limit exposure to contamination discovered on the property.[1] “Reasonable steps” in regard to an identified vapor condition on a property may include the installation and maintenance of mitigation measures to safeguard building occupants from vapors that would otherwise enter the building. The failure to take these “reasonable steps” may result in the loss of landowner liability protections afforded under CERCLA.

There are several vapor intrusion mitigation options available for existing buildings. However, implementing a vapor intrusion mitigation plan during construction is typically easier and more cost-effective than retrofitting an existing building. Vapor mitigation options for new construction include the installation of vapor barriers underneath the building; designing the building in a podium-style manner to limit the exposure of occupants on lower floors; installation of active or passive sub-slab depressurization systems to create a negative pressure environment beneath building floor slabs in order to keep unacceptable levels of vapor

THE NECESSITY OF EVALUATING VAPOR INTRUSION RISKS DURING ENVIRONMENTAL DUE DILIGENCE

contaminants out of the building; or the installation of a soil vapor extraction system to remediate the source of contaminants. Options to mitigate the risk of vapor intrusion for existing buildings may include sealing cracks in floors or walls of the building, installing indoor air vapor mitigation systems, or in extreme cases, replacing the slab or installing liners.

- Closing Remarks

Individuals considering the purchase of certain properties must take into account the potential liability associated with vapor intrusion when undergoing due diligence. Failure to do so exposes the buyer to potential cleanup costs, as well as the likelihood that the property's use and value will significantly decrease. Perhaps most importantly though, evaluation of the risks posed by vapor intrusion is critical to ensure the safety of the residents, employees, or school children who may occupy the building. Vapor intrusion is a complex issue with significant consequences if not handled correctly. As such, it is important to consult an environmental attorney in order to successfully navigate the due diligence process in an effort to minimize potential liability of buyers or current owners for vapor intrusion conditions.