

Vapor Intrusion: A Game Changer For Environmental Due Diligence And Environmental Liability



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Think that old Phase 1 will be enough to protect your client from vapor intrusion claims? Think again.

IN 2004, a publicly traded company acquired a regional drug store chain that owned a strip mall in Bozeman, Montana. The mall had been placed on the state superfund because of a release of dry cleaning solvents that had escaped from leaky sewers beneath the mall. The contamination was not believed to pose a risk because the groundwater was not used for drinking water. After the transaction closed, the buyer learned that the contaminated groundwater had migrated several miles and that the 21-year-old spill now posed a threat of vapor intrusion in a large residential neighborhood. The buyer is now implementing vapor intrusion assessment and abatement activities pursuant to a state order.

In another case, the purchaser of a shopping mall lost its financing when a state environmental agency withdrew a no further action letter after learning that contaminated vapors were detected in tenant spaces of a mall.

In Las Vegas, another dry cleaner plume migrated 4,000 feet into a residential neighborhood and the owner of the mall where the dry cleaner was formerly located was ordered by a federal court to implement remedial measures and now faces toxic tort lawsuits from the residents.

In northern California, homes that were constructed near the site of a former semiconductor manufacturer sold for a \$300,000 discount because of concerns of vapor intrusion migrating up from contaminated groundwater.

In Pennsylvania, local officials delayed granting a certificate of occupancy to a developer who constructed a college dormitory on the site of a former gas station until the developer completed a vapor intrusion assessment and installed a sub-slab venting system.

These examples illustrate how vapor intrusion has become one of the most important environmental issues facing property owners. Not surprisingly, the pace of lawsuits involving vapor intrusion has been greatly accelerating. Indeed, in many lawsuits, the vapor intrusion pathway is the only basis for the lawsuit because the plaintiffs are not using contaminated groundwater for potable purposes and are not otherwise exposed to contaminated soils. Similarly, evidence of a completed vapor intrusion pathway is allowing the plaintiffs to survive motions to dismiss common law claims.

This article will review legal and regulatory developments in recent years with respect to vapor intrusion and provide some practical suggestions for addressing and anticipating potential vapor intrusion concerns.

BACKGROUND • During the 1990s, federal and state remedial programs moved away from requiring that all contaminants be removed from sites and began to implement risk-based cleanups that focused on potential risks resulting from exposure to contaminants in soil and groundwater for the anticipated land use. Under this approach, the soil cleanup standards adopted were developed using direct exposure to soil or effects on drinking water. If the soil was covered or groundwater was not used for drinking purposes, the remedial programs would frequently allow residual contamination to remain at the site, provided adequate engineering

and institutional controls were established to prevent unacceptable human exposures.

Now regulators are realizing that the contamination remaining at many of these closed sites may be posing a risk of vapor intrusion. Responsible parties who thought they had completed remediation at sites and received no further action letters are now finding themselves subject to additional investigation and remedial obligations. At sites currently undergoing remediation, the potential for vapor intrusion is causing regulators to insist on more stringent cleanups or forcing developers to incorporate vapor abatement measures into building designs.

The Old Approach: Focus On Acute Or Short-Term Buildup

Concern over the potential migration of gases into buildings is not new. For decades, developers have had to address potential health and safety dangers posed by acute or short-term buildup of explosive or flammable vapors in buildings in certain locations as well as less dangerous levels that resulted in odor or aesthetic complaints. For example, if a structure was to be located in an area where methane gas was prevalent or to be constructed at or near a former municipal solid waste landfill where methane gas might be generated, the developer would determine if there was a potential for the methane gas concentrations to infiltrate a building and reach its lower explosive limit (LEL) of five percent. If there was a potential for methane gas concentrations to enter a building and approach the LEL, the builder would incorporate design features into the building to prevent accumulation of methane gas. Similarly, if floating petroleum fuel near a building posed a risk of flammable vapors, or began entering a building from a rising water table, the developer would implement emergency response measures to mitigate the risk of flammable vapors accumulating in the building.

The New Approach: Focus On Chronic Or Long-Term Exposure

What is different and challenging about the vapor intrusion is that it involves risks not from acute exposure but from chronic or long-term exposure to extremely low levels of contaminants that are usually below detectable odor thresholds. (It is commonly believed that humans should be able to smell odors at sites with petroleum-contaminated sites before dangerous levels of benzene vapors can accumulate in a building. In contrast, vapors of chlorinated solvents can generally exceed health-based action levels for indoor without being detected by human olfactory senses.) The low levels of contaminants are difficult to sample because the action thresholds approach laboratory detection limits. Even when the presence of vapors can be accurately sampled, it can be difficult to distinguish vapors attributable to sub-surface contamination from background levels resulting from natural sources or from chemicals commonly used in buildings and workplaces, combustion of fossil fuels for heating purposes, and even air pollutants in the ambient or outside air. The sites that pose the greatest risk of vapor intrusion include current and former dry cleaners, current and former gas stations, auto repair shops, businesses that used solvents for degreasing or parts washers, landfills, and former gas plants.

The Problem: An Unpleasant Surprise

Further exacerbating the problem for owners and lenders is that Phase 1 reports have not customarily evaluated the vapor intrusion pathway unless specifically requested by the client. As a result, when loans became due for refinancing or new Phase 1 reports are issued, property owners are discovering that properties that may have received “clean” Phase 1 reports in the past or what were previously thought to have low levels of soil contamination may now exceed the screening levels for vapor intrusion. In such instances, properties will

now have to undergo a vapor intrusion assessment or implement vapor intrusion mitigation.

Statutory And Common Law Basis For Vapor Intrusion

The principal statutory sources of liability for vapor intrusion are the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. §9601 et seq.; the Resource Conservation and Recovery Act (RCRA) 42 U.S.C. §6901 et seq.; and to a lesser extent the Toxic Substances Control Act, 15 U.S.C. §2501 et seq., for sites contaminated with polychlorinated biphenyls (PCBs). Traditional common law claims are also available even when cleanups are underway or may have been completed but residual contamination has been allowed to remain.

CERCLA • CERCLA imposes liability on four categories of potentially responsible parties (PRPs). To establish liability under CERCLA, a plaintiff must show that there has been: (1) a release of (2) a hazardous substance (3) from a facility that (4) has resulted in the response costs that were incurred consistent with the National Contingency Plan (NCP).

“Release” Encompasses Vapor Intrusion

Courts broadly interpret the term “release” so that, for example, it may not only include the initial discharge of volatile organic compounds (VOCs) from a dry cleaner but also the subsequent escape of the liquid VOCs through cracks in sewer system as well as the migration of contaminated vapors from hazardous substances located in the subsurface soil or groundwater into a building. *See Westfarm Associates Ltd. v. Washington Suburban Sanitary Comm’n*, 66 F.3d 669 (4th Cir. 1995), *cert denied*, 517 U.S. 1103 (1996) (PCE leaking or leaching through); *Amoco Oil Co. v. Borden, Inc.*, 889 F.2d 664 (5th Cir. 1989) (radon gas); *Castaic Lake Water Agency v. Whittaker Corp.*, 272 F. Supp. 2d 1053 (C.D.Cal. 2003); *U.S. v. A & N Cleaners and Launderers, Inc.*, 854 F. Supp. 229 (S.D.

N.Y. 1994); *Lincoln Properties Ltd. v. Higgins*, 823 F. Supp. 1528 (E.D. Cal. 1992).

“Facility” Encompasses Areas Into Which Vapors Migrate

Since a CERCLA “facility” includes any area where hazardous substances have “come to be located,” a CERCLA “facility” may include buildings where contaminated vapors are migrating. For example, where there has been a release at a dry cleaner and vapors from that release are migrating into an adjacent building either through the soil gas or upwards from groundwater that has migrated beneath an adjacent building, the source of the contamination and the adjacent building that has been impacted by the release would all be considered a facility for purposes of CERCLA liability. *Lincoln Properties*, supra.

Likewise, to the extent that there is a release into environmental media and the vapors from that release migrate into a building and present a risk to “human health or welfare or the environment,” the costs incurred to investigate and address a vapor intrusion condition may qualify as “costs of response.” 42 U.S.C. §9601(23)-(25).

In such scenarios, the current owners could also be responsible for abating hazards posed by the contamination beneath the building. Likewise, the dry cleaner operator and persons who had “authority over the operation and management” of the dry cleaning business could be liable as CERCLA operators. In some instances, this could include property managers and sublessors if they exercise day-to-day control of the equipment causing the release, or are otherwise responsible for operating the heating or ventilation system of a building that cause or facilitate a vapor intrusion condition. *See U.S. v. A & N Cleaners and Launderers, Inc.*, 788 F. Supp. 1317 (S.D. N.Y. 1992) (lender exercised control by assuming responsibility for maintenance and repair of property).

Possible Defenses

An owner or operator of contaminated property may try to avoid CERCLA liability by asserting one of the CERCLA affirmative defenses (collectively referred to as the “Landowner Liability Protections”), such as:

- The third-party defense, 42 U.S.C. §9607(b)(3);
- The innocent landowner (ILO) defense, 42 U.S.C. §9601(35)(A);
- The bona fide prospective purchaser (BFPP) defense, 42 U.S.C. §9601(40); and
- The contiguous property owner (CPO) defense, 42 U.S.C. §9607(q).

The Third-Party Defense

To assert the third-party defense, a defendant must establish that:

- The release was caused solely by a third party;
- The third party was not an employee or agent of the defendant, or did not otherwise have a direct or indirect contractual relationship to the defendant;
- The defendant exercised due care with respect to the hazardous substances; and
- The defendant took precautions against foreseeable acts or omissions of the third party.

See State of New York v. Lashins Arcade Co., 91 F.3d 353 (2d Cir. 1996).

Like the due care requirement, the precautionary requirement will be evaluated on a case-by-case basis. In one case, a municipal sewer authority was found to have failed to take adequate precautions when it knew that a dry cleaner discharged perchloroethylene (PCE) into the sewer system and that there were cracks in its sewer pipes even though it had the power to abate the foreseeable releases of PCE. *Westfarm Associates*, supra (despite this knowledge, the county did not repair its pipes or prohibit the discharge of PCE into its system). The third-party defense case law suggests that owners and

occupiers of property concerned about potential CERCLA liability may have to take some action to eliminate or mitigate human exposures to vapor intrusion conditions. Moreover, if the subsequent property owner or lessee fails to monitor or maintain engineering controls designed to eliminate the vapor intrusion pathway, this omission could constitute failing to exercise due care regarding the contaminants at the site. *A & N Cleaners*, supra.

ILO Defense

The ILO defense excludes from the definition of “contractual relationship” a person who, at the time he or she acquired the facility, did not know and had no reason to know that any hazardous substance that is the subject of the release or threatened release was disposed of on, in, or at the facility. 42 U.S.C. §9601(35)(A). To establish that it did not know nor had no reason to know of the contamination, a defendant must demonstrate that it conducted “all appropriate inquiries” (AAI). 42 U.S.C. §9601(35)(B). The EPA promulgated its AAI rule on November 1, 2005, *Standards and Practices for All Appropriate Inquiries*, 70 Fed. Reg. 66,069 (Nov. 1, 2005). The ASTM E1527-05 Phase 1 Standards satisfy the AAI requirement. Because the innocent purchaser defense is technically a part of the third-party defense, a landowner would still have to satisfy the due care and precautionary elements of the third-party defense. *Kerr-McGee Chem. Corp. v. Lefton Iron & Metal Co.*, 14 F.3d 321 (7th Cir. 1994). In addition, the landowner must demonstrate that it exercised appropriate care by taking reasonable steps to stop any continuing release, prevent any threatened future release, and prevent or limit any human, environmental, or natural resource exposure to previously released hazardous substances (continuing obligations). 42 U.S.C. §9601(35)(B)(i)(II).

BFPP And CPO Defenses

The BFPP liability protection applies to purchasers (and their tenants) that acquired ownership

or possession of property after January 11, 2002. A person may knowingly acquire contaminated property under the BFPP defense if it conducts AAI acquisition and complies with its continuing obligations. 42 U.S.C. §9601(40)(D). Owners or operators of properties impacted by an off-site source of VOCs might be able to assert the CPO if they can establish that as a result of conducting AAI, they did not know or have reason to know that the property was or could be contaminated as well as complying with continuing obligations.

What Constitutes “Due Care”?

CERCLA does not indicate what types of actions would constitute the exercise of “due care” that would satisfy the third-party defense. The legislative history indicates that a person must demonstrate that its actions were consistent with those that a “reasonable and prudent person would have taken in light of all relevant facts and circumstances.” H.R. Rep. No. 96-1016, pt.1, at 34 (1980), *reprinted in* 1980 U.S.C.C.A.N. 6119, 6137. The due care requirement has been interpreted to include “those steps necessary to protect the public from a health or environmental threat.” *Lashins Arcade*, supra. Because a person’s actions will be evaluated based on the “relevant facts and circumstances,” the due care analysis is a fact-intensive inquiry and will be evaluated on a case-by-case basis. *Foster v. U.S.*, 922 F. Supp. 642 (D.D.C. 1996); *Lashins Arcade*, supra. In one case, the owner of a shopping center was able to demonstrate that it exercised due care because it took steps such as maintaining water filters, sampling drinking water, instructing tenants to avoid discharging into the septic system, inserting use restrictions into leases and conducting periodic inspections. *Lashins Arcade*, supra, 91 F.3d 353; For other examples of owners who were held to have exercised due care, see *Lincoln Properties*, supra; *In re Sterling Steel Treating, Inc.*, 94 B.R. 924 (Bankr. E.D. Mich. 1989). At the other extreme are the cases that hold that a person who does not take any affirma-

tive measures will not be able to satisfy its due care obligations. *See Kerr-McGee*, supra, (7th Cir. 1994); *U.S. v. DiBiase Salem Realty Trust*, 1993 WL 729662 (D. Mass. Nov. 19, 1993). Some courts have even held that the failure to inquire about past environmental practices may constitute a lack of due care on the grounds that Congress intended CERCLA to provide incentives for private parties to investigate potential sources of contamination and initiate remediation efforts. *U.S. v. A & N Cleaners and Launderers*, 842 F. Supp. 1543 (S.D.N.Y. 1994) (failure to inquire about past use of floor drain, not communicating with local environmental authorities or inquiring about environmental compliance of commercial tenants). Other courts have held that CERCLA “does not sanction willful or negligent blindness.” *Westfarm Associates*, supra; *U.S. v. Monsanto*, 858 F.2d 160 (4th Cir. 1988), cert. denied, 490 U.S. 1106 (1989); *New York v. Shore Realty*, 759 F.2d 1032 (2d Cir. 1985).

Under its 2003 Common Elements Guidance, *Interim Guidance Regarding Criteria Landowners Must Meet In Order to Qualify for the Bona Fide Prospective Purchaser, Contiguous Property Owner or Innocent Landowner Limitations on CERCLA Liability* (“Common Elements”), Memorandum from Susan E. Bromm, Director of Site Remediation Enforcement, U.S. EPA, March 6, 2003 (available at www.epa.gov/compliance/resources/policies/cleanup/superfund/common-elem-guide.pdf), the EPA indicated that the “due care” case law of the CERCLA third-party defense provides a reference point for evaluating the “reasonable steps” requirement. The guidance goes on to state that when examining the due care requirement in the context of the ILO defense, courts have generally concluded that a landowner should take some positive or affirmative steps when confronted with hazardous substances on its property.

Based on the foregoing, it would appear that an owner or operator would have to show that it exercised “due care” or “appropriate care” with respect to the vapor intrusion condition to be able

to assert one of the CERCLA Landowner Liability Protections. This would probably include taking some form of abatement actions to eliminate the vapor intrusion pathway.

RCRA • RCRA established a comprehensive program for managing the generation, transportation, and disposal of hazardous wastes. A material may be regulated as a RCRA hazardous waste if either the EPA lists the waste as a hazardous waste or if it exhibits one of the four RCRA hazardous waste characteristics. 40 C.F.R. §261.20; *see also* www.epa.gov/osw/hazard/wastetypes/characteristic.htm. The EPA has listed chlorinated VOCs such as tetrachloroethylene (TCE) and PCE as hazardous wastes. 40 C.F.R. §261.31.

“Spent Materials”

The definition of hazardous waste extends to “spent materials.” 40 C.F.R. §261.1(c)(1). Spent material is defined as “any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing.” *Id.* Raw materials or products that are not initially regulated as hazardous wastes may become hazardous wastes if they are discarded, 40 C.F.R. §261.2(a)(2)(i), or abandoned, 40 C.F.R. §261.2(b), 261.2(a)(2)(i). Thus, PCE product discharged from a dry cleaner into soil or groundwater has been found to be “discarded” and therefore a hazardous waste. *Lincoln Properties Ltd. v Higgins*, 1993 U.S. Dist. LEXIS 1251 (E.D. Cal. 1993). The typical dry cleaning facility generates three type of aqueous wastes: condensation from PCE recovery during the normal drying cycle of fabrics; condensation from the PCE distillation recovery; and condensation from steam stripping of PCE from filter cartridges. The EPA has determined that the last two waste streams are hazardous wastes under 40 C.F.R. 261.3(c)(2)(i) because these are residues derived from the treatment of listed hazardous wastes F002 (spent solvents). The first wastewater stream

may be regulated as a hazardous waste if it exhibits a hazardous waste characteristic. Letter of Matthew Straus to John Skoufis, March 6, 1987 (available at www.epa.gov/epawaste/inforesources/online/index.htm). Under the same analysis, petroleum product that escapes from an underground storage tank has also been held to be discarded and considered a hazardous waste.

Vapor intrusion conditions associated with discharges or disposal of hazardous wastes may be addressed under a variety of RCRA authorities including corrective action requirements for:

- Permitted facilities, 42 U.S.C. §6924 (u) and (v);
- Non-permitted facilities, 42 U.S.C. §6928(h);
- Petroleum releases from underground storage tanks and other regulated units, 40 C.F.R. 264.111 and 265.111.

Additionally, RCRA provides for injunctive orders, 42 U.S.C. §6973, and citizen suits, 42 U.S.C. §6972.

Section 7002 Actions

To date, though, the principal form of vapor intrusion RCRA liability for owners and operators of sites with releases of VOCs has been RCRA section 7002. This section allows plaintiffs to seek injunctive relief against any person who has contributed or is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid waste or hazardous waste that may pose an imminent and substantial endangerment. Since section 7002 refers to human health and the environment, a plaintiff may not be required to demonstrate peril to human health but simply show that there is an imminent and substantial endangerment to the environment.

Imminent And Substantial Endangerment

Some courts have held that the mere presence of contaminants in groundwater above state clean-up levels may be enough to establish an imminent and substantial endangerment. In those jurisdic-

tions, elevated levels of PCE in groundwater may be sufficient to establish the existence of an imminent and substantial endangerment. Other courts, though, have found that contamination at concentrations exceeding the maximum contaminant levels (MCLs) is insufficient to prevail on a summary judgment motion. *Acme Printing Ink Co. v. Menard*, 870 F. Supp. 1465 (E.D. Wis. 1994); *Orange Env't, Inc. v. County of Orange*, 860 F. Supp. 1003 (S.D.N.Y. 1994). In most instances, an imminent and substantial endangerment finding is a fact-intensive inquiry that will depend on specific-site conditions.

One of the leading cases for the use of the RCRA 7002 in vapor intrusion situations is *US v. Apex Oil Company, Inc.* 1579 F.3d 734 (11th Cir. 2009), *cert denied*, 131 S. Ct. 67 (2010). In that case, the United States alleged that multiple leaks from a petroleum pipeline resulted in dangerous levels of vapor-phase hydrocarbons in soil and air that posed an imminent and substantial endangerment, and sought injunctive relief under section 7002 of the RCRA. The defendant disputed that the contamination posed an imminent and substantial endangerment. The court agreed with the United States that the standard for finding an endangerment was lower than the defendant suggested. However, because there were factual disputes on the degree of contamination, if the contamination posed a risk to human health, if the vapor intrusion was attributable to the hydrocarbon plume, and the specialized knowledge involving these issues, the court determined it was not in a position to make factual findings at the time and denied the government's motion for summary judgment. The Seventh Circuit subsequently granted the injunctive relief sought by the government. And in *The Newark Group v Dopaco, Inc.*, 2010 U.S. Dist. LEXIS 95061 (E.D. Cal. Sept. 12, 2010), the district court found the presence of VOCs in soil gas beneath a building to be demolished constituted an imminent and substantial endangerment under RCRA 7002 because workers would be exposed to dangerous levels of toluene

vapors and explosive levels of methane produced from the degradation of the toluene.

“Passive Owner” Beware

However, the case that no doubt sends chills down the spines of property owners is *Voggenthaler v Maryland Square LLC*. 2010 U.S. Dist. LEXIS 74217 (D. Nev. July 22, 2010). The federal district court for the district of Nevada ruled that the owner of a shopping center who simply leased space to a dry cleaner could be liable under RCRA’s citizen suit provision. The property owner argued that it was a passive owner and that the “contributing to” language required active human conduct. However, the court noted that the owner had received rent, was entitled to six percent of the gross sales of the dry cleaner under the lease and owned the pipes and drains below the dry cleaner. The court said the owner had participated in the financial operation of the dry cleaner and therefore had contributed to the handling and disposal of the PCE.

No Imminent and Substantial Threat

In *Grace Christian Fellowship v. KJG Investments*, 2008 U.S. Dist. LEXIS 45981 (E.D. Wis. June 12, 2008), a federal district court granted in part the motion of the plaintiff to introduce rebuttal evidence in connection with a preliminary injunction for vapors emanating from a gas station that were impacting a church. In a subsequent proceeding seeking a preliminary injunction, the court found that there was no imminent and substantial endangerment. 2009 U.S. Dist. LEXIS 76954 (E.D. Wis. Aug 7, 2009).

The United States District Court for the Northern District of California ruled in *West Coast Home Builders v. Aventis Cropscience*, 2009 U.S. Dist. LEXIS 74460 (N.D. Cal. August 21, 2009), that potential vapor intrusion at a development site did not pose an imminent and substantial endangerment under the RCRA because the site was not yet developed. The plaintiffs had proposed a mixed use project known as Highlands Ranch Phase II in the City

of Antioch. The plaintiffs alleged that contaminated groundwater that had migrated from a nearby landfill posed a risk of vapor intrusion. While the landfill was being remediated pursuant to a state-approved remedial action plan, the plaintiffs said the cleanup did not address vapor intrusion and sought an injunction requiring the responsible parties to address vapor intrusion. The court said that while vapor intrusion might pose a risk in the future if the site was in fact developed, there was no imminent threat at the time. Moreover, the court felt since the landfill was already being remediated under state supervision, the relief the plaintiffs sought was superfluous.

COMMON LAW • CERCLA, RCRA, and state remedial programs do not provide remedies for damages involving personal injury or property damage. Thus, state common law actions remain viable tools for bringing such actions and to complement these gaps in statutory remedies. These potential state common law causes of action include negligence, strict liability in tort, nuisance, trespass, and premises liability.

The overwhelming number of vapor intrusion cases involve off-site releases that are impacting the property of the plaintiffs. Frequently, vapor intrusion is the only completed exposure pathway. The lawsuits usually allege common law claims such as trespass and nuisance.

Maintaining Suit Under The Primary Jurisdiction Doctrine

Two toxic tort cases explored whether plaintiffs could maintain lawsuits while a cleanup was being conducted under the supervision of a regulatory agency. Under primary jurisdiction doctrine, a court may postpone consideration of underlying legal issues when there are factual issues not within the conventional experience of judges or in cases that require the exercise of administrative expertise. In both *Sher v. Raytheon* 2008 U.S. Dist. LEXIS 74998 (M.D. Fla. July 14, 2008), and *First*

Property Group, Led v. Behr Dayton Thermal Products, LLC, 3:08cv00329 (S.D. Ohio. April 22, 2009), the courts held that the claims for damages were based on the plaintiff's common law claims, rather than general enforcement of pollution laws. The courts said these were issues that were routinely decided by judges and juries, and did not require the special expertise of the administrative agency. Moreover, the courts found that the efficiency or progress of the agency actions would not be impeded by the resolution of damages in these cases.

In *Stoll v. Kraft Foods Global*, 2010 U.S. Dist. LEXIS 92926 (S.D. Ind. Sept. 6, 2010) plaintiff homeowners filed their lawsuit asserting claims for negligence, trespass, public nuisance, private nuisance, willful and wanton misconduct, as well as for injunctive relief under section 7002 of RCRA. The defendants argued that the court should not hear the case under the "primary jurisdiction doctrine" because the defendants were implementing measures under EPA supervision. However, the court said the legal claims involved were within the common experience of the court and did not involve highly technical or scientific matters. The court also said that it was not a foregone conclusion that any relief that it awarded would necessarily conflict with the remediation that may be required by EPA. The court also said that the doctrine could not be used to defeat claims for monetary damages like those requested by the plaintiffs. Finally, the court said the fact that remediation was ongoing did not mean there was no longer an endangerment from the vapors. In May, 2011, Kraft Agreed to settle the case for 8.1 million.

The Statute Of Limitations For Old Plumes?

Aiken v. General Electric Co., 869 N.Y.S. 2d 263 (N.Y. App. Div. 2008), involved a statute of limitations question. There, a group of residents living near the defendant's facility were allowed to proceed with a lawsuit stemming from groundwater problems that had been widely known for more

than two decades. The defendant argued that the three-year statute of limitations should have barred the action. However, the court ruled that because the residents showed that they had only become aware of vapor intrusion as a result of indoor air sampling conducted in 2004, the claim was timely.

REGULATORY DEVELOPMENTS • In 2002, EPA issued its guidance document for evaluating the vapor intrusion pathway. *Draft Guidance For Evaluating The Vapor Intrusion to Indoor Air Pathway From Groundwater And Soils (Subsurface Vapor Intrusion Guidance)*, 67 Fed. Reg. 71169 (Nov. 29, 2002). Available at <http://www.epa.gov/epawaste/hazard/correctiveaction/eis/vapor.htm>. Approximately 26 states have adopted their own vapor intrusion policies which vary considerably in how the issue is to be investigated and the levels that are considered acceptable.

Updated EPA Vapor Intrusion Guidance

In 2009, EPA's Office of the Inspector General (OIG) recommended that EPA update its Vapor Intrusion guidance. *Lack of Final Guidance on Vapor Intrusion Impedes Efforts to Address Indoor Air Risks* (Report No. 10-P-042; U.S. EPA, 2009). In response, EPA has begun its own review of its vapor intrusion policy that it hopes to complete by November 30, 2012. See <http://www.epa.gov/oswer/vaporintrusion>. In a preliminary review, the agency acknowledged that the pathway is far more complex than envisioned when it issued its 2002 guidance and that it anticipated that multiple lines of evidence may be required to complete remedial decisions in the future. The EPA also said that will probably have to expand its guidance to apply to a wider category of building types because approximately one-third of the sites it has reviewed for potential vapor intrusion exposures have involved multi-family residential buildings, retail stores, and municipal buildings. The agency also found that it had encountered vapor source areas that could affect large undeveloped areas that had potential for future buildings and that the agency might have to recommend preemp-

tive mitigation to address the potential impacts of vapor intrusion for future buildings. Review Of The Draft 2002 Subsurface Vapor Intrusion Guidance http://www.epa.gov/oswer/vaporintrusion/documents/review_of_2002_draft_vi_guidance_final.pdf.

Adding Vapor Intrusion To The Hazardous Ranking System

The Hazardous Ranking System (HRS) is the scoring system that EPA uses to determine if contaminated sites should be placed on the federal superfund list known formally as the National Priorities List (NPL). The HRS evaluates the risks posed by sites by analyzing four pathways: surface water, ground water, air, and soils. The principal driver for a high score on the HRS is contamination of drinking water. Because vapor intrusion was not a regulatory concern when the HRS was revised in 1990, the vapor intrusion pathway is not one of the pathways that are evaluated when scoring a site. However, the Government Accountability Office (GAO) issued a report in 2010, in which it suggested that the vapor pathway be evaluated when ranking sites for the NPL to minimize the possibility of unacceptable human exposures from vapor intrusion. *EPA's Estimated Costs to Remediate Existing Sites Exceed Current Funding Levels, and More Sites are Expected to Be Added to the National Priorities List*, GAO Report to Congressional Requesters, GAO-10-380, May 2010), available at <http://www.gao.gov/new.items/d10380.pdf>. As a result, EPA announced it will consider including vapor intrusion as a new screening mechanism to the HRS. 76 Fed. Reg. 5370 (Jan. 21, 2011)

DUE DILIGENCE CONFUSION: WHAT IS THE ROLE OF VAPOR INTRUSION IN PHASE 1?

• It may come as a surprise to property owners, lenders and their lawyers to learn that Phase 1 environmental site assessments performed before 2005 had not customarily looked at the potential vapor intrusion impacts. This is because environmental consultants

mistakenly believed that vapor intrusion was an indoor air issue that was not part of the standard scope of work for a Phase 1 environmental site assessment.

ASTM E1527-05

The ASTM E1527-05 standard developed for performing Phase 1 environmental site Assessments (ESAs) contains contradictory sections pertaining to indoor air quality. One section provides that a “recognized environmental condition” (the ASTM equivalent of a CERCLA release) can include releases into building structures while another section identifies indoor air quality as a non-scope item.

The confusion stems from the CERCLA definition of “release” in section 9601(22)(A). The definition excludes from the definition of release:

- A release that results in exposure to persons solely within a workplace; and
- With respect to a claim which such persons may assert against their employer.

Unfortunately, it appears that many involved in the due diligence community (apparently including the drafters of the ASTM E1527 standard) ignored the second clause of the exclusion so that many consultants and even lawyers came to believe that indoor air was not covered by a Phase 1 unless the client specifically requested such coverage.

Admittedly, this is a puzzling definition since it refers to exposure to persons yet CERCLA does not provide any remedy for personal injury. The answer lies in the preamble to the 1983 proposed CERCLA reporting requirements. *See* 48 Fed. Reg. 23, 552 (May 25, 1983). There, the EPA explained that the indoor exclusion was a relic of an earlier House bill that had contemplated that CERCLA would provide a remedy for personal injury. Apparently this section was left in the legislation after Congress decided to drop the provision providing for a remedy for personal injury due to exposure to releases of hazardous substances. This also explains the second clause of the exclusion, which refers to work-

ers' compensation claims. The old bill would have provided relief to person injured in the workplace from releases of hazardous substances unless they could file a workers compensation claim to avoid duplicate claims.

Revisiting The Phase 1

Because of the growing importance of vapor intrusion, sophisticated property owners and lenders are revising their Phase 1 scopes of work to include vapor intrusion or confirming with consultants that they expect the vapor intrusion pathway to be included as part of the Phase 1 services.

Even when consultants performing Phase 1 reports do consider vapor intrusion, they often underestimate the potential for off-site migration risk because they are unfamiliar with the vapor intrusion pathway. Consultants may also discount potential vapor intrusion concerns to occupants or nearby residential properties because a site may be enrolled in a state dry cleaner program and has been assigned a low priority. What many consultants do not realize is that most state dry cleaner programs primarily focus on impacts to drinking water and do not consider potential vapor intrusion when ranking sites for funding. Thus, while the owner of a contaminated may have to wait years for state funding, vapors could be migrating off the property, potentially exposing owners of the contaminated sites to toxic tort claims for bodily injury or property damage claims.

Revisions To E2600 Standard Guide For Vapor Encroachment Screening On Property Involved In Real Estate Transactions

It is anticipated that vapor intrusion screening will become a routine part of Phase 1 reports. In the meantime, ASTM released its own standard in 2008 entitled *Standard Practice for Assessment of Vapor Intrusion into Structures on Property Involved in Real Estate Transactions*. The purpose of E2600-08 was to define good commercial and customary practice for conducting a vapor intrusion assessment on property.

After issuance of E2600, a group of lawyers representing property owners threatened to sue ASTM over concerns that E2600 could adversely affect their clients' ability to comply with the CERCLA AAI rule, and, therefore, to qualify for the CERCLA landowner liability protections. In response, ASTM issued an updated E2600-10 *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions*. The revised E2600 no longer addresses vapor intrusion but is now focused on screening for the likelihood of vapors migrating onto a property from off-site sources. If the likelihood exists for vapors to reach the boundary of the property, the environmental professional is to identify this potential as a "vapor encroachment condition" (VEC).

E2600-10

E2600-10 has for two screening tiers:

- The first tier is based upon the existence of known or suspect contaminated sites within a primary search radius to the boundary of the target property. For sites known or suspected to be contaminated with chemicals of concern (VOCs), the primary search distance is one third of a mile. For sites known or suspected to be contaminated with petroleum, the primary search distance is one-tenth of a mile;
- The second tier focuses on the proximity of known contaminated plumes to the targeted property, know as the "critical search distance." E2600-10 defines the critical search distance as the distance from the nearest edge of plume to the nearest boundary of the target property. The critical search distance is 100 feet for VOCs or 30 feet for petroleum hydrocarbons. In urban areas where utility conduits and other subsurface structures can serve as preferential pathways, vapors or contaminated groundwater may be able to travel further than the critical search distances.

If an environmental professional determines that a VEC is present, the client may conduct further investigation, depending on the client's risk tolerance. While the Guide indicates that a vapor intrusion assessment would be necessary to confirm if a vapor intrusion condition at the property, E2600 makes it clear that it is up to the client whether to determine if there is vapor intrusion into any buildings on the property. The revised E2600 also has a revised legal appendix that addresses the relationship between the new guide and E1527-05 Phase I standard that is used to satisfy AAI. The revised legal appendix explains that E2600 does not satisfy and is not intended to meet the requirements for conducting AAI. It states that E2600 does not replace a Phase I environmental site assessment or any obligation to identify all recognized environmental conditions (RECs) related to the target property. Instead, the legal appendix states that E2600-10 merely provides a methodology for an environmental professional to determine if vapors are potentially coming onto a site. The legal appendix further explains that the mere presence of a VEC does not necessarily mean that the site has a REC. Instead, an environmental professional would have to conduct an investigation consistent with the E1527-05 Phase I standard to determine if a VEC constitutes a REC.

Have The Changes To E2600 Eviscerated Its Value?

The revised E2600 no longer informs a property owner or lender if there is a vapor intrusion problem at its property but instead is limited to whether there is a possibility that vapors may be present at the target property boundary. The term "vapor encroachment" has no regulatory significance. In other words, the federal and state programs are concerned about vapor intrusion, not vapor encroachment. As a result, it appears that the changes made to E2600 have rendered the standard essentially worthless to the property owners and lenders since E2600 no longer provides any meaningful information to the client.

A VEC does not tell a property owner if it faces potential toxic tort claims since it is essentially only a statement that vapors may have reached the property line. A VEC determination could give property owners a false sense of security while exposures are continuing. Indeed, many of the lawsuits that have been filed in the past two years involve situations that would have been screened out using E2600-10 because the plumes far exceed the critical search distances.

What is valuable for the property owner is to know if the occupants of its property are being exposed. The E2600-10 approach sets up an awkward two-step dance. The old approach of E2600-08, in which properties were presumptively "screened-in" unless there were specific facts to overcome the presumption, was a more conservative approach that led to the generation of objective data (sampling at the target property) to determine exposures.

For property owners with reputational risk concerns or otherwise low risk tolerances, it would seem preferable to generate objective data from rather inexpensive soil gas sampling, rather than relying on assumptions that are likely to be misused or misunderstood by a large number of consultants — particularly those who work for so-called "Phase I factories" or "commodity-shops." Such clients will likely want to incorporate the vapor pathway in the E1527 by using site-specific information and not relying on the default search radius. In some cases, particularly in urban areas, a nearby site might be beyond the E2600 screening distance but there might be specific factors such as utility conduits that could pose a risk to the subject property.

Pathway Complexity

The vapor intrusion pathway is incredibly complex and there are just too many variables and possible preferential pathways to "guess away" sites. The author has been involved with sites that were expected to be "hot" (unacceptable levels of vapors) but turned out to have no vapor intrusion issues, and with others that were not expected to have vapor intrusion problems but needed serious mitigation

measures. The only way to know if there is a risk of vapor intrusion is to do some soil gas sampling. The sampling is not expensive or time-consuming and it provides the certainty that an educated guess can never provide.

If a site within the E1527 search radius is flagged as having used VOCs currently or in the past, the consultant could determine through the exercise of its professional judgment if that off-site use would present a risk of vapor intrusion to the target property. If the consultant concludes that the off-site property does pose a risk of vapor intrusion, or if the consultant lacks sufficient information to make such a determination, then a soil gas sample at the target property could be performed.

If the property is located in a state that allows modeling the vapor intrusion pathway, the soil gas sampling could be used for that purpose. The sampling could also be used to obtain a legal liability insurance policy to address the toxic tort claims, depending on the risk tolerance of the client. On the other hand, many consultants seem to be taking the view that every VEC should be a REC that requires additional investigation. Depending on site-specific conditions, many VECs may simply be de minimis conditions that ASTM defines as a condition that would not result in enforcement action if brought to the attention of regulators and does not pose a risk of human health or the environment.

Before agreeing to additional sampling, property owners or lenders should ask consultants if they could make a determination through the exercise of professional judgment after taking the site-specific known facts if the VEC could likely be considered a de minimis condition.

CONCLUSION • The vapor intrusion pathway has enormous liability implications for property owners and developers. Because the science behind vapor intrusion is rapidly evolving and vapor intrusion programs vary considerably from state to state, property owners are finding themselves subject to costly delays and uncertainty as they try to satisfy ever-changing regulatory requirements.

Property owners should carefully review the findings and conclusions of prior reports that were completed before the advent of the vapor intrusion era. Consultants should be prepared to explain to their landowners, lenders, and attorneys why further investigation may be required — despite the existence one or more older Phase 1 reports that may have given the same property a green or clean bill of health.

Additionally, the presence of recommendations in a Phase 1 report could impact the ability of a property owner to assert one of the CERCLA landowner liability protections. As illustrated in *Ashley II of Charlestown v. PCS Nitrogen*, 2010 U.S. Dist LEXIS (D.S.C. September 20, 2010) when a purchaser or property owner fails to implement the recommended investigation, the failure to further investigate could be deemed a failure to exercise due care under the Third-Party Defense or appropriate care under the BFPP defense. Thus, if at all possible, even if a consultant determines that the presence or potential presence of vapors constitutes a REC, recommendations for further investigation or remedial/abatement activities should be set forth in a separate letter to counsel, and not included in the Phase 1 report. Under ASTM E1527-05, environmental professionals are only required to render opinions if the conditions identified in the report rise to the level of a REC. The consultant is not required to provide recommendations but may do so if the client desires it.

Like any environmental issue, any evaluation of the vapor intrusion pathway should take into account the particular risk threshold of a client. Some clients who have low risk appetites or are particularly concerned about reputational risk may want to aggressively address potential vapor intrusion issues through the use of mitigation measures or risk transfer mechanisms. Regardless of a particular client's risk tolerance, it is important that the client be advised of the vapor intrusion pathway so it can make decisions consistent with its risk profile.

PRACTICE CHECKLIST FOR
Vapor Intrusion:
A Game Changer For Environmental Due Diligence And Environmental Liability

- Carefully review historic uses of property, including searching the dry cleaner and gas station databases;
- If a dry cleaner, gas station, or other potentially problematic use operated on the property in the past, be sure to check if the property or area was serviced by septic systems or dry wells during the relevant time period — these could have received wastewater from these prior uses;
- Do not assume that old Phase 1 reports that did not identify any RECs evaluated the vapor intrusion pathway. If it did, verify that the screening levels have not changed;
- Consider revising your Phase 1 scope of work to specifically address vapor intrusion;
- Do not overlook the potential impacts of past dry cleaners. While dry cleaners are small businesses, the volume of solvents that they used are equivalent to larger manufacturing facilities;
- When performing due diligence, specifically ask the consultant to search historical dry cleaner and gas station databases to determine if such uses occurred in the past at the target property or within one quarter of a mile of the property;
- Vapors may not necessarily follow groundwater flow but can migrate in an “upgradient” direction if there are preferential pathways such as utility conduits or subsurface structures;
- Remember that prior studies have suggested that approximately 75 percent of dry cleaners have suffered releases. In the absence of best management practices such as secondary containment around drums and solvent-grade epoxy floor coatings, soil gas sampling should be strongly considered at sites with past or current dry cleaners;
- Seek verification that former dry cleaners were only “drop-off” locations that did not conduct on-site dry cleaning operations;
- Do not simply rely on a site’s low ranking in a state dry cleaner or oil petroleum funds unless the state program includes vapor intrusion in the prioritization process;
- Determine if the state has a vapor intrusion policy or guidance and understand its screening levels and procedures;
- Determine if vapor intrusion was evaluated in connection with a previously issued no further action letter;
- It is frequently better to simply implement a presumptive vapor intrusion abatement system instead of investigating the pathway;
- Verify the screening or action levels established by a state vapor intrusion program;
- The vapor intrusion pathway is very complex and can vary considerably within a site. Be sure to use an environmental professional who has experience investigating and mitigating vapor intrusion sites. Recommendations for additional investigation or abatement actions should be included in a separate letter to counsel and not set forth in the report unless the client intends to timely implement the additional work that is recommended