Vapor Intrusion:
The Potential for Adverse Effects on Human Health and Property Value

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Vapor intrusion occurs when volatile chemicals from contaminated soil or groundwater migrate into indoor air spaces. Chemical storage tank leaks and product spills are frequently the source of the contamination, and old releases can cause as many vapor intrusion problems as more recent events. Virtually unrecognized a decade ago, federal and state regulators now acknowledge vapor intrusion to be a threat to human health. And, property values can also be adversely affected when vapor intrusion occurs.

In 2002, the U.S. Environmental Protection Agency ("EPA") issued draft guidance with recommendations for determining whether a vapor intrusion pathway poses an unacceptable risk to human health. *OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soil,* http://www.epa.gov/osw/hazard/correctiveaction/eis/vapor/complete.pdf. The document primarily focuses on determining risk in residential settings, but non-residential exposures also may be considered. However, the EPA does not recommend how to delineate the extent of risk or how to eliminate the risk, and it does not impose any obligations on the EPA, states, or the regulated community.

The Interstate Technology and Regulatory Council's *Vapor Intrusion Documents*, www.itrcweb.org/guidancedocument.asp?TID=49, also provides guidance for dealing with vapor intrusion. And, Occupational Safety and Health Administration and National Institute for Occupational Safety and Health standards often limit employee exposure in non-residential cases. More than twenty states have published a form of vapor intrusion guidance. *See* Appendix A to EPA's March 2008 *Brownfields Technology Primer: Vapor Intrusion Considerations for Redevelopment*, http://www.brownfieldstsc.org/pdfs/BTSC%20Vapor%20Intrusion%20Considerations%20for%20Redevelopment%20EPA%20542-R-08-001.pdf. Because the status of state guidance is changing rapidly, check your own state for updated vapor intrusion guidance status.

In addition to health and safety concerns, vapor intrusion also may adversely affect site closure options and/or property values In March 2008, ASTM published the *E 2600 Standard Practice for Assessment of Vapor Intrusion into Structures on Property Involved in Real Estate Transactions*, which provides several tiers of screening to voluntarily assess the potential for vapor intrusion and which can be used in conjunction with the *E1527 Practice for Environmental Site Assessments Phase I Environmental Site Assessment Process*. However, the voluntary E 2600 standard contains presumptions that may have significant economic and legal implications.

The impact of vapor intrusion on site closure and property values means that current property owners and prospective purchasers should consider investigating vapor intrusion. But, deciding whether to conduct a vapor intrusion assessment involves complicated analyses. And, once a vapor intrusion assessment is determined to be necessary, there are numerous methods and parameters for conducting indoor air sampling -- selecting the proper sample method, duration, and location is essential. Consequently, current and prospective property owners should seek legal and technical advice when determining whether and how to assess vapor intrusion risks. Please call Don Gallo at 262-951-4555 with any questions.

Going Light Green

By David Welch, Everchem Specialty Chemicals

Shipping containers (cardboard boxes)

Instead of ordering your own cardboard boxes, seek out cardboard manufacturers or middlemen and investigate using overruns, blems or slightly off-spec boxes that meet your needs. Customers really don't care about the package in which they receive their urethane goods, they just want the undamaged product. By doing this, you are using a resource that would otherwise be discarded.

If you have any ideas for Going Light Green, please contact the PMA office at info@pmahome.org.