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Technical Brief for Environmental Professionals & Commercial Real Estate Lenders

Vapor Intrusion - How to Prepare for the New U.S. EPA Guidance & ASTM E 1527 Standard

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Awareness about the risks posed by the migration of contaminated vapors into overlying buildings is growing, yet there is still a great deal of confusion about how best to assess and address vapor-related risks. Two significant developments are pushing vapor intrusion onto the radar screens of environmental professionals and risk managers at financial institutions alike: the impending release of the U.S. EPA's guidance on vapor intrusion, and the proposed revisions to the ASTM E 1527 Phase I ESA standard. To help environmental consultants and risk managers understand what these documents mean in terms of the standard of care for environmental due diligence and how it might affect their own liability, EDR Insight hosted a webinar on December 11th with these three leading experts in the field who are helping clients address vapor risk every day:

- David Gillay, attorney (and former environmental engineer) and chair of Barnes & Thornburg's Brownfields & Environmental Transactional Practice Group;
- Francis Ramacciotti, Senior Manager, ENVIRON International Corporation; and
- Robert Uppencamp, Project Scientist/Risk Assessor, ARCADIS.

This technical brief summarizes some of the key points covered during the webinar, including advice on what environmental professionals and commercial real estate lenders should be doing to prepare for the new EPA guidance and ASTM Phase I ESA standard in 2013.

Vapor Intrusion Risk in the Real World

As attested to by all three speakers, vapor intrusion is already arising as a potential issue at a wide variety of sites today. For instance, closed sites have been reopened by regulatory agencies across the country specifically to address vapor risk. Vapor can be particularly risky at properties involving residential exposure, such as multifamily properties or sites near residential developments. As noted by Uppencamp in his comments, "Vapor is becoming a medium that is just as common as soil and groundwater have been for many years." If a vapor issue is identified during due diligence, it is not necessarily a deal killer, however. Popular mitigation options for making vapor risk less severe include: source remediation, elimination of the receptors, institutional/engineering controls, elimination or reduction of the exposure or some combination of these options.

U.S. EPA VI Guidance

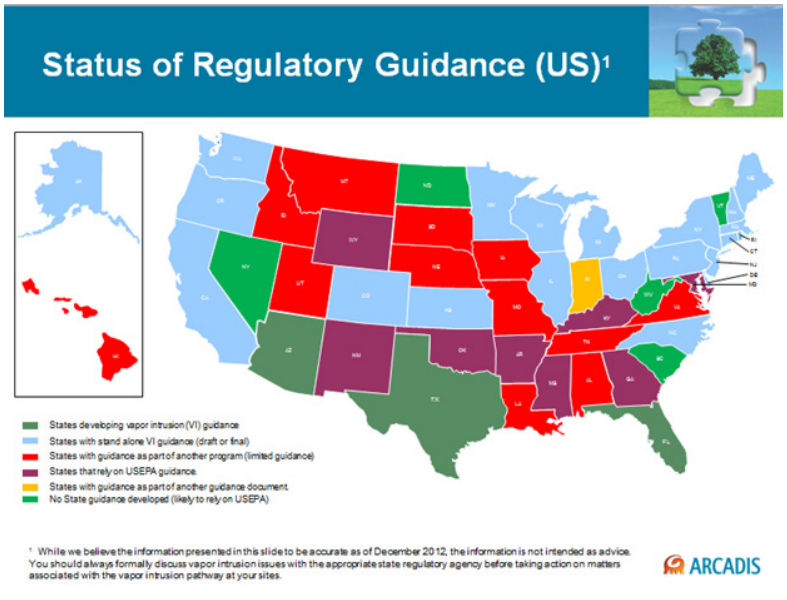
The U.S. EPA was expected to issue federal VI guidance in November 2012 but has not yet done so. According to Ramacciotti, EPA's web site says the agency has made "substantial progress during the past year" preparing its final VI guidance, engaging stakeholders and addressing public comments.

As shown in the accompanying map from Uppencamp's slides, there are very few states that do not currently have VI guidance (draft or final) on the books, and these states are expected to rely on the federal guidance when it is released. When final, the most important implication will be that the market will have a document that outlines EPA's requirements related to mitigation and long term obligations for owners of sites with vapor issues. Significantly, as Uppencamp noted, EPA's guidance will also include options for "preemptive mitigation:"

> *"When there is a reasonable expectation that vapor intrusion is occurring due to subsurface contamination and is posing unacceptable exposure and risk to occupants of an existing building(s), it may be appropriate to implement vapor mitigation, even though sufficient lines of evidence may not yet be available to fully characterize the vapor intrusion pathway for the subject building(s)."*

EPA's document, noted Gillay, "is full of missing pieces of information that state regulatory agencies and other stakeholders have been waiting on for years." For instance, the document will address any long-term stewardship issues for owners associated with O&M plans for mitigation systems, exit strategies and funding mechanisms.

In addition to the soon-to-be-final federal guidance, there were also a number of VI-related documents released in late 2012. Among them is a November 2012 EPA document, titled "Assessing Protectiveness at Sites for VI, Supplement to the 'Comprehensive Five-Year Review Guidance." This one has specific significance, according to Gillay, in that it lays out EPA's tools and a policy by which closed sites will be reassessed for VI. Gillay is "confident that a lot of state agencies will be looking closely at this guidance and building their own state-specific policies to address VI on sites that have been closed." This will likely drive the reopening of even more closed sites for potential VI issues.



E 1527 Revisions and Vapor

Until now, the E 1527 standard has been silent on the vapor pathway. In the process of developing the current proposed revisions, the U.S. EPA had a voice and recommended that the Task Group not ignore the vapor pathway in its 2013 revisions. The proposed standard is currently undergoing requisite EPA review, but if adopted in its current proposed form, "The new standard will be very clear that VI should be treated the same way as any other type of medium, such as groundwater….You will see a big emphasis on vapor," according to Gillay. "Vapor migration is being specifically included in E 1527 and must be evaluated by environmental professionals in their Phase I ESAs." In the current draft of the ASTM E1527 standard, there are very strategic changes to some

of the definitions that will bring VI into the practice including:

- the definition of AULs to include soil vapor.
- references that tie several definitions back to CERCLA and AAI, making it clear that there is no distinction between soil, groundwater and soil vapor.
- a new definition for "migrate/migration," which also specifically includes soil vapor as part of CERCLA/AAI to clarify that vapor should be addressed.

No matter how the E 1527 revisions shake out, Gillay predicts that "VI is likely to be flagged in more future transactions."

Vapor and CERCLA

As noted by Gillay in his comments, "it is very important to understand vapor intrusion in the context of CERCLA. Continuing obligations that kick in after purchase are critical to vapor intrusion because after AAI is conducted and a property is acquired, the owner may have obligations to address over the course of ownership." If an owner has a Phase I ESA that identifies VI as a potential REC, then an owner's post-closing obligations may involve having to delineate a groundwater plume to a VI groundwater screening level and perhaps take steps to address that risk to prevent human exposure over time. And now with EPA guidance, the market will have more clarity on what EPA and states will require for long term obligations.

What Should Lenders and EPs Be Doing Now?

VI continues to evolve at a rapid pace. For regulatory agencies, VI concerns are driving remedies and complicating site closure so it is critical for purchasers to work with experts who can carefully assess vapor and if necessary, consider mitigation and other options upfront. If E 1527-13 is finalized in its current form, there will be no distinction made between solids, liquids and vapors in a Phase I ESA. As emphasized by the webinar's three presenters, vapor intrusion risk is already complicating commercial real estate deals—and that is likely to grow after release of these two documents.

There are a number of important implications of the new federal VI guidance, followed closely by a new standard of practice for Phase I ESAs that will recognize the vapor pathway, including:

- Environmental professionals are often the target for VI-related litigation when risk is overlooked during due diligence, so it is critical for them to develop an understanding of the factors that influence vapor migration/intrusion so that they can adequately advise clients and not expose themselves to liability.
- Lenders should be working with knowledgeable environmental professionals to determine if their policies need to change in order to be protective of vapor-related risk.
- It is likely that more sites will be screened in and require vapor intrusion assessments so it is critical to properly address the vapor intrusion pathway and consider where site-specific evaluations are appropriate.

Quoted & Noted

- "We're in the midst of "a shift back to CERCLA, which makes no distinction between solids, liquid and vapors."
- "There is no site that is immune to VI."
- "No doubt about it. Vapor intrusion can complicate transactions."
- "Vapor migration is becoming a medium just as common as soil and groundwater."

NOTE TO READERS: EDR Insight would like to sincerely thank David, Rob and Francis for sharing their unique technical expertise. To hear directly from these three vapor intrusion experts, listen to a free replay of the December 11th event here. In addition to more details on the topics addressed in this brief, the webinar content includes:

- a detailed Vapor Intrusion 101 segment by Uppencamp for any EDR Insight readers who are unfamiliar with the basics of vapor intrusion and the risk it presents;
- a terrific technical discussion by Ramacciotti on the myths associated with modeling and sampling for VI risk, as well as options for evaluating data to assess VI risk;
- the low-down on mitigation alternatives for properties where vapor intrusion is deemed to be a risk;
- a list of key VI-related documents; and
- Gillay's legal discussion of vapor intrusion in the context of CERCLA liability (and the conduct of AAI), particularly the bona fide prospective purchaser protection for those who purchase sites with known contamination.

Questions or comments?

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