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DEPARTMENT OF ENVIRONMENTAL PROTECTION



Bureau of Environmental Cleanup & Brownfields

# **Overview of Draft-Final Vapor Intrusion Guidance**

**Cleanup Standards Scientific Advisory Board Meeting  
July 13, 2016**

**presented by:  
Michael Maddigan  
PADEP**

# Activity Since February

- Revisions to address public comments
- Revisions to address Cleanup Standards Scientific Advisory Board (CSSAB) comments from 2/24 meeting
- May 18 conference call with VI Core Group to discuss Section D (preferential pathways)
- Additional revisions based on Core Group discussions
- Final review by regions, Policy, & Reg Counsel
- Final revisions completed
- Comment/Response document completed

# Implementation

**This guidance should be used to evaluate VI for sites where the remedial investigation or site characterization report is expected to be submitted following the effective date of this guidance. Upon the effective date of this VI guidance, a remediator with a site for which VI was evaluated under the 2004 VI guidance and who has a FR or remedial action completion report (RACR) under review by the Department will not need to update their VI evaluation. If this VI guidance becomes effective prior to the Department receiving a FR or RACR, then the remediator is expected to complete the FR or RACR using this VI guidance. The Department will not require remediators to amend or resubmit reports that have been approved under previous versions of this guidance, where VI can be evaluated under the current version of this guidance in a subsequent report in the cleanup process.**

# Changes to Guidance

## Preferential Pathways

- Typical residential utility lines concept (i.e. “Residential waiver”) removed
- Revised concept of *internal preferential pathways* to *significant openings* – aligns with EPA language
- Increased focus on sealing openings
- Allow the use of screening values in the presence of typical cracks, gaps, utility penetrations, and other minor foundation openings

# Changes to Guidance

## Preferential Pathways (continued)

- Removed specific language that caused concern with the possibility of mistaking examples for requirements
- Removed confusing language pertaining to external preferential pathways and the use of proximity distances
- Clarified expectations for how remediators can evaluate external preferential pathways and significant openings – when building access is needed

# Changes to Guidance

## Other Revisions

- Revised text to be more careful with the word “contamination”
- Added matrix table to clarify choices when using a combination of standards.
- Updated Figures 2 and 3 based on Core Group recommendations
- Changed appendices to A, B, & C to accommodate OSHA checklist as Appendix D

# Changes to Guidance

## Other Revisions

- Made distinction between any possible future construction and planned future buildings – helped to clarify when activity and use limitations are needed
- Moved OSHA discussion out of Statewide health standard (SHS) section and into site-specific standard (SSS) section due to it being an institutional control
- Added table for alternative assessment options

# Changes to Guidance

## Other Revisions

- Changed Appendix B (modeling) to allow remediators more flexibility in using site-specific input parameters
- Added figures to Appendix C (sampling) to illustrate sampling location options for various scenarios
  - Shows when to apply screening values
  - Shows when modeling is available
- New guidelines in Appendix C for assessing the VI potential of separate phase liquids (SPL)



# Changes to Guidance

## Other Revisions

- Changed soil/groundwater temperature used to calculate screening values from 11°C to 16°C to more accurately represent the average temperature in Pennsylvania.
  - Resulted in decrease of screening values associated with Henry's Law Constant (temperature dependent)
  - Allows for more accurate regional temperatures to be used in modeling

# Next Steps

- Regional office staff webinar training in August
- Final guidance and Comment/Response document to be published in PA bulletin in early September
- Classroom training with PCPG in Sept. & Oct.
- Guidance effective 60 days after publication (early November)



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Discussion?**