



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION



Bureau of Environmental Cleanup & Brownfields

Overview of Draft Vapor Intrusion Guidance Public Comments

**Cleanup Standards Scientific Advisory Board Meeting
February 24, 2016**

**presented by:
Michael Maddigan
PADEP**

Public Comment Period

Draft Vapor Intrusion (VI) Guidance was published with 60-day public comment period

- July 25, 2015 to September 23, 2015.

Public Comments

- Eight commenting organizations:
 - ❖ Langan Engineering & Environmental Services
 - ❖ Hydrocon Services
 - ❖ AECOM
 - ❖ HDR Engineering
 - ❖ PA Chamber of Business and Industry
 - ❖ Pennsylvania Council of Professional Geologists
 - ❖ Fox Rothschild LLP
 - ❖ PPL Electric Utilities
- 97 total public comments

Public Comments

12 Comment Categories

- 25 Sampling
- 22 Editorial or Definition Clarification
- 12 Screening Values
- 7 Combination of Standards
- 7 Environmental Covenant
- 5 Implementation of Guidance
- 5 Proximity Distances
- 4 Preferential Pathways
- 4 Mitigation Systems
- 2 OSHA Program
- 2 Modeling
- 2 Separate Phase Liquid

Recurring Comments

Implementation Comments

- Five comments on the timing of the implementation of the revised VI guidance.
- Concern that approved reports would become invalid and that proposed language is generally unclear.

Recurring Comments

Implementation Response

- Sites in the process of evaluating VI under the 2004 VI guidance that have final reports (FRs) or remedial action completion reports (RACRs) under review by the Department at the time of publication of new guidance will not need to update their VI evaluations.

Recurring Comments

Implementation Response

- If new VI guidance is published prior to receipt of FR or RACR, then complete the FR or RACR using the new VI guidance.
- No requirement to amend or resubmit reports already approved under the 2004 VI guidance.

Recurring Comments

Seasonal Sampling Comments

- Five comments regarding the differential temperature condition and seasonal requirements for indoor air sampling.
- Does the differential temperature requirement apply to unheated buildings?
- Concern that seasonal requirements will impact timing of property transactions and corrective action investigations.

Recurring Comments

Seasonal Sampling Response

- Differential temperature condition for indoor air sampling is unnecessary for buildings that are unheated, such as warehouses.
- Collection of two samples during the heating season is a reasonable expectation, provides a better level of protectiveness, and is compatible with existing regulatory requirements.

Recurring Comments

Seasonal Sampling Response

- Seasonal groundwater variation needs to be evaluated during site characterization which is currently a seasonal sampling requirement.
- Site characterization deadlines can be extended beyond 180 days for corrective action sites if necessary.

Recurring Comments

Proximity Distances Comment

- One public comment and two regional office comments asking to change the vertical proximity distance from 6 feet to 5 feet
- **Response:** It is agreed that 6 feet is very conservative, and that 5 feet is adequately protective.

Notable Public Comments

Applicability Comment

- Proposed guidance states it is applicable “to any person or persons conducting a site remediation under Act 2.” Does this include background standard cleanups, special industrial area (SIA) cleanups, and storage tank corrective actions?

Notable Public Comments

Applicability Response

- Under Act 2, SIA sites and storage tank corrective action sites need to do VI assessments and this guidance provides the procedures and standards that should be used.
- Background standard cleanups do not fall under this umbrella of applicability.

Notable Public Comments

Preferential Pathways Comment

- Pipes that pass through foundations are typically sealed to keep moisture out of the building. If they are sealed they should not be considered preferential pathways (PPs).
- **Response:** Will revise Section D to emphasize that sealed penetrations are generally not considered to be preferential pathways.

▶ Notable Regional Office Comment

Preferential Pathways Comment

- PA building code requires using pipe sleeves and gravel/sand backfill for buried piping in many instances. Most newer single-family homes may not have soil backfill for utilities.
- **Response:** Will revise Section D to reduce the focus on backfill material and emphasize sealing penetrations. Backfill is less important if penetrations are sealed.

Notable Public Comments

Preferential Pathways Comment

- The guidance is unclear regarding the necessary activities required to assess the presence of potential PPs.
- **Response:** Want to allow for the use of professional judgment. Section D will be revised to add more definitive descriptions of considerations to be made when assessing the presence of potential PPs.

Notable Public Comments

Preferential Pathways Comment

- There is no basis for eliminating use of the groundwater MSCs and generic soil-to-groundwater numeric values as minimum screening values where preferential pathways may be present.
- **Response:** Section F will be revised to define how to use screening values where preferential pathways are present.

Notable Public Comments

Preferential Pathways Comment

- Must an underground feature penetrate the building foundation to be considered a PP?
- **Response:** An underground feature does not have to penetrate the foundation to be a PP. Vapors from features within five feet of the foundation can enter the building if there are cracks or other openings in the building foundation.

Notable Public Comments

Preferential Pathways Comment

- Can *potential future* PPs be ignored, or must they be addressed with an environmental covenant?
- **Response:** EC is not required to address future PPs. However, considering future PPs in current VI evaluation may reduce possibility of reopener.

Notable Public Comments

Modeling Comment

- The guidance incorrectly identifies a dirt basement floor as a preferential pathway, and does not allow for use of the J&E model.
- **Response:** The J&E model can be used to model vapor intrusion through a dirt floor. A dirt floor can be simulated by setting the slab thickness to zero.



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Special thanks to:
David Brown
Carolyn Fair
Discussion?