

NJDEP Vapor Intrusion Technical (VIT) Guidance

List of Significant changes from Version 4.0 (August 2016) to Version 4.1 (January 2018)

1. Cover Page: Changed date from August 2016 to January 2018.
2. Cover Page: Changed Version from 4.0 to 4.1.
3. Chapter 1, Introduction: Added to the section on Department-generated variances. These are changes the Department has implemented and will be reflected in the next update to the Technical Requirements for Site Remediation (Technical Rules, N.J.A.C. 7:26E).
4. Chapter 2, Receptor Evaluation and Screening (Steps 1 & 2): Clarifying language has been added to better explain the need for a vapor intrusion (VI) investigation when a wet basement contains contaminated groundwater or light non-aqueous phase liquid (LNAPL).
5. Chapter 3, Vapor Intrusion Investigation (Step 3): Clarifying language has been added on gaining legal access to a building for VI sampling, the role of indoor air and sub-slab soil gas samples, and the definition of near slab and exterior soil gas samples. Explain that the Technical Rules do not exclude any building from a VI investigation. Introduced the concept of *Indeterminate VI Pathway* status for those buildings where a VI investigation is conducted, but indoor air (IA) samples cannot be collected since the current operator(s) in the building uses the same contaminants of concern (COCs) as part of their operation. Incorporating the indeterminate status into various forms and documents so the Department can track these buildings and ensure that proper measures are taken when there is a change in use or the contaminants of concern are no longer used. Recommend NIOSH Method 6009 for the analysis of elemental mercury in IA samples.
6. Chapter 4, Multiple Lines of Evidence and Data Evaluation: Added language related to VI and the establishment of a ground water classification exception area (CEA). Additional details related to ground water investigation and seasonal high water table are included. Stating that pressure differential readings can NOT be averaged.
7. Chapter 5, Petroleum Hydrocarbons: Clarifying language added that gasoline service stations must be investigated (GW, sub-slab soil gas), although IA samples may be delayed (indeterminate status) until a change in use occurs.
8. Chapter 6, Vapor Intrusion Mitigation: Included language from the ground water remediation standards as it relates to vapor intrusion and an explanation of pressure differential readings. Clarified the requirement to complete step-out sampling for vapor concern (VC) and immediate environmental concern (IEC) cases. Monitoring & Maintenance will include determining that buildings that have an indeterminate status and other restricted uses are annually inspected to determine any change in use.
9. Appendix A: Minor editorial changes
10. Appendix I: Updates to background sources and minor editorial changes
11. Appendix N: *Vapor Intrusion Mitigation Monitoring & Maintenance Checklist* has been renamed and significantly updated to assist the investigator.
12. Appendix O: Indeterminate VI Pathway status and Target Velocity have been added to the *Glossary*.
13. Appendix P: Minor changes to the *Acronyms*.