



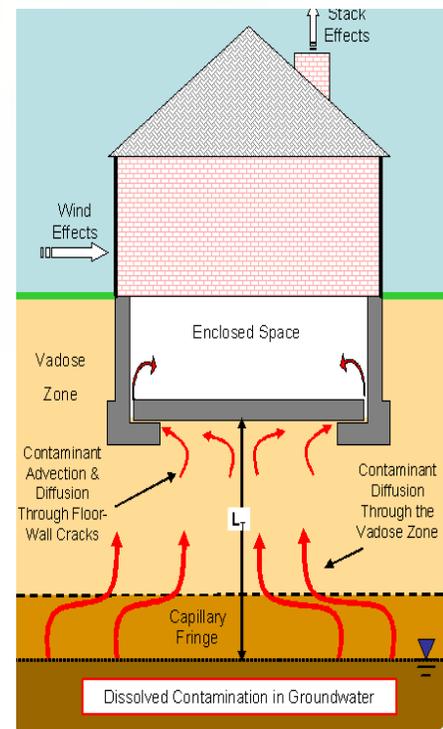
Vapor Intrusion

Vapor intrusion (VI) is the general term given to the migration of hazardous vapors from any subsurface contaminant source, such as contaminated soil or groundwater, into an overlying building or structure and has become and continues to be a focal point of regulators. Vapors can be generated from various chemicals including chlorinated hydrocarbons, petroleum hydrocarbons, and other types of volatile organic compounds (VOCs). Vapor migration may pose unacceptable acute or chronic health risks and needs to be evaluated against the applicable State and U.S. EPA remediation standards as well as OSHA requirements for worker protection and the regulatory trend is toward more stringent standards. In fact, some states have conducted emergency evacuations of buildings due to VI and in other instances some states are re-opening historically closed sites with VOC contamination where the VI pathway may not have been previously investigated.

Vapors from a release can follow preferential pathways such as utility corridors and migrate to unaware receptors in homes, schools, or offices. In these cases, VI can cause a publicity nightmare for parties responsible for a release of volatile compounds. As such, VI matters can require prompt attention in the areas of community outreach, investigation, and mitigation.

BB&E has significant experience conducting VI investigations and evaluations at sites with varying degrees of geologic complexity including the investigation of contaminant plumes and VI issues in bedrock geology. BB&E staff has conducted soil-vapor, sub-slab vapor, and in-door air sampling as part of VI evaluations in support of a multiple lines of evidence approach preferred by the U.S. EPA. With BB&E's experience, our clients can develop an effective strategy to communicate, evaluate, and mitigate any potential health risks.

BB&E's vapor intrusion expertise spans a range of project types and applications from utility corridor VI hazard assessments to chlorinated groundwater plume evaluations. Collectively, BB&E's staff has conducted VI evaluation projects across the country for both federal and private sector clients. Moreover, we understand the technical complexities and nuances of conducting VI evaluations in active facilities and appreciate the needs of clients to maintain business operations while site VI evaluations occur. BB&E is prepared to mobilize a qualified team of support professionals on a moment's notice to provide affordable, expert support, with unparalleled levels of expertise to deliver solutions to our clients' most challenging VI projects.



Services Provided:

- ✓ Site Evaluations
- ✓ Sub-slab Sampling
- ✓ Soil-gas Sampling
- ✓ Indoor Air Sampling
- ✓ Work Plan Development
- ✓ Data Evaluation
- ✓ Attenuation Assessment
- ✓ Mitigation Strategies
- ✓ Mitigation Implementation

Please contact Aaron Etnyre for additional information regarding BB&E's vapor intrusion expertise and our ability to support your specific project needs at 248-489-9636 x303 or email aetnyre@bbande.com

