VAPOR INTRUSION ASSESSMENT

Residential Building Adjacent to a Gas Station

Vapor intrusion occurs at sites contaminated with volatile chemicals such as gasoline and dry cleaning solvents where contaminated vapors migrate from the subsurface into overlying buildings, basements and utility corridors. During a routine inspection of a residential basement adjacent to a gasoline station, ***R.E.A.*** personnel noted slight petroleum odors. Upon further inspection, elevated PID readings were noted along cracks in the foundation.

Figure 1. Installing vapor sampling point beneath a concrete floor

Gore™ Modules were deployed to passively collect indoor air and sub-slab vapor samples for laboratory analysis. Using this data, ***R.E.A.*** was able to design and install a vapor mitigation system with input from the homeowner. The system was installed in less than one day and the post-testing documented the system was operating as designed.

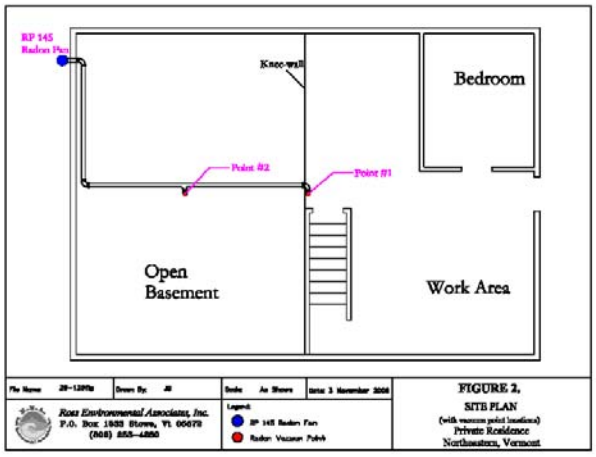

Figure 2. *As-Built Plan of Vapor Mitigation System*

Key Findings

- Gore™ Module allowed rapid collection of soil gas data.
- Elevated concentrations of volatile petroleum compounds were noted beneath the concrete slab.
- Sealing the foundation cracks greatly reduce the vapor intrusion impact.
- Low level post-mitigation sampling of indoor air quality to evaluate the effectiveness of mitigation system.

Figure 3. SUMA Canister used for collecting 24-hr composite indoor air sample

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