

Vapor Intrusion Outreach Toolkit
and
Sub-slab Vapor Sampling
Procedures Guidance

Remediation & Redevelopment
Issues & Trends Webinar
October 15, 2014

Webinar Agenda

- VI Outreach Toolkit: Template letters and Fact Sheets
- New VI Internet Pages for Environmental Professionals and General Public
- Access requests for buildings not owned by RP
- Sub-slab Vapor Sampling Procedure Guidance

Sub-Slab Vapor Sampling
Procedures (RR-986)

Terry Evanson

Goals of Guidance

- Basic expectations for collection of sub-slab vapor samples
- Options for sample collection
- Quality control/quality assurance
- Multiple samples to rule-out vapor intrusion in residential settings
- Reporting results

Basic Expectations

- Number of sub-slab probes based on building footprint
- Installation of probes should be “semi-permanent” rather than one-time use
- Sump pit samples – allowed if no other option
- Leak testing must be performed, but a number of methods allowed

Options for sampling

- Stainless steel or brass probes grouted in place
- Vapor Pin (by Cox-Colvin) uses pre-manufactured silicon sleeve
 - Avoids cement or grout seal probe



Leak Detection

- Shut-in test for sample train leaks
- He shroud recommended
- Alternates include:
 - Water dam
 - Non-He tracers (should take sample of tracer inside shroud)



Quality Control/Assurance

- Number of sample points
- Air tight sample train & probe seal
- Number of samples collected over time

Multiple Samples to Confirm no VI Risk

- Professional judgment is key – 3 sub-slab sample do NOT need to be collected at every property
- Where can you immediately determine multiple samples are not needed?
 - When sub-slab samples exceed VRSL
 - Most industrial sites (e.g., high purge volume test method)
- Guidance is written for residential settings
 - The need for multiple samples in a commercial setting is case-by-case

Multiple Samples to Confirm no VI Risk

- Considerations for reducing number of sub-slab samples in a residential setting:
 - Vapor concentrations in the initial sample round
 - Location of residence in relation to contaminated soil and groundwater
 - Sub-slab sample results from nearby residences or a nearby soil vapor probe
 - Season of the year – e.g., two sample rounds in winter may be sufficient

Multiple Samples to Confirm no VI Risk

- Prefer at least one sample in the late fall/winter/early spring
 - i.e., November through March
- Sample interval: depends on season when first sample is collected
 - E.g., monthly interval OK if 1st round occurs in November through February.
 - E.g., interval of 4 – 5 months OK if 1st round occurs in April.
 - Interval can vary between 1st & 2nd and 2nd & 3rd rounds.

Multiple Samples to Confirm no VI Risk

- If VI sampling is indicated at a residence, do not delay sampling to wait for a different season
- Communication with residents and access agreements should clearly state possible timing of sampling

Reporting Results

- NR 716.14 requires reporting of results to residents/occupants/DNR within 10 days of receipt.
- DNR template letters available for reporting results; include relevant fact sheets and laboratory reports
 - Optional DNR form can be used:
<http://dnr.wi.gov/files/PDF/forms/4400/4400-249.pdf>



Webinar Wrap-up

- Send suggestions/comments/ideas for the VI Outreach Toolkit and other resources to:
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