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
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.
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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