



Update on Maine's Vapor Intrusion Guidelines

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MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

Protecting Maine's Air, Land and Water

Current VI Guidance Documents (3)

- 1) **2013 Remedial Action Guidelines (RAGs)**
 - Take into account soil, groundwater & indoor air
 - Based on updated toxicity values
- 2) **2010 Petroleum Guidance** (under revision)
 - Outlines remediation of petroleum sites in general and includes vapor intrusion guidance.
- 3) **2010 Vapor Intrusion Guidance** (under revision)
 - Outlines vapor intrusion in general for all chemicals; and
 - Follows the same approach as outlined in the Petroleum Guidance



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2012 DEP Study: Petroleum Sites- Lessons Learned

- 1) In order to have a completed VI pathway, all three of these scenarios are needed:
 - a) LNAPL/oil saturated soil within 30 feet laterally of a receptor;
 - b) A hydraulically downgradient nearby receptor; and
 - c) Petroleum impacted groundwater less than 15 feet below a structure.

Therefore, follow-up investigations (i.e. near-slab, sub-slab and indoor air sampling) are only done when these 3 scenarios are present and/or suspected;

- 2) Indoor Air Background levels often exceed Maine's allowable risk values (i.e. background is higher than action levels).



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2012 DEP Study: Chlorinated Solvent VI Lessons Learned

- 1) Based on step out investigations:
 - a) Start at the source and move along pathway to receptor;
 - b) Vapor follows utility corridors (rather than groundwater) to receptors;
 - c) Measure soil vapor rather than soil or groundwater concentrations: Modeling too uncertain; and
 - d) Measure subslab vapor if show completed pathway



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Chlorinated Solvent VI Study Lessons Learned cont...

- 2) Indoor air sampling is only done when there is a completed pathway & subslab soil vapor is greater than 10x's allowable indoor air concentration;
- 3) VI Fate and Transport depends on persistence of compounds (resistance to natural attenuation).



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Anticipated 2014 Revisions

- 1) Petroleum VI Guidance:
 - a) Gasoline sites: Screen out historical releases per the DEP Study findings and reference 2013 EPA Petroleum VI Guidance for new sites;
 - b) Home Heating Oil Spills: Handled through Emergency Response Action (Clean-up)
 - Closure allows for consideration of “typical background” levels.



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Anticipated 2014 Revisions

2) Persistent Chemicals VI Guidance

(i.e. chlorinated solvents)

a) Large Sites: Anticipate following EPA's guidance;

b) Small Sites: Adapting EPA's approach to fit small sites (i.e. < 6 buildings are impacted).



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Dry Cleaner Initiative (DCI)-Update

- Recommended DCI Program in 2013:
 - Evaluating dry cleaners on a case by case basis as funding and staff time allows:
 - Focusing on sites with the greatest HH risks:
 - a) preferential pathways are present (significant migration risk); and
 - b) closest distance to receptors (residential);
 - Investigating top ~30 out of 200 sites remaining on the list.



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Additional Information

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▪ Links:

[OSWER Final Guidance For Assessing And Mitigating The Vapor Intrusion Pathway From Subsurface Sources To Indoor Air — External Review Draft \(PDF\)](#)

[Guidance For Addressing Petroleum Vapor Intrusion At Leaking Underground Storage Tank Sites – External Draft Review \(PDF\)](#)



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