Vapor Intrusion (VI) Guidance and Policy Activities at U.S. EPA

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What is Vapor Intrusion?

- Vapor intrusion is a potential pathway for human exposure to subsurface contamination.

- Vapor intrusion **occurs when** volatile compounds migrate from contaminated groundwater or soil **into the indoor air** of an overlying or nearby building.
Simple conceptual model of the vapor intrusion exposure pathway

Office of Solid Waste and Emergency Response

Mod. from slide by M. Bolas, Ohio EPA, presented Jan. 2006
Background

- In November 2002, EPA issued the OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance)
- Since then EPA has provided training, supported technical meetings, published related documents, including:
  - Brownfields Technical Primer (2008)
  - Sampling method development and evaluations
  - Indoor Air Vapor Intrusion Mitigation Approaches
- In the near future we will be releasing:
  - Technical Analysis of EPA’s Vapor Intrusion Database
  - Background Indoor Air Levels of VOCs in Residences report
  - Conceptual Model Scenarios document
Recent Report from EPA’s Office of Inspector General (OIG)

- In December 2009, EPA’s OIG released an evaluation report: **Lack of Final Guidance on Vapor Intrusion Impedes Efforts to Address Indoor Air Risks**
- The OIG made four recommendations:
  1. Identify and publicly report the portions of OSWER’s November 2002 draft vapor intrusion guidance that remain valid and the portions that should be updated [EPA response - August 2010]
  2. Issue final vapor intrusion guidance(s) [EPA response - November 2012]
  3. Train EPA and State staff and managers and other parties on the newly updated, revised, and finalized guidance document(s) [EPA response - initiate by May 2013]
  4. Finalize toxicity values for TCE and PCE in the IRIS database [Expected-TCE summer 2011, PCE spring 2011]
Inspector General Recommend that our final vapor intrusion guidance(s) incorporate information on:

- Updated toxicity values.
- A recommendation(s) to use multiple lines of evidence in evaluating and making decisions about risk from vapor intrusion.
- How risk from petroleum hydrocarbons should be addressed.
- How the guidance applies to Superfund Five-Year reviews.
- When or whether preemptive mitigation is appropriate.
- Operations and maintenance, the termination of the systems, and when Institutional Controls and deed restrictions are appropriate.
Approach for Developing Final VI Guidance

• Launch Vapor Intrusion website (April 2010)
  http://www.epa.gov/oswer/vaporintrusion/
  – Portal for information about our VI efforts
  – Resources for environmental professionals and the public
• Identify aspects of the November 2002 draft that will be updated (August 2010)
• Seek public input through a range of venues (beginning fall 2010 – 2011)
• Conduct cross agency and interagency review
• To the extent possible, we will release interim guidance and supporting documents in advance of the final guidance document (November 2012)
Review and Consideration of Other *Vapor Intrusion* Guidance Documents

- Federal guidance documents:
  - Interstate Technology and Regulatory Council (ITRC) Technical and Regulatory Guidance (2007)
  - Department of Defense (DOD) Vapor intrusion Handbook (2009)
  - United States Postal Service (USPS) Vapor Intrusion Guidance (2009)

- State guidance documents:
Stakeholder Involvement

• Issue Federal Register Notice announcing effort and soliciting comments
• Coordinate with tribal, state and local governments directly and through associations, including ASTSWMO, Council of State Governments (CSG), Environmental Council of the States (ECOS), Tribal Science Council (TSC)
• Coordinate with Community Involvement Coordinators and representatives of community based organizations
• Meet with nongovernmental organizations
• Provide information through OSWER’s VI website
• Conduct webinars
• Hold public listening sessions in coordination with Regional offices
• Community Engagement Initiative (CEI) pilot
Seeking Input from ASTSWMO

- How to best coordinate and involve the State Representatives?
  - Process (who, how, when)

- What are the issues important to States that OWSER needs to consider?
Thank You

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Vapor Intrusion Website:
http://www.epa.gov/oswer/vaporintrusion/