

Petroleum Vapor Intrusion (PVI): The Webinar

Coming to a computer near you!

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Welcome!

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Presentation will focus on

- ▶ Regulatory Updates:
 - EPA OUST PVI Guide
 - ITRC PVI Guide

Why do it? ... (Congressional Statute)

Subtitle I of Solid Waste Disposal Act (SWDA) (added/amended 1984,1986)

10) Definition of exposure assessment As used in this subsection, the term **"exposure assessment"** means an **assessment to determine the extent of exposure of, or potential for exposure of, individuals to petroleum from a release from an underground storage tank based on such factors as the nature and extent of contamination and the existence of or potential for pathways of human exposure** (including ground or surface water contamination, air emissions, and food chain contamination), the size of the community within the likely pathways of exposure, and the comparison of expected human exposure levels to the short-term and long-term health effects associated with identified contaminants and any available recommended exposure or tolerance limits for such contaminants. (emphasis added)

(Cite: 42 USC Chapter 82 - Solid Waste Disposal)

Why do it? ... (EPA Regulations)

- ▶ 40 CFR Part 280.60 (Subpart F)
 - “Owners and operators of petroleum or hazardous substance UST systems must, in response to a confirmed release from the UST system, comply with the requirements of this subpart...”
- ▶ 40 CFR Part 280.62(a)(5)
 - “(a) Unless directed to do otherwise by the implementing agency, owners and operators must perform the following abatement measures:...”
 - “(5) Measure for the presence of a release where contamination is most likely to be present at the UST site ...” (emphasis added)

So ... soil, groundwater, and soil gas.

How is EPA moving forward?

- ▶ Creating a national PVI guide

EPA OUST PVI Guide Update

- ▶ Sept. 2009 – OUST convened meeting of interested parties to provide individual input (PVI stakeholder group)
- ▶ Broad representation and expertise: state regulators, industry, consultants, EPA HQ, Regions, and ORD
- ▶ 4 Drafts to date: 2 external (October 2011, March 2012), 2 internal (May 2012, June 2012)

EPA OUST PVI Guide Update

- ▶ Purpose & Scope of PVI Guidance
 - Presumes aerobic biodegradation of petroleum hydrocarbons (PHCs)
 - Plain language screening tool for PVI investigations at corner gas station sites
 - Addresses concern that some investigations may do more than necessary while others may not be doing enough

EPA OUST PVI Guide Update

- ▶ Purpose & Scope of PVI Guidance cont.
 - Not intended to be a comprehensive technical document
 - Only applies to USTs regulated under Subtitle I of SWDA

Major Components of PVI Guidance

- ▶ Short policy statement; including Community Engagement
- ▶ Supporting Technical Information (sections), including:
 - Conceptual Site Model
 - created from multiple lines of evidence
 - Lateral Inclusion Zone
 - based on density of clean monitoring points; upcoming ORD Issue Paper in peer review
 - Vertical Separation Distance
 - based on empirical data set; report currently in peer review

PVI Technical Supporting Documents Under Development

- ▶ Contractor report on PVI database analysis report (for vertical separation distance) – ready Summer 2012
- ▶ ORD Issue Paper on construction of lateral inclusion zone – ready Fall 2012
- ▶ Contractor report on 3-D modeling of building size (and surface cover) on oxygen flux – ready Fall 2012
- ▶ ORD technical paper on PVI modeling with BioVapor code (API's model) – ready Fall 2012

EPA OUST Guidance

▶ Planned next steps

- ▶ Internal Agency stakeholder group closure review and approval (June/July 2012)
- ▶ White House – Office of Management and Budget (OMB) review and approval (August – October 2012)
- ▶ Final guidance issued by EPA (Nov. 30, 2012)

Interstate Technology & Regulatory Council (ITRC) PVI Update

- ▶ ITRC gathered last week (6/19–21/12) in Denver, Co., for the 2nd in person meeting
 - Next meeting Oct 2012
- ▶ The ITRC PVI guidance will expand on the EPA OUST PVI guide
 - to include: Non-UST sites – refineries, terminals, etc
 - describe multiple lines of evidence approach of petroleum biodegradation in the PVI evaluation

ITRC PVI Update

- ▶ Components of guide:
 - Summary of current regulatory approach to petroleum vapor intrusion,
 - Case studies and peer reviewed research will be included,
 - overview of petroleum-related vapor intrusion mitigation will be furnished.
- ▶ Project Schedule
 - “Tech / Reg” Guidance targeted completion Dec. 2013
 - (free downloadable online document)
 - Internet-based Training targeted completion Dec 2013

Summary:

- ▶ OUST PVI Guide to be completed in Nov. 2012
 - presumes aerobic biodegradation of PHCs
 - only USTs – regulated under subtitle I SWDA
 - mainly corner gas station
 - peer reviewed supporting reports
 - lateral inclusion / vertical separation
- ▶ ITRC PVI Guide to be completed in Dec 2013
 - non-subtitle I SWDA facilities
 - case studies
 - peer reviewed reports
 - mitigation

One more thing

- ▶ PVI Compendium
- ▶ <http://www.epa.gov/oust/cat/pvi/index.htm>
- ▶ Great Source of Information

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