Dealing with TCE

(A State Perspective)

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New TCE Toxicity Values

- 2011 EPA released new "Reference Concentration" or RfC of 2 $\mu g/m^3$
- 2 $\mu g/m^3$ is safe for short- and long-term exposure
- RfC considers developmental effects (fetal cardiac malformations) that may occur after only a few days exposure during early pregnancy
- RfC based on animal studies with supporting human epidemiology

At what point above 2 µg/m^3 is TCE exposure a concern pregnant women?

- USEPA has not yet developed guidance for evaluating short-term TCE exposure with new RfC
- MassDEP raised the issue with its Health Effects Advisory Committee
- Short-term levels of concern identified for
  - Women who may be in their first 8 weeks of pregnancy;
  - General population;
  - Residential settings; and
  - Workplace settings

Required Response to "Imminent Hazards"

- Must be reported to DEP within 2 hours
- Triggers *Immediate Response Action* (IRA) to eliminate or reduce exposures
- MassDEP approves (oral/written) IRA's
- Includes notice to Chief Municipal Officer and Board of Health
- Includes notice to affected individuals

Response to TCE Imminent Hazards

- Actions put on accelerated schedule, including:
- **Immediate implementation*:***
  - Ensure appropriate Fact Sheets are provided to Affected Individuals;
  - Vent the basement or lowest level of the building by opening windows;
  - Seal cracks/utility annular spaces in bottom floor of building and subsurface walls; and
  - Enclose and passively vent sumps.

Response to TCE Imminent Hazards

- **Implemented *as soon as possible, but which may require several days to two weeks to arrange:***
  - Adjust the HVAC system
  - Install carbon filtration on HVAC system; and
  - Bring portable air-purifying units (APUs) to the affected building

Response to TCE Imminent Hazards

- **Implementation** ***as soon as possible, but which may require several weeks to two months to design, construct and test:***
  - Installation of a sub-slab depressurization system
  - Installation of air-to-air heat exchanger to over-pressurize the basement
  - Installation of a soil vapor extraction system

DEP Guidance Available Online

mass.gov/eea/agencies/massdep/cleanup/reports/site-cleanup-news-and-updates.html
on/about March 27th)

- A Fact Sheet, *"TCE Toxicity Information: Implications for Chronic and Shorter-Term Exposure" targeted to the regulated community;*
- Two sets of *"Frequently Asked Questions", for residential and workplace exposures, to address concerns raised by individuals who live and work in buildings affected by the TCE contamination;*
- A template for public notices that are required at sites where actions are being taken to address Imminent Hazards;
- Documentation of MassDEP's review of the USEPA's toxicity values for TCE and the Department's advisory committee recommendations for addressing short-term exposure; and
- (existing) technical guidance: *"Interim Final Vapor Intrusion Guidance"*