

**Understanding Indoor Vapor Intrusion Pathway
AGENDA
February 2016**

8:00 **Welcome, Agenda Overview, and Introductions**

8:10 **Background and Overview of the Pathway**

- Description of pathway and definition of problem
- Site conceptual model and determination of complete/incomplete pathways
- Options available to evaluate indoor vapor intrusion
- Calculation of risk based indoor air target concentrations
- USEPA and state guidance documents

Session will include hands on calculation of indoor air target levels.

9:30 **Option 1: Evaluation Based on Indoor Air Measurements**

- Measurement of indoor air concentrations
- Comparison of measured concentrations with target levels
- Background indoor and ambient air concentrations
- Estimation of risk based on measured concentrations

Session includes discussion of a case study.

10:15 **Break**

10:30 **Option 2: Evaluation Based on the Attenuation Factor Approach**

- Definition of attenuation factor
- Parameters that affect attenuation factors
- Attenuation factors presented in literature (USEPA and peer reviewed literature)
- Application of models to estimate attenuation factors

12:00 **Lunch**

1:00 **Estimation of Attenuation Factor (Technical Basis of Vapor Intrusion Models-1)**

- Relevant chemical specific properties
- Relevant soil properties
- Equilibrium partitioning of chemicals in soil and groundwater
- Issues and practical significance of equilibrium partitioning

Session includes hands on calculations.

2:00 **Break**

2:15 **Estimation of Attenuation Factor (Technical Basis of Vapor Intrusion Models-2)**

- Qualitative and quantitative understanding of diffusion
- Qualitative and quantitative understanding of advection
- Mixing within a building and relevant building parameters
- J&E Model & BioVapor Model.

3:30 Development and Implementation of Field Investigation Work Plan

- Data needs to evaluate pathway
- Measurement of soil vapor concentrations (location, frequency, timing)
- Field sampling methods
- Laboratory analytical methods
- Practical insights and lessons learned
- Cost-effective work plan to evaluate vapor intrusion pathway

4:00 Mitigation of Vapor Intrusion

- Vapor barriers for new buildings
- Sub-slab depressurization systems
- Remediation
- Increased ventilation
- Case Study 1: Solvents at a federal facility
- Case Study 2: Hydrocarbon plume in a large residential area
- Case Study 3: Former manufactured gas plant site

Case studies will be discussed depending on availability of time

5:00 ADJOURN

Instructor will be available to answer any questions or discuss specific projects until 6:30 pm.