



The Vapor Intrusion Risk Pathway: A Practical Guide Classroom Training – 2 Day Course

Hartman Environmental Geoscience will be providing a comprehensive and practical training class in northern & southern California in February/March 2017. The course is open to all environmental professionals on how to understand and assess the vapor intrusion pathway. The course will also cover ramifications of the new ASTM Phase 1 Standard relating to the vapor encroachment condition in Phase 1 assessments.

The course is highly interactive with numerous class exercises from real sites and demonstrations of sampling methods. A draft topic outline follows this page. The course will include presentations by CA-DTSC staff on the agency's vapor intrusion guidance/policy and possibly also by regulatory staff from CA Waterboards.

Course Dates: Oakland: Tuesday February 28 & Wednesday March 1, 2017
Costa Mesa: Thursday March 2 & Friday March 3, 2017

Location: Venues to Be Announced

Pricing: Before February 1st: \$495 if by check; \$525 if by credit card (VISA) or PayPal
February 1st or after: \$595 if by check; \$625 if by credit card (VISA) or PayPal

Instructors: Dr. Blayne Hartman, Suzie Reed Nawikas and at least 2 additional instructors

Registration:

- By Check: Send e-mail to: blayne@hartmaneg.com or
Call Hartman Environmental Geoscience (858) 204-6170
- By Credit Card: Go to www.hartmaneg.com; CA VI Course Payment Page

Certificates of Course Attendance: Will be given for 13 hours of instruction

Want More Information? Contact Dr. Blayne Hartman at blayne@hartmaneg.com

TOPIC LIST/COURSE OUTLINE:

◆ OVERVIEW OF VAPOR INTRUSION

- What is it?
- Why do You Care About it?
- When Should You Care About It?
- At What Sites/Conditions Need You Care About It?

◆ REVIEW OF FEDERAL & STATE GUIDANCES

- EPA OSWER & EPA-OUST
- ITRC & ASTM
- Updates on CA VI Guidances by CA Regulatory Staff

◆ SOME KEY PRINCIPLES

- Units
- Partitioning (Henry's Constants & How to Use them).
- Transport Through the Vadose Zone (Diffusion & Advection)
- Site Conceptual Models
- Attenuation Factors. What are they? How to Use Them?
- Risk Basics

◆ METHODS TO ASSESS VAPOR INTRUSION

- Indoor Air Methods
- Groundwater Methods
- Modeling
- Supplemental & Unique Investigatory Tools

◆ SOIL GAS SAMPLING METHODS

- An Overview of Soil Gas Methods
- Details of Active Soil Gas Survey Sampling

◆ ANALYSIS METHODS

- Indoor Air Methods
- Soil Gas Methods
- Portable Field Meters

◆ MITIGATION

- A Review of the Various Methods
- Cost Effective System Design Considerations

◆ CASE HISTORIES

- Chlorinated Solvent Site
- Fuels Site