



# Vapor Intrusion Pathway: A Practical Guideline



## Course Overview

Over the past ten years, vapor intrusion (VI) has become a significant environmental issue for regulators, industry leaders, and concerned residents alike. Vapor intrusion is characterized as the migration of volatile chemicals from the subsurface into overlying structures. The simplicity of this definition belies the magnitude of resources being expended to address this complex exposure pathway. This training is based on ITRC's national VI pathway guidance which was developed through the combined efforts of more than 100 professionals, including state and federal regulators, consultants, technology vendors, industry, and community stakeholders.

Led by internationally recognized experts, this 2-day ITRC classroom training will enable you to:

- ▶ *Learn the latest strategies to conduct site screening and investigations*
- ▶ *Determine what tools are appropriate to collect quality data and evaluate the results*
- ▶ *Apply multiple lines of evidence to ensure quality decision-making*
- ▶ *Build solutions for VI issues through understanding of mitigation options*
- ▶ *Network with environmental professionals*
- ▶ *Learn about new USEPA VI developments*

Interactive learning with hands-on exhibits, classroom exercises, and frequent Q&A sessions will reinforce these course objectives and contribute to a practical understanding of this difficult pathway.

### **ITRC's Vapor Intrusion Guidance:**

- ▶ *Vapor Intrusion Pathway: A Practical Guideline (VI-1, January 2007)*

No cost download at:

<http://www.itrcweb.org/VaporIntrusion>

## 2010 Class Dates & Locations:

- ▶ **March 22-23**  
in Norfolk, Virginia

Hosted by ITRC State Member:



- ▶ **July 12-13**  
in Boston, Massachusetts (area)

In cooperation with ITRC State Member:

**Massachusetts Department of Environmental Protection**

- ▶ **October 4-5**  
in Atlanta, Georgia

Hosted by ITRC State Member:

**Georgia Environmental Protection Division**



## Course Outline & Agenda

### Day 1

**7:00 a.m.–8:00 a.m.**

- ▶ Participant check in

**8:00 a.m.–5:00 p.m.**

- ▶ Vapor Intrusion (VI) Pathway
- ▶ Investigative Framework
- ▶ Workplan Design
- ▶ Conceptual Site Model
- ▶ Investigative Tools & Exhibits

### Day 2

**8:00 a.m.–5:00 p.m.**

- ▶ Data Evaluation
- ▶ Background Sources
- ▶ Multiple Lines of Evidence
- ▶ Mitigation
- ▶ Application Exercises

*Also includes information about new USEPA VI developments*

## Registration Instructions

To register, go to "Classroom Training" at [www.itrcweb.org/crt.asp](http://www.itrcweb.org/crt.asp) and select the "Registration" link corresponding to the appropriate training course, location, and date. Follow the instructions to register and provide payment (if required). If you have questions after viewing the online registration information, please contact the ITRC Training Program at (402) 201-2419 or [training@itrcweb.org](mailto:training@itrcweb.org).

## Course Instructors (instructors vary by class)

### John Boyer

New Jersey Department of Environmental Protection  
Trenton, New Jersey  
Technical co-Lead for ITRC's Vapor Intrusion Project and  
Principal in developing vapor intrusion policy for NJDEP

### Robin Mongeon

New Hampshire Dept. of Environmental Services  
Concord, New Hampshire.  
Technical co-Lead for ITRC's Vapor Intrusion Project and  
developed vapor intrusion guidance for NHDES

### Bill Morris

EnviroGroup, Ltd  
Lawrence, Kansas  
Former co-Lead for ITRC's Vapor Intrusion Project with 20  
years in environmental field, including 8 years as the vapor  
intrusion expert for the State of Kansas

### Blayne Hartman, Ph.D.

Hartman Environmental Geoscience  
Carlsbad, California  
Author/editor for vapor intrusion and soil gas guidance for  
U.S. EPA, CA-EPA, ITRC, DOD, API, ASTM, and more  
than 25 separate state documents

### Robert Ettinger

GeoSyntec Consultants  
Santa Barbara, California  
Author of the most commonly used vapor intrusion model  
and has conducted vapor intrusion site investigation and  
modeling assessments at sites across the country.

### Todd McAlary, P.E., P.G.

GeoSyntec Consultants  
Ontario, Canada  
Technical Director of one of the world's largest studies of  
subsurface vapor intrusion and member of the EPA  
OSWER Expert Panel since 2000

### David Folkes, P.E.

EnviroGroup, Ltd  
Centennial, Colorado  
Project Manager of one of the largest vapor intrusion sites  
in the country since 1998 and has worked on over 30 other  
vapor intrusion projects across the U.S.

## Continuing Education Information

A certificate of participation will be provided to interested participants indicating 16 professional development hours. Please check with your organization or appropriate licensing board for their requirements and if they will accept this ITRC training course. More information on registration page.

## Registration Fee

The course fee is \$795 (with early bird fee of \$595). This fee includes a student manual and networking opportunities with refreshments.

**Note:** For U.S. local, state, and federal government, students, community stakeholders, and tribal representatives, ITRC will offer a limited number of scholarships. More information is available on the registration webpage: [www.itrcweb.org/crt.asp](http://www.itrcweb.org/crt.asp).

**Cancellations:** If you must cancel and notify us on or before the cancellation cut-off date, the registration fee will be fully refunded (Note: a \$75 processing fee may apply).

## Who should attend?

Regulatory staff involved in remediation programs, members of the regulated community with remediation projects or problems, remediation consultants, public stakeholders, and others interested in gaining a better understanding of the vapor intrusion pathway should attend this training class. Space is available for 200 participants and may be limited by sector to ensure participant diversity.

## ADA (Americans with Disabilities Act) Information

If you require special accommodation to fully participate in this seminar, please contact the ITRC Training Program at (402) 201-2419 or [training@itrcweb.org](mailto:training@itrcweb.org) at least four weeks prior to the course start date.

## Future classes

ITRC plans to offer this classroom training course at various locations throughout the U.S. from 2010 - 2011. As classes are scheduled, information will be available at [www.itrcweb.org/crt.asp](http://www.itrcweb.org/crt.asp).

ITRC is  
hosted by



Environmental Council  
of the States

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[www.itrcweb.org](http://www.itrcweb.org)



### ITRC Federal Partners



ITRC Industry  
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of Energy



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U.S. Environmental  
Protection Agency

Established in 1995, the Interstate Technology and Regulatory Council (ITRC) is a state-led coalition working together with federal partners, industry, academia, and stakeholders to achieve regulatory acceptance of innovative environmental technologies and approaches.

ITRC operates as a committee of the Environmental Research Institute of the States (ERIS), a Section 501(c)(3) public charity that supports the Environmental Council of the States (ECOS) through its educational and research activities aimed at improving the environment in the United States and providing a forum for state environmental policy makers. Including membership from all 50 states, ITRC is funded primarily by the U.S. Department of Energy, the U.S. Department of Defense, the U.S. Environmental Protection Agency as well as through the ITRC Industry Affiliates Program (IAP).