

## What is ITRC?

Established in 1995, the Interstate Technology & Regulatory Council (ITRC) is a state-led, national coalition of personnel from the environmental regulatory agencies of some 40 states and the District of Columbia; three federal agencies; tribes; and public and industry stakeholders. The organization is devoted to reducing barriers to, and speeding interstate deployment of, better, more cost-effective, innovative environmental techniques.

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. ITRC is funded primarily by the U.S. Department of Energy. Additional funding and support have been provided by the U.S. Department of Defense and the U.S. Environmental Protection Agency.



ITRC is  
hosted by



Environmental Council  
of the States

More information about ITRC  
and its available products  
and services can be found  
via the ITRC home page  
[www.itrcweb.org](http://www.itrcweb.org).

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**Supporting ITRC and the  
Accelerated Bioremediation Class:**  
Southern States Energy Board (SSEB)  
Western Governors' Association (WGA)  
U.S. DOE Office of Technical Program Integration  
Environmental Security Technology Certification  
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U.S. EPA, Technology Innovation Office  
U.S. EPA, Office of Research and Development



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# Accelerated Bioremediation of Chlorinated Solvents

AN ITRC/RTDF TRAINING COURSE

Location:

## Adams Mark Hotel

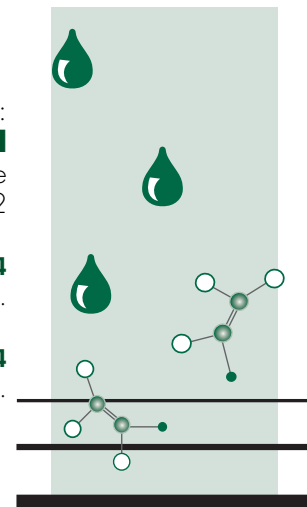
1550 Court Place  
Denver, CO 80202

**September 28, 2004**

8:00 a.m. – 5:00 p.m.

**September 29, 2004**

8:00 a.m. – 4:00 p.m.



Colorado Department  
of Public Health  
and Environment



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Regulatory Council (ITRC)  
Remediation Technologies  
Development Forum (RTDF)



# Accelerated Bioremediation of Chlorinated Solvents

Chlorinated solvents are present in soil and groundwater at thousands of sites in North America. Accelerated bioremediation can provide an innovative and cost-effective approach for remediation of many of these sites.

In this class international experts present the latest developments in accelerated bioremediation of chlorinated solvents. A logical follow-on to the highly acclaimed training series "Natural Attenuation of Chlorinated Solvents in Groundwater," this new course examines the roles of site characterization, modeling, design, monitoring, and regulatory interaction in applying in situ engineered bioremediation. Lectures, case studies, hands-on exercises, and structured discussion sessions give students knowledge and information that can be immediately put to use.

## Course Outline

### Tuesday, September 28 7:30 a.m.

On-site registration and course material distribution

#### 8:00 a.m. – 5:00 p.m.

Key Bioremediation Concepts  
Groundwater Case Studies  
Bioventing Case Studies  
Practical Exercises  
Regulatory Discussion

### Wednesday, September 29

#### 8:00 a.m. – 4:00 p.m.

Design Considerations  
Construction, Start-Up, and Operation  
Cost Estimating  
Hands-On Problem Solving  
Performance Evaluation and Validation



An  
ITRC/RTDF  
Training  
Course



## Who Should Attend

Regulatory staff involved in remediation programs, members of the regulated community with remediation projects or problems, remediation consultants, public stakeholders and academic researchers in this field. Space is limited to 100 participants on a first come, first served basis.

## Fees

Fees include a student manual for each participant and continental breakfast, lunch, and breaks throughout the training. The course fee is \$400 until September 6 and \$500 after. **Note:** Fee waived for state and federal regulators and tribal registrants.

## Registration Instructions

To register, go to "Classroom Training" on the ITRC Web site at [www.itrcweb.org](http://www.itrcweb.org). Click "Accelerated In Situ Bioremediation," then the "Registration" link. Simply complete the online form and click "Submit." All fees should be paid online by credit card. If you cannot register online, please call Bill Herrington at (540) 557-6079.

## Suggested Accommodations

Adams Mark Hotel  
1550 Court Place • Denver, CO 80202

Reservations must be made by **August 28** to guarantee the conference rate of \$112 plus tax. Please call (303) 893-3333 or (800) 444-2326 and ask for "ITRC."

Participants are responsible for their own lodging arrangements and expenses.

## Course Instructors

**David E. Ellis, Ph.D., P.G.,** Environmental Fellow in DuPont Chemical, Wilmington, Delaware  
Leads DuPont's Bioremediation Technology Team, also Chair of the RTDF Consortium on Bioremediation of Chlorinated Solvents

**Edward Lutz, P.E.,** Senior Principal Engineer, Dupont Chemical, Wilmington, Delaware  
Registered professional civil engineer with over 25 years of experience in remediation field projects

**Evan Cox, M.Sc.,** Associate, GeoSyntec Consultants, Guelph, Ontario, Canada  
Brings over 10 years of practical experience in design and application of in situ bioremediation systems

## Ground Transportation

The airport shuttle is available every 15 minutes 5AM-6PM. It costs \$18 and the ride takes 60-90 minutes (it stops at every hotel in the area). Taxis and limousines are available from the Denver airport to the Adams Mark hotel (approx. 45 minutes).

Directions: From the airport, take I-70 West to South I-25. Exit East Colfax, left on Court to the hotel entrance. The Adams Mark hotel is 24 miles from Denver International Airport. Four blocks from Colorado Convention Center.

## ADA Requests

If you require special accommodations to fully participate in this seminar, please contact Paul Hadley at (916) 324-3823 at least two weeks prior to course start date.

## Cancellations

If you must cancel and notify us on or before September 21, 2004, the registration fee will be fully refunded.

## Questions?

**Course Details:** Paul Hadley, California Department of Toxic Substance Control, [phadley@dtsc.ca.gov](mailto:phadley@dtsc.ca.gov), (916) 324-3823, fax (916) 327-4494

**Future Course Dates:** See "Classroom Training" on the ITRC Web site: [www.itrcweb.org](http://www.itrcweb.org)

**David W. Major, Ph.D.,** Principal, GeoSyntec Consultants, Guelph, Ontario, Canada  
Internationally recognized for pioneering development of in situ remediation technologies

**Paul Hadley, P.E.,** California Department of Toxic Substances Control, Sacramento, California  
Technical Chair for ITRC's In Situ Bioremediation Team

**Carolyn Acheson, Ph.D.,** U.S. EPA Office of Research and Development  
Co-chair of the RTDF Consortium on Bioremediation of Chlorinated Solvents