

## Battelle's 7<sup>th</sup> International Symposium on Bioremediation and Environmental Biotechnology

June 23-26<sup>th</sup>, 2025, Boston, Massachusetts

### Featured Presentations

#### Monday, June 23, 2025

##### Short Course - Technology Selection: Matching Key Contaminant Characteristics and Hydrogeology with Technology Attributes

**8:00 AM – 12:00 PM** This session will target the fundamental concepts that are the basis for selecting a remedial technology to treat still prevalent contaminants such as chlorinated solvents and petroleum hydrocarbons.

**Back Bay Ballroom B** **Instructors:** Josephine Molin (Evonik), Brant Smith (Evonik), Dan Leigh (Evonik), and Fayaz Lakhwala (Evonik)

#### Tuesday, June 24, 2025

##### Session – C2. Combined Treatment of Emerging Contaminants with CVOCs

**11:45 AM – 12:10 PM** Balancing Construction Timeline and Technical Approach – Regulatory and Logistical Challenges Addressing Comingled TCE and PFAS Plumes While Managing Client Expectations  
**Back Bay Ballroom B** *Christine Redfern, Heather Reccelli, Ravi Srirangam, Kyle Boretsky, Michael Kozar*  
**Christine Redfern, Ramboll**

##### Session – D2. Innovative and Efficient Amendment Delivery Strategies

**4:20 PM – 4:45 PM** Can ISCO Promote Biodegradation? Synergistic Effects of Combining Sodium Persulfate and Sulfate-Enhanced Biostimulation Relying on Reusable Direct Push Points  
**Back Bay Ballroom C** *David Alden, Carlo Bianco, Gary Birk, David Wiley, Jose Suarez, Ximena Druar*  
**David Alden, Tersus**

##### Session – E1. Advances in Amendment Formulations

**8:00 AM – 8:25 AM** Transitioning Remediation Approaches: From Biological Permeable Reactive Barriers (PRBs) to Biogeochemical Reactive Zones to Mitigate Chlorinated Solvent Plume Discharge to Surface Water  
**Back Bay Ballroom D** *Ravi Srirangam, Christine Redfern, Gary Angyal*  
**Ravi Srirangam, Ramboll**

##### Session – E3. Enhanced Methods for Biodegradation/Biotransformation of Organic and Inorganic Contaminants

**1:50 PM – 2:15 PM** In Situ Treatment of Heavy Metals and Chlorinated Solvents in Groundwater at a Brownfields Redevelopment Site  
**Back Bay Ballroom D** *Fayaz Lakhwala, Jamie Stapleton*  
**Fayaz Lakhwala, Evonik**

#### Session – E4. Biogeochemical Remediation Processes

3:55 PM – Meta-Study of In Situ CVOC Degradation Using Combined Organic Carbon and ZVI  
4:20 PM Reagents  
Back Bay Jason Tillotson  
Ballroom D Jason Tillotson, ARCADIS

Wednesday, June 25, 2025

#### Session – D4. Challenges in Application of Bioremediation Tools

11:45 AM – Application of an All-In-One Technology for a Combined Bioremediation and ISCO  
12:10 PM treatment of a Comingled Source Area at a Former Pharmaceutical Facility  
Back Bay Alberto Leombruni, Michael Mueller, Brant Smith  
Ballroom C Alberto Leombruni, Evonik

#### Session – E5. Optimization of Classical Bioremediation Technologies

10:30 AM – Full-Scale Application in Italy of an ERD Technology for the Treatment of an Aquifer  
10:55 AM Impacted with Chlorocarbons Near a Salt Pond Ecosystem  
Back Bay Alberto Leombruni, Michael Mueller, Daniel Leigh  
Ballroom D Alberto Leombruni, Evonik

#### Session – E7. Advances in Heat-Enhanced Bioremediation

4:20 PM – Evaluating ISTR Influence on a Passive EISB Biobarrier: A Multi-Faceted Approach to  
4:45 PM Mitigate CVOC Impacts to Surface Water on an Accelerated Timeline  
Back Bay Christine Redfern, Gary Angyal, Ravi Srirangam  
Ballroom D Christine Redfern, Ramboll

Thursday, June 26, 2025

#### Session - D8. Bioremediation Case Studies

2:15 PM – Full Scale Application of ERD following ISCO/S-ISCO® for Treatment of NAPL  
2:40 PM Pharmaceutical Waste Mixture  
Back Bay Felipe Solan  
Ballroom C Felipe Solan, Geosyntec Demark

#### Session - E10. Bioremediation of Munitions Constituents

1:00 PM – Biochemical Treatment of Organic Explosive Compounds in Soil and Sediment at U.S.  
1:25 PM Military Sites  
Back Bay Alan Seech, Edward Meeks, Scott Larew, John Valkenburg, Stacey Telesz  
Ballroom D Alan Seech, Evonik

## Featured Poster Presentations

---

### Group 1 Posters

**Display: Monday 7:00 PM – Tuesday 7:00 PM**

**Presentations: Tuesday 5:45 PM – 7:00 PM**

#### **Session – B1. Remediation and Management of Petroleum Hydrocarbon-Contaminated Sites**

**Poster # 80** Effective Remediation of Residential Heating Oil  
*Paul Dombrowski, Krystian Gombosi, Mark Ratner, Brian Hasty*  
**Paul Dombrowski, ISOTEC Remediation Technologies**

#### **Session – C2. Combined Treatment of Emerging Contaminants with CVOCs**

**Poster # 53** Progressing from Bioremediation to Chemical Reduction and Sequestration:  
Remediating CVOCs at a Formal Industrial Site in New Jersey with Historical Use of  
PFAS  
*Ravi Srirangam, Christine Redfern, Heather Reccelli, Kyle Boretsky, Michael Kozar*  
**Ravi Srirangam, Ramboll**

#### **Session – D1. In Situ Bioremediation Applications**

**Poster # 460** Enhanced Reductive Dechlorination using a Multi-Aquifer Injection Well Transect to  
Replace a Pump & Treat System at a TCE-Impacted Site  
*Eduardo Abdo, Isaac Pelz, Arun Chemburkar*  
**Eduardo Abdo, ERM**

#### **Session – D2. Innovative and Efficient Amendment Delivery Strategies**

**Poster # 28** “First-of-Its-Kind” Horizontal Directional Drilling Injection of More than 1,000,000  
Pounds of Reagent  
*Mike Scalzi, Dan Ombalski*  
**Mike Scalzi, IET**

**Poster # 388** Demonstration of Advanced Amendment Delivery Technologies for Remediation in  
Difficult Geologic Settings: Multiple Case Studies  
*Ryan Wymore, Michael Lamar, Jeff Bamer*  
**Ryan Wymore, CDMSmith**

### Group 2 Posters

Display: Wednesday 7:00 AM – Thursday 1:00 PM

Presentations: Wednesday 5:45 PM – 7:00 PM

#### Session – D8. Bioremediation Case Studies

**Poster #387** Lessons Learned in 30 Years of Aerobic Soil Bioremediation

*Alan Seech, John Valkenburg, Stacey Telesz*

**Alan Seech, Evonik**

**Poster # 100** Combined Remedy for Multi-Acre TCE and 1,4-Dioxane Groundwater Plumes

*James Kazanjian, Peter Downham*

**James Kazanjian, ROUX**

**Poster # 256** Application of Combined In Situ and Bioaugmentation Remedial Approaches at Two Former Industrial Sites to Treat Recalcitrant CVOC Impacts and Move Sites to Closure

*Jeffery Miller, Elizabeth Biship, Edward Clement, W. Thomas West, Adam Quick, Julia LaRochelle, Shannon Cisneros*

**Jeffery Miller, Haley & Aldrich**

#### Session – E10. Bioremediation of Munitions Constituents

**Poster # 359** The Proof Is In the Pudding: Bioremediating TNT and Metabolites to Facilitate On-Site Soil Reuse

*Scott Larew, Edward Meeks, Ian McCary, Alan Seech*

**Scott Larew, Kennedy/Jenks**