

# PROGRAM AT A GLANCE

## SUNDAY SHORT COURSES

**8:00 A.M.–5:00 P.M.** (1-hr break on own)

- ~~Development and Use of Air Action Levels at Remediation Sites~~ **CANCELED**
- Challenges of Groundwater Remediation in Fractured Rock and Karst Aquifers
- ~~Raising Leadership to Your Level of Authority~~ **CANCELED**
- Vapor Intrusion: Learning the Current Approaches for Conceptualization, Assessment, Evaluation, Monitoring, and Mitigation

**8:00 A.M.–12:00 NOON**

- Measurement and Use of Mass Discharge and Mass Flux to Improve Decisions at Contaminated Sites

**1:00–5:00 P.M.**

- ~~Environmental Molecular Diagnostic Tools for Site Assessment and Bioremediation Monitoring~~ **CANCELED**
- Practical Tracer Testing Techniques for Site Characterization and Remediation System Design
- Integrated DNAPL Site Strategy (IDSS)
- ~~Framework and Metrics for Incorporating Sustainability into Remediation Projects~~ **CANCELED**

## WEDNESDAY SHORT COURSES

**1:00–5:00 P.M.**

- Improving your Remedial Success Rate with Incremental Sampling Methodology Investigation Approaches
- Introduction to Groundwater Remediation Geochemistry
- ~~Biofuels: Release Prevention, Environmental Behavior, and Remediation~~ **CANCELED**
- Field Methods to Distinguish Between Vapor Intrusion and Indoor Sources of VOCs
- Horizontal Wells: Enhanced Access for Characterization and Remediation of Chlorinated Compounds and Recalcitrant Compounds
- Characterizing and Understanding Remediation Processes In Situ: The In Situ Technological Toolbox
- Utilization of Stable Isotopes in Studying the Fate and Origin of Chlorinated and Recalcitrant Compounds
- Biogeochemical Reductive Remediation of Chlorinated Solvents and Metals
- ~~Life Cycle Assessment (LCA) and Other Approaches to Estimation Impacts for Remediation Systems~~ **CANCELED**

## SUNDAY, MAY 20, 2012

Short Courses 8:00 A.M. – 5:00 P.M.

*See sidebar for course offerings.*

Registration Desk 3:00 – 9:00 P.M.

Exhibits, Welcome Reception  
Poster Group 1 Display  
6:00 – 9:00 P.M.



Photo courtesy of David Gubernick/Monterey County CVB



Photo courtesy of Monterey County CVB



Photo courtesy of Monterey County CVB

## MONDAY, MAY 21, 2012

Exhibits, Registration, Poster Group 1 Display  
7:00 A.M. – 7:00 P.M.

Continental Breakfast 7:00 – 9:00 A.M.

Plenary Session 9:00 – 10:30 A.M.

Lunch on Own

## PLATFORM SESSIONS 12:35–5:10 P.M.

**A**

- A1.** ITRC Development of a Technical/Regulatory Guideline on Incremental Sampling Methodology
- A2.** Innovative Site Characterization

**B**

- PANEL.** The State of Environmental Remediation in 2012: Present and Future Research Needs.
- B1.** Environmental Remediation in Emerging International Markets

**C**

- C1.** Remediation Cost and Technology Selection
- C2.** Long-Term Monitoring Strategies and Optimization

**D**

- D1.** Abiotic Degradation Pathways and Rates
- D2.** Innovation and Applications of ISCO Using Sodium Persulfate

**E**

- E1.** Large Dilute Plumes
- E2.** Advances in Bioremediation Techniques for Chlorinated Solvents

**F**

- F1.** LNAPLs: Advances in Source and Solvent Plume Characterization
- F2.** Enhanced Bioremediation of Hydrocarbons

**G**

- G1.** Estimating Remediation Impacts: Tools and Approaches
- G2.** Incorporating GSR Practices into Remedy Selection and Design

**H**

- H1.** Contaminated Sediment and Soil Assessment
- H2.** Contaminated Sediments Remediation

**Poster Group 1 Presentations and Reception**  
5:15–7:00 P.M. (See Page 8 for sessions.)

<p style="text-align: center;"><b>TUESDAY, MAY 22, 2012</b></p> <p>Exhibits, Registration, Poster Group 2 Display 7:00 A.M. – 7:00 P.M.</p> <p>Continental Breakfast 7:00 – 8:00 A.M.</p> <p>Platform Sessions 8:00 A.M. – 5:10 P.M.</p> <p style="text-align: center;">Lunch</p>	<p style="text-align: center;"><b>WEDNESDAY, MAY 23, 2012</b></p> <p>Exhibits, Registration, Group 3 Poster Display 7:00 A.M. – 1:00 P.M.</p> <p>Continental Breakfast 7:00 – 8:00 A.M.</p> <p>Lunch 11:00 A.M. – 12:45 P.M.</p>	<p style="text-align: center;"><b>THURSDAY, MAY 24, 2012</b></p> <p>Exhibits, Poster Group 3 Display 7:00 A.M. – 1:30 P.M.</p> <p>Registration Desk 7:00 A.M. – 6:00 P.M.</p> <p>Continental Breakfast 7:00 – 8:00 A.M.</p> <p style="text-align: center;">Lunch</p>
<p style="text-align: center;"><b>PLATFORM SESSIONS 8:00 A.M.–5:10 P.M.</b></p>	<p style="text-align: center;"><b>PLATFORM SESSIONS 8:00–10:55 A.M.</b></p>	<p style="text-align: center;"><b>PLATFORM SESSIONS 8:00 A.M.–3:55 P.M.</b></p>
<p><b>A3.</b> Application of Compound-Specific Isotopic Analysis in Forensic Analysis <b>A4.</b> High-Resolution Site Characterization <b>PANEL.</b> Site Characterization: Determining the Right Amount for Decision Making</p>	<p><b>A5.</b> Innovative Assessment Tools and Techniques</p>	<p><b>A6.</b> Emerging Contaminants: Characterization, Assessment, and Regulatory Considerations <b>A7.</b> Characterization and Remediation of Pesticides/Herbicides <b>A8.</b> Advances in Detection and Remediation of PAHs, PCBs, Dioxins, and Furans</p>
<p><b>B2.</b> Advances in Physical/Chemical Remediation <b>B3.</b> Best Practices in Thermal Remediation</p>	<p><b>B4.</b> Nanoscale Zero-Valent Iron and Other Reactive Particles</p>	<p><b>B5.</b> Permeable Barrier Advances and Applications <b>B6.</b> Combining Remediation Technologies</p>
<p><b>C3.</b> Site Closure and Exit Strategies, Including Alternative Endpoints <b>C4.</b> Improvements in Selection and Verification of Natural Attenuation <b>C5.</b> Combined Remedies <b>C6.</b> Risk Communication/Community Outreach during Cleanup</p>	<p><b>C7.</b> Optimization and Shutdown of Existing Systems</p>	<p><b>PANEL.</b> DNAPL Site Cleanup and Closure Strategies <b>C8.</b> Mass Flux/Discharge as a Remediation Performance Metric <b>C9.</b> Integrated DNAPL Site Strategy/Mass Flux Management</p>
<p><b>D3.</b> In Situ Chemical Oxidation: Recent Advances <b>D4.</b> In Situ Chemical Reduction</p>	<p><b>D5.</b> Improvements to Subsurface Delivery Methods for Chemical Oxidants and Reductants</p>	<p><b>D6.</b> Fracturing to Improve Subsurface Delivery of Oxidants and Reductants <b>D7.</b> Long-Term Impacts to Groundwater Quality after ISCO <b>D8.</b> Using Horizontal Wells for Enhanced Delivery</p>
<p><b>E3.</b> Defining and Managing Aquifer Heterogeneity to Improve Groundwater Remediation <b>E4.</b> Plume Responses to Source Zone Treatment <b>E5.</b> DNAPLs: Advances in Source and Solvent Plume Characterization</p>	<p><b>E6.</b> Chlorinated Solvents Assessment and Remediation: Are We There Yet?</p>	<p><b>E7.</b> Enhanced Bioremediation of Chlorinated Solvents <b>E8.</b> Remediation of Chlorinated Solvents in Fractured Media</p>
<p><b>F3.</b> Bioaugmentation <b>F4.</b> Aerobic and Anaerobic Biodegradation Pathways <b>F5.</b> Molecular Biological Tools for Remediation <b>F6.</b> Biogeochemical Transformation: Mechanisms and Engineering Considerations</p>	<p><b>F7.</b> Field-Scale Applications of Enhanced In Situ Bioremediation</p>	<p><b>F8.</b> Phytoremediation <b>F9.</b> Biostimulation: Advances with Electron Donors and Nutrients <b>F10.</b> Physical and Microbiological Inhibitors to Bioremediation</p>
<p><b>G3.</b> Incorporating GSR Practices into Remedy Operation and Optimization <b>PANEL.</b> Assessing Green and Sustainable Remediation (GSR): What Have We Accomplished and What Can We Improve Upon? <b>G4.</b> Integrating Renewable Energy into Remedial Programs to Achieve Cost-Effective Solutions <b>G5.</b> Incorporating Societal and Economic Aspects into GSR</p>	<p><b>G6.</b> Demonstrating Values of GSR: Programs and Approaches that Reduce Footprint</p>	<p><b>G7.</b> Vapor Intrusion Sampling and Assessment <b>G8.</b> Vapor Intrusion Mitigation</p>
<p><b>H3.</b> Hydraulic Fracturing Impact Assessment Strategies and Monitoring <b>H4.</b> Assessment and Remediation of MTBE and Other Oxygenates <b>H5.</b> Remediation of MGP Sites <b>H6.</b> Perchlorate Source Identification, Detection, and Remediation</p>	<p><b>H7.</b> Munitions Constituent Characterization, Fate, and Transport</p>	<p><b>H8.</b> Mercury <b>H9.</b> Chromium: Assessment, Characterization, and Remediation <b>H10.</b> Heavy Metals and Metalloids: Global Biochemical and Geochemical Strategies for Remediation</p>
<p style="text-align: center;"><b>Poster Group 2 Presentations and Reception 5:15–7:00 P.M.</b> (See Page 8 for sessions.)</p>	<p style="text-align: center;"><b>Poster Group 3 Presentations and Group Lunch 11:00 A.M.–12:45 P.M.</b> (See Page 8 for sessions.)</p>	<p style="text-align: center;"><b>Closing Reception 4:00–5:30 P.M.</b></p>

# POSTER SCHEDULE

Poster sessions are divided into three groups for display and presentation as shown below. Presenters will be at their posters during the designated presentation periods to discuss their work. Receptions will be served during the Monday and Tuesday evening poster sessions, and a light lunch will be provided during the Wednesday poster presentations.

## POSTER GROUP 1

**Display: Sunday 6:00 P.M.–Monday 7:00 P.M.**

**Presentations: Monday 5:15–7:00 P.M.**

- A1. ITRC Development of a Technical/Regulatory Guideline on Incremental Sampling Methodology
- A2. Innovative Site Characterization
- B1. Environmental Remediation in Emerging International Markets
- B2. Advances in Physical/Chemical Remediation
- B3. Best Practices in Thermal Remediation
- C1. Remediation Cost and Technology Selection
- C2. Long-Term Monitoring Strategies and Optimization
- D1. Abiotic Degradation Pathways and Rates
- D2. Innovation and Applications of ISCO Using Sodium Persulfate
- D3. In Situ Chemical Oxidation: Recent Advances
- E1. Large Dilute Plumes
- E2. Advances in Bioremediation Techniques for Chlorinated Solvents
- F1. LNAPLs: Advances in Source and Solvent Plume Characterization
- F2. Enhanced Bioremediation of Hydrocarbons
- F3. Bioaugmentation
- G1. Estimating Remediation Impacts: Tools and Approaches
- G2. Incorporating GSR Practices into Remedy Selection and Design
- H1. Contaminated Sediment and Soil Assessment
- H2. Contaminated Sediments Remediation
- H3. Hydraulic Fracturing Impact Assessment Strategies and Monitoring

## POSTER GROUP 2

**Display: Tuesday 7:00 A.M.–7:00 P.M.**

**Presentations: Tuesday 5:15–7:00 P.M.**

- A3. Application of Compound-Specific Isotopic Analysis in Forensic Analysis
- A4. High-Resolution Site Characterization
- A5. Innovative Assessment Tools and Techniques
- C3. Site Closure and Exit Strategies, Including Alternative Endpoints
- C4. Improvements in Selection and Verification of Natural Attenuation
- C5. Combined Remedies
- C6. Risk Communication/Community Outreach during Cleanup
- C7. Optimization and Shutdown of Existing Systems
- D4. In Situ Chemical Reduction
- D5. Improvements to Subsurface Delivery Methods for Chemical Oxidants and Reductants
- E3. Defining and Managing Aquifer Heterogeneity to Improve Groundwater Remediation
- E4. Plume Responses to Source Zone Treatment
- E5. DNAPLs: Advances in Source and Solvent Plume Characterization
- F4. Aerobic and Anaerobic Biodegradation Pathways
- F5. Molecular Biological Tools for Remediation
- F6. Biogeochemical Transformation: Mechanisms and Engineering Considerations
- G3. Incorporating GSR Practices into Remedy Operation and Optimization
- G4. Integrating Renewable Energy into Remedial Programs to Achieve Cost-Effective Solutions
- G5. Incorporating Societal and Economic Aspects into GSR

- G6. Demonstrating Values of GSR: Programs and Approaches that Reduce Footprint
- H4. Assessment and Remediation of MTBE and Other Oxygenates
- H5. Remediation of MGP Sites
- H6. Perchlorate Source Identification, Detection, and Remediation
- H7. Munitions Constituent Characterization, Fate, and Transport

## POSTER GROUP 3

**Display: Wednesday 7:00 A.M.–Thursday 1:30 P.M.**

**Presentations: Wednesday 11:00 A.M.–12:45 P.M.**

- A6. Emerging Contaminants: Characterization, Assessment, and Regulatory Considerations
- A7. Characterization and Remediation of Pesticides/Herbicides
- A8. Advances in Detection and Remediation of PAHs, PCBs, Dioxins, and Furans
- B4. Nanoscale Zero-Valent Iron and Other Reactive Particles
- B5. Permeable Barrier Advances and Applications
- B6. Combining Remediation Technologies
- C8. Mass Flux/Discharge as a Remediation Performance Metric
- C9. Integrated DNAPL Site Strategy/Mass Flux Management
- D6. Fracturing to Improve Subsurface Delivery of Oxidants and Reductants
- D7. Long-Term Impacts to Groundwater Quality after ISCO
- D8. Using Horizontal Wells for Enhanced Delivery
- E6. Chlorinated Solvents Assessment and Remediation: Are We There Yet?
- E7. Enhanced Bioremediation of Chlorinated Solvents
- E8. Remediation of Chlorinated Solvents in Fractured Media
- F7. Field-Scale Applications of Enhanced In Situ Bioremediation
- F8. Phytoremediation
- F9. Biostimulation: Advances with Electron Donors and Nutrients
- F10. Physical and Microbiological Inhibitors to Bioremediation
- G7. Vapor Intrusion Sampling and Assessment
- G8. Vapor Intrusion Mitigation
- H8. Mercury
- H9. Chromium: Assessment, Characterization, and Remediation
- H10. Heavy Metals and Metalloids: Global Biochemical and Geochemical Strategies for Remediation