

## 2020 CHLORINATED CONFERENCE: TECHNICAL PROGRAM SCOPE

Examples of anticipated presentation topics are listed below; use the numerical codes to reference topics you believe are the best match for your proposed presentation. **This is neither a final nor comprehensive list. Abstracts are welcome on all relevant topics.** Presentations will address the full range of technologies that can be used to remediate sites contaminated by chlorinated and other recalcitrant compounds. Risk, regulatory, and site management issues associated with these technologies will be discussed. The program will emphasize field applications, case studies, and site-closure approaches, but submissions on fundamental research and laboratory, pilot, and modeling studies are encouraged.

### Remediation Technology Innovations

- 1a. Lessons Learned with In Situ Technologies
- 1b. Emerging Remediation Technologies
- 1c. Biological Remedies
- 1d. Monitored Natural Attenuation
- 1e. Abiotic and In Situ Biogeochemical Processes
- 1f. Phytoremediation/Mycoremediation and Plant Uptake
- 1g. In Situ Chemical Oxidation
- 1h. In Situ Chemical Reduction
- 1i. Thermal Remediation Design & Best Practices
- 1j. Heat-Enhanced Remediation
- 1k. Injectable Activated Carbon Amendments: Lessons Learned and Best Practices
- 1l. Other Physical/Chemical Remedies
- 1m. Advances in Amendment Formulations
- 1n. Innovative and Optimized Amendment Delivery Methods
- 1o. Combined Remedies and Treatment Trains
- 1p. Electroenhanced Technologies
- 1q. Zero Valent Iron Applications
- 1r. Horizontal Wells
- 1s. Permeability Enhancements for In Situ Technologies

### Assessing Remediation Effectiveness

- 2a. Advances in Monitoring Injection Effectiveness (e.g., Radius of Influence)
- 2b. Applications of Mass Flux and Mass Discharge for Remedial Design/Optimization
- 2c. Estimating Cleanup Timeframes and Modeling to Support Site Closure
- 2d. Optimizing Remedial Systems
- 2e. Lessons Learned from Plume Containment
- 2f. Application of Sensors, the Internet, and Automated Data Collection
- 2g. Big Data, Data Mining, and Portfolio Optimization
- 2h. Assessing Performance and Cost of Remedies
- 2i. Setting Cleanup Goal End Points: When Are We Done?
- 2j. Assessing Remediation Effectiveness: Performance Assessment of In Situ Carbon-Based Amendments

### Green and Sustainable Remediation

- 3a. GSR Best Practices and Case Studies
- 3b. GSR Metrics and Resiliency Evaluations
- 3c. Reusing and Revitalizing Contaminated Sites and Social, Ecological Considerations
- 3d. Impact of Climate Change and Sea Level Rise on Remediation Sites

### Addressing Challenging Site Conditions

- 4a. Adaptive Site Management
- 4b. Risk Management Strategies
- 4c. Lessons Learned in DNAPL Source Zone Remediation

- 4d. Low-Permeability Zone Challenges and Case Studies
- 4e. Large, Dilute, and Commingled Plume Case Studies
- 4f. Surface Water/Groundwater Interactions
- 4g. Remediation Challenges in Extreme Environments and Remote Locations
- 4h. Radiological Issues
- 4i. Landfill Redevelopment and Management

### Fractured Rock and Complex Geology

- 5a. Managing Remediation in Fractured Rock and Karst Aquifers
- 5b. Challenges and Considerations to Evaluate Technical Impracticability at Fractured Rock Sites
- 5c. Depositional Environments and Stratigraphic Considerations for Remediation
- 5d. Remediation Geology: Geology-Focused Approach to Remediation Site Management
- 5e. Modeling and the CSM

### Petroleum and Heavy Hydrocarbon Site Strategies

- 6a. LNAPL Recovery/Remediation Technology Transitions
- 6b. In Situ Remediation of Petroleum Hydrocarbons
- 6c. Natural Source Zone Depletion
- 6d. TPH Risk Assessment and Metabolites
- 6e. Understanding and Managing Risks at LNAPL Sites
- 6f. Remediation of Heavy Hydrocarbons
- 6g. Perspectives on Plume Sequestration Technologies
- 6h. Manufactured Gas Plants
- 6i. Surfactant-Enhanced LNAPL Remediation

### Emerging Contaminants

- 7a. Advances in the Analysis of Per- and Polyfluorinated Alkyl Substances (PFAS)
- 7b. PFAS Risk Assessment and Toxicity
- 7c. PFAS Site Characterization
- 7d. PFAS Remediation Advances and New Approaches
- 7e. Point of Use Treatment for PFAS: Technologies and Case Studies
- 7f. Energetics, Perchlorate
- 7g. Insensitive Munitions
- 7h. 1,4-Dioxane Remediation Challenges
- 7i. Other Emerging Contaminants
- 7j. PFAS Fate and Transport
- 7k. Pump and Treat for PFAS Remediation

### Metals

- 8a. Precipitation and Stabilization of Metals
- 8b. Managing Chromium-Contaminated Sites
- 8c. Mining and Uranium Site Restoration
- 8d. Coal Ash

### Vapor Intrusion

- 9a. Chlorinated Compound Vapor Intrusion
- 9b. Vapor Intrusion Risk Assessment and Site Management
- 9c. Advances in Vapor Intrusion Investigations
- 9d. Vapor Intrusion Mitigation and Effectiveness
- 9e. Vapor Intrusion Preferential Pathways

### Characterization, Fate, and Transport

- 10a. Conceptual Site Models
- 10b. Improvements in Site Data Collection, Data Management, and Data Visualization
- 10c. Groundwater Modeling Advancements
- 10d. Advanced Investigation Tools and Techniques
- 10e. High-Resolution Site Characterization (HRSC)
- 10f. Incremental Sampling for Characterization
- 10g. Risk Assessment Practices, Applications, and Benefits
- 10h. Risk Assessment and Bioavailability Considerations
- 10i. Advances in Monitoring and Assessment Techniques

### Advanced Diagnostic Tools

- 11a. Innovative Monitoring and Measurement Tools
- 11b. Use of Advanced Molecular Tools for Site Assessment or Remedy Performance
- 11c. Compound-Specific Isotope Analysis
- 11d. Using Omic Approaches to Optimize Site Remediation
- 11e. Environmental Forensics
- 11f. Unmanned Systems for Remote Monitoring
- 11g. Innovative Sampling and Investigation Tools

### Technology Transfer and Stakeholder Communications

- 12a. Advances in Technology Transfer
- 12b. Technology Verification
- 12c. Decision Analysis Tools for Environmental Restoration Applications
- 12d. Stakeholder Success Stories and Risk Communication
- 12e. Innovative Strategies and Approaches to Expedite Site Closure

### International Environmental Remediation Markets

- 13a. Research and Development Projects and Practices
- 13b. International Regulatory Issues and Challenges
- 13c. International Market and Business Challenges