



TechDirect, February 1, 2023

Welcome to TechDirect! Since the January 1 message, TechDirect gained 52 new subscribers for a total of 40,486. If you feel the service is valuable, please share TechDirect with your colleagues. Anyone interested in subscribing may do so on CLU-IN at <https://clu-in.org/techdirect>. All previous issues of TechDirect are archived there. The TechDirect messages of the past can be searched by keyword or can be viewed as individual issues.



TechDirect's purpose is to identify new technical, policy and guidance resources related to the assessment and remediation of contaminated soil, sediments and groundwater.



Mention of non-EPA documents or presentations does not constitute a U.S. EPA endorsement of their contents, only an acknowledgment that they exist and may be relevant to the TechDirect audience.

> Upcoming Live Internet Seminars

ITRC Optimizing Injection Strategies and In situ Remediation Performance - February 7, 2023, 1:00PM-3:15PM EST (18:00-20:15 GMT). ITRC developed the guidance: Optimizing Injection Strategies and In Situ Remediation Performance (OIS-ISRP-1) and this associated training course to identify challenges that may impede or limit remedy effectiveness and discuss the potential optimization strategies, and specific actions that can be pursued, to improve the performance of in situ remediation by: refining and evaluating remedial design site characterization data; selecting the correct amendment; choosing delivery methods for site-specific conditions; creating design specifications; conducting performance evaluations, and optimizing under-performing in situ remedies. The target audience for this guidance and training course is: environmental consultants, responsible parties, federal and state regulators, as well as community and tribal stakeholders. This training will support users in efficiently and confidently applying the guidance at their remediation sites. An optimization case study is shared to illustrate the use of the associated guidance document. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live>.

PNNL's RemPlex Environmental Behavior and Remediation of Contaminated Sites with Cationic Radionuclides: The Cases of Cs and Sr - February 14, 2023, 1:00PM-2:00PM PST (21:00-22:00 GMT). Radioactive cesium (¹³⁷Cs) and strontium (⁹⁰Sr) are common contaminants in many environments around the world. This webinar by the Center for the Remediation of Complex Sites (RemPlex) features experts from around the world discussing the current understanding of Cs and Sr behavior in complex contaminated sites, including experimental, modeling, and monitoring data on the deposition, distribution, fate, and transport of these radionuclides; the role of permeable reactive barriers; and emerging remediation strategies for cationic radionuclides under different environmental conditions. For more information and to register, see <https://www.pnnl.gov/projects/remplex/seminars>.

ITRC Vapor Intrusion Mitigation (VIM-1): A Two Part Series - February 14 and 21, 2023. When certain contaminants or hazardous substances are released into the soil or groundwater, they may volatilize into soil gas. Vapor intrusion (VI) occurs when these vapors migrate up into overlying buildings and contaminate indoor air. ITRC has previously released guidance documents focused on VI, including the "Vapor Intrusion Pathway: A Practical Guidance" (VI-1, 2007) and "Petroleum Vapor Intrusion: Fundamentals of Screening, Investigation, and Management" (PVI, 2014). However, ITRC has received multiple requests for additional details and training on mitigation strategies for addressing this exposure pathway. The ITRC Vapor Intrusion Mitigation Team (VIMT) created ten fact sheets, 16 technology information sheets, and 4 checklists with the goal of assisting regulators during review of vapor intrusion mitigation systems, and helping contractors understand the essential elements of planning, design, implementation, and operation, maintenance and monitoring (OM&M) of mitigation systems. The Vapor Intrusion Mitigation training is a series of eight (8) modules, presented over two sessions. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live>.

One Project, One Team: Lessons Learned in Military Munitions Response Program (MMRP) Contracting and Systematic Project Planning - February 15, 2023, 1:00PM-4:00PM EST (18:00-21:00 GMT). The M2S2 webinars have proven to be valuable forums to share information across the munitions response industry, on a wide range of topics and presented by a variety of subject matter experts representing multiple perspectives. Join this open forum as lessons learned are presented from the Government, Regulator and Contractor's side. Learn the best practices and challenges from each perspective, starting with the Systematic Planning Process from pre-proposal, to awarding the contract, and ultimately getting to the finish line. For more information and to register, see <https://clu-in.org/live>.

ITRC Environmental Data Management (EDM): Real Life Application of Data Management Planning and Field Data Collection Best Practices - February 23, 2023, 1:00PM-2:30PM EST (18:00-19:30 GMT). The ITRC Environmental Data Management Best Practices Team (EDMBP Team) prepared a series of guidance documents and case studies on best practices for all phases of EDM to address the need for guidance on managing large stores of environmental data. Environmental data management (EDM) is a broad field that encompasses all aspects of environmental research and regulation, from habitat studies and wildlife management plans to health advisories and remediation of hazardous waste sites. The EDMBP Team developed three Roundtable training sessions to support the Guidance Document and case studies. The additional offerings are scheduled for April and May of 2023. You are welcome to register for any of the three, but they do not build upon each other. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live>.

SERDP and ESTCP PFAS Leaching and Mobility at AFFF-Impacted Sites - February 23, 2023, 12:00PM-1:30PM EST (17:00-18:30 GMT). This webinar will feature DoD-funded research efforts to quantify PFAS leaching at AFFF-impacted sites. First, Dr. Jennifer Guelfo (Texas Tech University) will present her efforts to develop a standard PFAS leaching assessment methodology by optimizing three standard leaching methods. Second, Dr. Charles Schaefer (CDM Smith) will discuss his research into the relationship between PFAS concentrations measured in soil and those measured in porewater with the ultimate goal of facilitating site management. For more information and to register, see <https://serdp-estcp.org/webinars>

ITRC Strategies for Preventing and Managing Harmful Cyanobacteria Blooms (Two Part Series) - Interstate Technology and Regulatory Council - March 2 and 9, 2023. Cyanobacteria are microscopic, photosynthetic organisms that occur naturally in all aquatic systems but most often in freshwater systems. Under certain conditions,

cyanobacteria can multiply and become very abundant, discoloring the water throughout a water body or accumulating at the surface. These occurrences are known as blooms. Cyanobacteria may produce potent toxins (cyanotoxins) that pose a threat to human health. They can also harm wildlife and domestic animals, aquatic ecosystems, and local economies by disrupting drinking water systems and source waters, recreational uses, commercial and recreational fishing, and property values. It is likely that continued population growth, land use change, increases in nutrient inputs to our waterways, and the warming climate will favor proliferation of these problematic species. Providing a range of practical approaches to minimize these blooms and their likely societal and wildlife effects is critical to our future vitality, health, and economic prosperity. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live>.

> New Documents and Web Resources

New Focus Area: Geophysical Methods. Geophysical methods measure physical properties of materials that can be used to infer information about the surface and subsurface of the Earth. These minimally invasive to non-invasive methods have been used in oil and mineral exploration since the early 1900s and modified over the past several decades to support the characterization and remediation of contaminated hazardous waste sites. Geophysical methods provide both quantitative and qualitative information. Properties such as electrical resistance, seismic reflection/refraction, or magnetism can be used to interpret geologic characteristics such as porosity, permeability, water content of the formation, and/or mineralogy. Geophysical data can also be used to identify the top of bedrock; other geologic contacts; geologic features, such as joints and faults; and buried objects, including drums and other potential subsurface sources of contamination and potential pathways for contaminant migration (such as more permeable layers in the subsurface). Visit the Geophysical Methods Focus Area: <https://clu-in.org/geophysical>

Superfund Remedy Report, 17th Edition. The U.S. Environmental Protection Agency's (EPA) Office of Superfund Remediation and Technology Innovation prepared the Superfund Remedy Report (SRR) 17th Edition to share analyses of remediation technologies selected to address contamination at Superfund sites. EPA is particularly interested in documenting and disseminating information on treatment technologies to advance its mission of protecting human health and the environment. The report focuses on treatment as the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) establishes a statutory preference for treatment. View or Download the report at <https://www.epa.gov/system/files/documents/2023-01/100003149.pdf>

New ITRC Hydrocarbons Resources Now Available. ITRC's Hydrocarbons Training Team (Effective Application of Guidance Documents for Hydrocarbons Sites) has developed new tools and training to address data gaps that occur from reviewing multiple source files on this topic. This training builds upon information presented in three popular ITRC Guidance Documents: Light Non-Aqueous Phase Liquid (LNAPL), Petroleum Vapor Intrusion (PVI), and Total Petroleum Hydrocarbon (TPH) Risk Evaluation. View guidance documents at <https://hyd-1.itrcweb.org/>

Technology Innovation News Survey Corner. The Technology Innovation News Survey contains market/commercialization information; reports on demonstrations, feasibility studies and research; and other news relevant to the hazardous waste community interested in technology development. Recent issues, complete archives, and subscription information is available at <https://clu-in.org/products/tins/>. The following

resources were included in recent issues:

- BNSF Railway Skykomish Cleanup
- Sampling Device Harnesses Powerful Molecular Interactions, Overcomes Barriers in Detecting Volatile Contaminants
- New EM Groundwater Monitoring, Remediation Initiatives to Advance Cleanup

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than five resources, events, projects and news items were added to EUGRIS in January 2023. These can be viewed at <http://www.eugris.info/whatsnew.asp> . Then select the appropriate month and year for the updates in which you are interested.

> Conferences and Symposia

2023 ITRC Annual Meeting - Boston, MA, March 20-23, 2023. This in-person event will include a plenary session, awards ceremony, receptions, and working group meetings for ITRC's many Technical Teams. In addition to the meeting, ITRC will also host a state-specific PFAS training on Friday, March 24. The ITRC Annual Meeting brings together environmental leaders and professionals from state agencies; Tribes; EPA, DOE, DOD, and other federal agencies; industry; and NGOs to work together in the development of revolutionary, consensus-based environmental guidance. For more information and to register, please visit <https://itrcweb.org/meetings/upcoming>

Call for Ideas! 2023 National Brownfields Training Conference - Detroit, MI, August 8-11, 2023. The National Brownfields Training Conference is the largest event in the nation focused on environmental revitalization and economic redevelopment. Usually held every two years, the National Brownfields Conference attracts over 2,000 stakeholders in brownfields redevelopment and cleanup to share knowledge about sustainable reuse and celebrate the EPA brownfields program's success. Whether you're a newcomer or a seasoned professional, Brownfields 2023 offers something for you! The Call for Ideas is now open - you are invited to submit your ideas for dynamic educational sessions that encourage conversation and participation from fellow attendees. The call for ideas closes February 6. For more information, please visit <https://brownfields2023.org/call-for-ideas/>

NOTE: For TechDirect, we prefer to concentrate mainly on new documents and the Internet live events. However, we do support an area on CLU-IN where announcement of conferences and courses can be regularly posted. We invite sponsors to input information on their events at <https://clu-in.org/courses> . Likewise, readers may visit this area for news of upcoming events that might be of interest. It allows users to search events by location, topic, time period, etc.

If you have any questions regarding TechDirect, contact Jean Balent at (202) 566-0832 or balent.jean@epa.gov. Remember, you may subscribe, unsubscribe or change your subscription address at <https://clu-in.org/techdirect> at any time night or day.

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