



TechDirect, November 1, 2022

Welcome to TechDirect! Since the October 1 message, TechDirect gained 56 new subscribers for a total of 40,381. 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.

> Funding Opportunity

FY 2023 Brownfields Multipurpose, Assessment, Revolving Loan Fund, and Cleanup (MARC) Grants. These brownfields grants may be used to address sites contaminated by hazardous substances, pollutants, or contaminants (including hazardous substances co-mingled with petroleum) and petroleum. The deadline to submit an application is November 22, 2022. For more information and application instructions, see <https://www.epa.gov/brownfields/solicitations-brownfield-grants>.

> Upcoming Live Internet Seminars

ITRC Vapor Intrusion Mitigation (VIM-1): A Two Part Series - November 3 and 15, 2022. 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>.

SERDP/ESTCP Technical Advances for Managing Munitions Constituents at DoD Sites - November 3, 2022, 12:00PM EDT (16:00 GMT). Join SERDP and ESTCP for a webinar featuring DoD-funded research efforts to advance remediation of munitions constituents (MC) in contaminated surface and/or ground waters. Dr. Craig Tobias (University of Connecticut) will present his work to evaluate natural attenuation of MC as a remedial option, and Dr. Wenqing Xu (Villanova University) will discuss her efforts to optimize MC hydrolysis and adsorption by carbonaceous amendments. For more information and to register, see <https://www.serdp-estcp.org/webinars>.

NIEHS Climate Change and Health: Session II - Untangling Complex Exposures and Health Effects - November 4, 2022, 1:00PM-3:00PM EDT (17:00-19:00 GMT). The NIEHS Superfund Research Program (SRP) is hosting a Risk e-Learning webinar series focused on scientific research and tools that can be used to promote health and resilience to climate change. The series will feature SRP-funded researchers, collaborators, and other subject-matter experts who aim to better understand and address how climate change affects human exposures to hazardous substances and the public health consequences of a changing climate and identify ways to build health resilience. People are continually exposed to a complex mixture of environmental toxicants. The second session will describe how extreme weather events, such as hurricanes and wildfires, and other extreme events affect the distribution of these pollutants, their toxicity, and the potential increased risk of exposure to humans. Presenters will introduce new models to track the movement of multiple contaminants in the environment and will discuss the health effects of these complex exposures. We will also hear about the NIH Climate Change and Health Initiative and other ongoing efforts at NIH to reduce the health consequences associated with climate change. This is the second session in a three part series. For more information and to register, please visit <https://clu-in.org/live/>.

ITRC Strategies for Preventing and Managing Harmful Cyanobacteria Blooms (Two Part Series) - November 8, 2022, 1:00PM-3:15PM EST (18:00-20:15 GMT). 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. This is the second part. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live>.

Federal Facilities Online Academy: Coordinating with Tribes at Federal Facilities - November 9, 2022, 1:00PM-3:00PM EST (18:00-20:00 GMT). Coordinating with Tribes at Federal Facilities is a two-hour webinar course that will provide an overview of Environmental Protection Agency (EPA) policy on consultation and coordination with Indian Tribes at federal facilities. This webinar will also provide tips on how to work more collaboratively during this process. By taking this course, participants will achieve the following objectives: Identify EPA processes and policies for interacting with the Tribes; Understand the roles of EPA and tribal governments in Federal Facility clean ups; Learn about the Federal Facilities Restoration and Reuse Office (FFRRO); and,

Discover EPA resources and tools available to assist Federal Facilities in building partnerships with the Tribes. The instructional methodology for this course includes lecture, group discussions, and case studies. The target audience for this course is federal, state, and tribal representatives who work on Federal Facility cleanups. Ideally, students should have a basic understanding of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process. This course is part of the Federal Facilities Academy training program. Please consider registering for other Federal Facility Academy courses and obtain a certificate upon completion of the entire Federal Facility Academy series (12 courses total). For more information and to register, please visit <https://clu-in.org/live/>.

ITRC Sustainable Resilient Remediation (SRR) - November 17, 1:00PM-3:15PM EST (17:00-19:15 GMT). Extreme weather events and wildfires are increasing and impacting hazardous waste sites. The primary goal of cleanups, which is protecting human health and the environment, is undermined. Confronted with these risks, environmental professionals should assess, and de-sign remedies that are sustainable and resilient. Sustainable resilient remediation (SRR) is an optimized solution to cleaning up and reusing a hazardous waste site that limits negative environmental impacts, maximizes social and economic benefits, and creates resilience against increasing threats. The objective of the ITRC Sustainable Resilient Remediation (SRR-1) is to provide resources and tools for regulators, stakeholders, consultants, and responsible parties to help integrate sustainable and resilient practices into remediation projects. This guidance updates the Inter-state Technology and Regulatory Council's (ITRC) Technical and Regulatory Guidance: Green and Sustainable Remediation: A Practical Framework (ITRC 2011a) and includes a strong resilience component to address the increasing threat of extreme weather events and wildfires.

Recommendations for careful and continuous consideration of the social and economic costs and benefits of a cleanup project are included. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live/>.

NIEHS Climate Change and Health: Session III: Documenting Exposures and Promoting Health - November 18, 2022, 1:00PM-3:00PM EST (18:00-20:00 GMT). The NIEHS Superfund Research Program (SRP) is hosting a Risk e-Learning webinar series focused on scientific research and tools that can be used to promote health and resilience to climate change. The series will feature SRP-funded researchers, collaborators, and other subject-matter experts who aim to better understand and address how climate change affects human exposures to hazardous substances and the public health consequences of a changing climate and identify ways to build health resilience. The third and final session will highlight how climate-related disasters, and exposure to harmful chemicals redistributed during these events, affect people's health and well-being. Presenters will describe how certain populations are disproportionately exposed to harmful contaminants. Speakers will also share innovative tools to track environmental exposures and improve public health. For more information and to register, please visit <https://clu-in.org/live/>.

Top 10 Questions to Ask When Buying a Superfund Site and Prospective Purchaser Inquiry Service - November 30, 2022, 1:00PM-2:30PM EST (18:00-19:30 GMT). In this informative webinar, hosted by EPA's Superfund Redevelopment Program and Office of Site Remediation Enforcement, you will learn about the top ten redevelopment questions that prospective purchasers and local governments ask EPA and best practices to support the return of Superfund sites back to beneficial use. Join us as we discuss two popular EPA tools: the Top 10 Questions to Ask When Buying a Superfund site fact sheet and the Superfund Redevelopment Program's Prospective Purchaser Inquiry (PPI) Service. The webinar will also provide real-life lessons learned and tips for developers and local governments seeking to redevelop Superfund sites. For more information and to register, please visit <https://clu-in.org/live/>.

ITRC Optimizing Injection Strategies and In situ Remediation Performance - December 6, 2022, 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 underperforming 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>.

> New Documents and Web Resources

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:

- EPA Announces Proposed Plan for Remedy Modification
- Pilot Test Work Plan: Per- and Polyfluoroalkyl Substances Groundwater Remediation at Site 5 - Former Fire Training Area, Former Naval Air Station Joint Reserve Base Willow Grove, Horsham Township, Pennsylvania
- Combined Technologies for In Situ Remediation of Tc-99 and U in Subsurface Sediments
- The Importance of Abiotic Transformations in Natural Attenuation of Contaminated Groundwater

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than two resources, events, projects and news items were added to EUGRIS in October 2022. 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

FRTR Fall 2022 Federal Remediation Technologies Roundtable (FRTR) Fall 2022 Meeting: Strategies and Resources for Advancing Remediation Technology from R&D to Commercialization - Washington, DC, November 8, 2022. The FRTR Fall 2022 General Meeting will explore changing needs and opportunities for interagency collaboration in advancing innovative remediation technology from basic research, through development and evaluation, to commercialization for full-scale application to meet site cleanup goals. As the remediation technology industry evolves to meet new cleanup priorities and emerging technology needs, the role of Federal agencies and

FRTR in technology transfer also needs to evolve. This meeting is open to the public. For details and registration, please visit <https://trainex.org/offeringslist.cfm?courseid=1145&all=yes>

Save the Date! 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! For more information, please visit <https://brownfields2023.org>

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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