U.S. ENVIRONMENTAL PROTECTION AGENCY

TechDirect, January 1, 2024

Happy Holidays and may you have a prosperous new year!

Welcome to TechDirect! Since the December 1 message, TechDirect gained 43 new subscribers for a total of 43,813. 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 Funding Opportunities

FY 2024 Technical Assistance to Existing and Potential Brownfields Revolving Loan Fund (RLF) Grant Recipients. EPA anticipates releasing a funding opportunity in early January 2024 for RLF-specific Technical Assistance (RLF TA) to existing and potential Brownfields RLF Cooperative Agreement Recipients (CARs). A single grant would be awarded for up to $3,000,000 for a five-year period of performance. The purpose of this grant is to provide RLF TA that focuses on the unique complexities of EPA Brownfield RLF Grants with the goal of increasing the capacity of EPA-funded Brownfield RLF Programs nationwide. EPA expects to post the Notice of Funding Opportunity in early January, with an outreach webinar in mid-January, and applications due by early March 2024. For more information, please visit https://www.epa.gov/brownfields/upcoming-funding-opportunity-fy-2024-technical-assistance-existing-and-potential .

The Department of Defense's Strategic Environmental Research and Development Program (SERDP) is seeking environmental research and development proposals for funding beginning in Fiscal Year (FY) 2025. Projects will be selected through a competitive process. Details are available on the SERDP website. The Core Solicitation provides funding opportunities for basic and applied research and advanced technology development. Core projects vary in cost and duration consistent with the scope of the work proposed. The Statements of Need referenced by this solicitation request proposals related to the SERDP program areas of Environmental Restoration, Resource Conservation and Resilience, and Weapons Systems and Platforms. All Core pre-proposals are due January 9, 2024 by 2:00 p.m. ET. For more information, please visit https://serdp-estcp.org/workingwithus/solicitation?id=078a8263-a3e4-4cb5-a195-d91cc074c065

The SERDP Exploratory Development (SEED) Solicitation provides funding opportunities for work that will investigate innovative environmental approaches that entail high technical risk or require supporting data to provide proof of concept. Funding is limited to not more than $250,000 and projects are approximately one year in duration. This year, SERDP is requesting SEED proposals for the Weapons Systems and Platforms program area. SEED proposals are due March 14, 2024 by 2:00 p.m. ET. For more information, please visit https://serdp-estcp.org/workingwithus/solicitation?id=b2d13885-2562-407b-964e-12f1e6925aa3

> Upcoming Live Internet Seminars

ITRC Sediment Cap Chemical Isolation Training - January 18, 2024, 1:00PM-3:00PM EST (18:00-20:00 GMT). In 2023, ITRC published the Sediment Cap Chemical Isolation Guidance to supplement the 2014 Contaminated Sediments Remediation Guidance with the goal of improving consistency in sediment cap performance outcomes. Sediment capping is a commonly selected remediation approach and numerous designs have been completed. Previous cap designs have been evaluated in multiple ways, and these varying approaches have led to some differences in selection of chemical design criteria, construction tolerance specifications, and monitoring/maintenance objectives for sites with similar characteristics and contaminants, leading to different expectations for long-term performance and reliability. The Sediment Cap Chemical Isolation Training will cover several key elements of the recommended framework. For more information and to register, see https://www.itrcweb.org or https://clu-in.org/live.

ITRC Contaminants of Emerging Concern (CEC) Identification Framework - January 25, 2024, 1:00PM-3:00PM EST (18:00-20:00 GMT). In 2023, the ITRC Contaminants of Emerging Concern (CEC) Framework (see below) was published to help environmental regulatory agencies and other stakeholders identify, evaluate, and manage CEC's while acknowledging uncertainties in their environmental fate and transport, receptor exposure, and/or toxicity. Such an approach can be conducive to improved allocation of regulatory response resources and provide a foundation for communicating potential risk to stakeholders. For more information and to register, see https://www.itrcweb.org or https://clu-in.org/live.

ITRC: Pump & Treat Optimization - January 30, 2024, 1:00PM-3:15PM EST (18:00-20:15 GMT). This training aims to summarize existing information and best practices while also developing a systemic and adaptive optimization framework specifically for P&T well-network design and management. P&T systems have been one of the most commonly used methods for hydraulic containment and treatment of contaminated groundwater at sites with large groundwater plumes. This method cleans up groundwater contaminated with dissolved chemicals by pumping groundwater from wells to an above-ground treatment system that removes the contaminants. The primary audience for this training is environmental project decision-makers, which may include federal, state, tribal, and various local agency employees; contractors to these agencies; and potentially liable parties and their engineers and consultants as well as involved stakeholders. Generally, those involved in designing, building and operating, and optimizing pump & treat systems would benefit. For more information and to register, see https://www.itrcweb.org or https://www.clu-in.org/live.

Correcting Some Misconceptions about EPA's Superfund Approach for Radiation Risk Assessment - January 31, 2024, 1:30PM-3:30PM EST (18:30-20:30 GMT). The

U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation (OSRTI) has primary responsibility for implementing the remedial long-term (non-emergency) portion of a key U.S. law regulating cleanup: the Comprehensive Environmental Response, Compensation and Liability Act, CERCLA, nicknamed "Superfund." The Superfund program generally addresses radioactive contamination in a consistent manner as it addresses chemical contamination, except where there are technical differences between radionuclides and other chemicals. For example, cleanup levels for radioactive contamination at sites are generally expressed in terms of risk levels (e.g., 10^{-4}, rather than millirem or millisieverts, as a unit of measure. Although EPA and other US agencies have issued millirem-based regulations under other statutory authorities, under CERCLA EPA promulgated a risk range of 10^{-4} to 10^{-6} as a standard of protectiveness for all carcinogens including radionuclides. CERCLA guidance recommends the use of slope factors when estimating cancer risk from radioactive contaminants, rather than converting from millirem. Current slope factors are based on risk coefficients in Federal Guidance Report 13. The Superfund remedial program uses 10^{-6} as a point of departure and establishes Preliminary Remediation Goals (PRGs) at 1×10^{-6}. PRGs not based on other environmental standards known as Applicable or Relevant and Appropriate Requirements (ARARs) are risk-based concentrations, derived from standardized equations combining exposure information assumptions with EPA toxicity data. The policy rationale and technical underpinnings for this risk management approach is often misunderstood by radiation professionals. This presentation will help clarify some of these misunderstandings by focusing on misstatements about the Superfund approach that the author has encountered from radiation professionals. Often, they are citing the wrong EPA documents or portions of documents incorrectly, or not reading sections of the correct Superfund guidance. For more information and to register, see https://clu-in.org/live.

> New Documents and Web Resources

ITRC Contaminants of Emerging Concern Framework (CEC). CEC are defined in this resource as: "substances and microorganisms including physical, chemical, biological, or radiological materials known or anticipated in the environment, that may pose newly identified risks to human health or the environment." For more information, please visit https://cec-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://www.clu-in.org/products/tins/. The following resources were included in recent issues:

- Conducting Climate Vulnerability Assessments at Superfund Sites
- Benefits of the Environment, Revitalization, and Environmental Cleanup Webinar
- Using Surface-Area Weighted Average Concentrations (SWACS) to Optimize Sediment and Soil Remedies
- Best Practices for PFAS Sampling and Data Evaluation
- Subsurface Per- and Polyfluoroalkyl Substances (PFAS) Distribution at Two Contaminated Sites
- Evaluating and Applying Site-Specific NAPL Dissolution Rates During Remediation
- Development of Scalable Reactive Transport Framework for PFAS

NAVFAC Fact Sheet on Electrokinetic (EK)-Enhanced In Situ Remediation (September 2023). EK-enhanced in situ remediation offers a promising approach to treating source zones at complex sites. An EK-enhanced delivery method can achieve a more uniform distribution of amendments into the target treatment zone at low-permeability sites compared to hydraulic-based methods. EK can be used to implement in situ bioremediation, in situ chemical oxidation (ISCO), and in situ chemical reduction. This fact sheet discusses how EK delivery methods work and explores two EK case studies for bioremediation and ISCO. Lessons learned and key considerations for applying and implementing EK technologies are also summarized. To view or download, please visit https://exwc.navfac.navy.mil/Portals/88/Documents/EXWC/Restoration/er_pdfs/e/NAVFAC%20EK_FactSheet__9_27_23.pdf?ver=cQkrUYX7EWNDKcQOkKcdqQ%3d%3d

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. Several resources, events, projects and news items were added to EUGRIS in December 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

Design and Construction Issues at Hazardous Waste Sites (East), April 10-12, 2024, Philadelphia, PA. The Society of American Military Engineers organizes this annual conference to share information about applications of engineering and science associated with cleaning up hazardous waste sites. The conference panels focus on case studies, advances in processes such as remedy optimization, and emerging issues such as PFAS contamination. For more information, please visit https://sites.google.com/samephiladelphiapost.org/dchws/home

Registration now open for ITRC Annual Meeting, April 8-11, 2024, Long Beach, CA. Environmental professionals from the state, tribal and federal government, private sector, and stakeholder groups come to ITRC's Annual Meeting to collaborate on critical environmental topics and guidance. For more information, please visit https://itrcweb.org/itrcwebsite/events/2024-annual-meeting

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.