



TechDirect, April 1, 2024

Welcome to TechDirect! Since the March 1 message, TechDirect gained 44 new subscribers for a total of 43,856. 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.

> ITRC Now Accepting Proposals for New 2025 Project Teams!

ITRC is excited to announce that they are now accepting proposals for new Project Teams to launch in 2025! The deadline to submit a proposal is May 15, 2024. They invite proposals from any agency, organization, company, or individual on any environmental topic. More information about ITRC Project Teams and the proposal process is available online including an electronic form and instructions for submitting Project Team proposals and frequently asked questions. To learn more and submit a proposal, please visit <https://itrcweb.org/teams/planning>.

> Upcoming Live Internet Seminars

In Vitro Bioaccessibility Assay (IVBA) Sampling Guidance Update - Part 4 Soil Sampling Best Practices and Laboratory Methods to Measure IVBA & RBA - Monday, April 1, 2024, 1:00PM-2:30PM EDT (17:00-18:30 GMT). This session will focus on a discussion of soil sample collection and processing best practices and methods to directly measure relative bioavailability (RBA) or estimate RBA by measuring in vitro bioaccessibility via EPA Method 1340 at soil arsenic and lead contaminated sites. This training will target a general audience of regional staff working in risk assessment, remediation, emergency response, technical support, and quality assurance. The training will be an approximately one hour long and will include time for general discussion. Members of the Bioavailability Committee and a Regional representative will be present to answer questions in real time. For more information and to register, see <https://www.clu-in.org/live>.

ASTSWMO - EPA Risk Management Methodology (RMM) for States and EPA - Monday, April 1, 2024, 1:00PM-4:00PM EDT (17:00-20:00 GMT). This online session is open only to State and EPA regulators and will focus on conducting baseline risk assessments on munitions response sites using the Department of Defense's Risk Management Methodology (RMM). In this session, State and EPA regulators will review the unique challenges of munitions response, examine the RMM model framework, and present case studies on RMM implementation. After the presentation there will be a Q&A session for participants. For more information and to register, see <https://register.gotowebrinar.com/register/3561231738755785815>

Federal Facilities Online Academy: Military Munitions Policy Overview - April 15, 2024, 1:00PM-3:00PM EDT (17:00-19:00 GMT). Military Munitions Policy Webinar is a two-hour webinar course that provides an overview of the Department of Defense (DoD) Military Munitions Response Program (MMRP), munitions policies, and how the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) is applied to munitions sites. By taking this course, participants will achieve the following objectives: Learn about DoD MMRP; Understand the CERCLA process as applied to a munitions site; Understand munitions policies; and, Explore EPA Munitions Frequently Asked Questions (FAQs). For more information and to register, see <https://www.clu-in.org/live>.

ITRC Environmental Data Management (EDM): Best Practices for Exchanging Environmental Data Training - April 16 and 25, 2024, 1:00PM-2:30PM EDT (17:00-18:30 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. This is the final in a 3-part series. You are welcome to register for any of the series, but they do not build upon each other. For more information and to register, see <https://www.itrcweb.org> or <https://www.clu-in.org/live>.

US EPA Superfund Remedial Program's Approach for Addressing Radioactive Contamination - April 17, 2024, 1:30PM-3:30PM EDT (17:30-19:30 GMT). The U.S. Environmental Protection Agency (EPA) Superfund program has developed regulations and guidance for remediating radioactively contaminated CERCLA sites. The focus of this presentation is an overview of EPA's recommended guidance documents on ARARs and risk assessment, models for conducting risk and dose assessments, and community involvement tools for engaging in meaningful involvement with the public that are intended to be used during the process to determine cleanup levels for radioactively contaminated Superfund sites. The presentation is intended to help the audience obtain knowledge of EPA's recommended guidance to facilitate cleanups that are consistent with how chemical contaminants are addressed, except where technical differences posed by radiation are addressed. The guidance and tools that are discussed in the presentation are freely available on the internet. This webinar provides an updated version of Module 3 that was presented in the ITRC webinar "Radiation Site Cleanup: CERCLA Requirements and Guidance" on June 5, 2007, an archive of which is available at https://www.clu-in.org/conf/itrc/radscleanup_060507/. For more information and to register for the live event, see <https://www.clu-in.org/live>.

ITRC PFAS Beyond the Basics: Sampling, Analysis, Surface Water, & Air Occurrence Training - April 18, 2024, 1:00PM-3:00PM EDT (17:00-19:00 GMT). This ITRC training course will build upon PFAS sampling and analysis information presented in the PFAS 101 CLU-IN training, an archive of which is available at

https://www.clu-in.org/conf/itrc/PFAS-Introductory_091423/ . The ITRC PFAS Beyond the Basics class provides in-depth information on preparing for and implementing sampling events. Some detailed information and case studies are presented for sampling surface water and PFAS-containing foam that can form and aggregate at the surface water-air interface. The training includes information about PFAS analysis and discusses alternative qualitative analytical techniques. The occurrence of PFAS in air information from the literature for outdoor air, indoor air, settled dust and precipitation is discussed. For more information and to register, see <https://www.itrcweb.org> or <https://www.clu-in.org/live>.

ITRC Beyond the Basics: PFAS Human Health, Ecological Effects and Regulations Training - April 23, 2024, 1:00PM-3:00PM EDT (17:00-19:00 GMT).

This training class builds on the earlier information for introductory PFAS topics presented in the PFAS 101 CLU-IN training, an archive of which is available at , an archive of which is available at https://www.clu-in.org/conf/itrc/PFAS-Introductory_091423/ . It provides more in-depth information for human health effects, ecological toxicity and ecological risk assessment, PFAS regulations, and AFFF alternatives and replacement. For more information and to register, see <https://www.itrcweb.org> or <https://www.clu-in.org/live>.

SRP Progress in Research Webinar Series: Emerging Technologies in Occupational Health and Safety Training and Education - Session I: April 26, 2024, 1:00PM-3:00PM EDT (17:00-19:00 GMT). The NIEHS Superfund Research Program (SRP) is hosting their 2024 Progress in Research webinar series showcasing federally-funded researchers developing curricula and educational programs focused on emergent technologies in the sphere of occupational health and safety. Over the three sessions, presenters will highlight their research projects and accomplishments - included in this group of researchers are SRP's Occupational Health and Safety Training Education Programs on Emerging Technologies grant recipients. For more information and to register for the live event, see <https://www.clu-in.org/live>.

ITRC Sediment Cap Chemical Isolation Training - April 30, 2024, 1:00PM-3:00PM EDT (17:00-19:00 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>.

SRP Progress in Research Webinar Series: Emerging Technologies in Occupational Health and Safety Training and Education - Session II - May 3, 2024, 1:00PM-3:00PM EDT (17:00-19:00 GMT). The NIEHS Superfund Research Program (SRP) is hosting their 2024 Progress in Research webinar series showcasing federally-funded researchers developing curricula and educational programs focused on emergent technologies in the sphere of occupational health and safety. Over the three sessions, presenters will highlight their research projects and accomplishments - included in this group of researchers are SRP's Occupational Health and Safety Training Education Programs on Emerging Technologies grant recipients. For more information and to register for the live event, see <https://www.clu-in.org/live>.

> New Documents and Web Resources

Fiscal Year 2023 Superfund Accomplishments Report. EPA's Superfund Accomplishments Report highlights the important work of EPA staff and partners to clean up the nation's most contaminated land and respond to environmental emergencies and natural disasters. Superfund cleanups protect human health and the environment, while also supporting community revitalization efforts and economic opportunities through redevelopment. For more information, please visit <https://www.epa.gov/superfund/superfund-accomplishments-quarterly-report-fiscal-year-2023>

Sustainable Treatment System Caps Off Cleanup at Elizabeth Mine Superfund Site. The Elizabeth Mine site is an abandoned copper mine located in Vermont and was added to the Superfund National Priorities list in 2001. EPA researchers worked with a team of other experts on the cleanup efforts to solve complex problems at the abandoned mine site. For more information, please visit: <https://www.epa.gov/sciencematters/sustainable-treatment-system-caps-cleanup-elizabeth-mine-superfund-site>

Research Brief 351: Using Earth Materials to Remove Metals Near Abandoned Mines. NIEHS Superfund Research Program (SRP)-funded researchers developed a new strategy that uses limestone and a naturally occurring mineral to clean up water contaminated with arsenic and uranium - two of the most frequently detected drinking water pollutants in Tribal communities. More than 600,000 American Indians in the Southwestern U.S. are estimated to live within six miles of an abandoned mining site, which can contain mixtures of arsenic, uranium, and other toxic elements. These contaminants can pollute the local air, water, and soil. For more information, please visit https://tools.niehs.nih.gov/srp/researchbriefs/view.cfm?Brief_ID=351

Superfund Research Program Technology Profile March 2024. Researchers at the University of Iowa are investigating how biochar, the carbon-rich byproduct of burning plant matter, can enhance the performance of a type of bacteria - called organohalide-respiring bacteria (OHRB) - commonly used to break down halogenated pollutants. Chlorinated ethenes, a type of halogenated pollutants, are among the most frequently detected contaminants in aquatic ecosystems across the U.S. OHRB is not able to fully degrade halogenated pollutants in the field. To address this limitation, the team is developing a platform to tailor the properties of biochar to increase the ability of OHRB to break down chlorinated ethenes into non-toxic substances. For more information, please visit https://www.niehs.nih.gov/research/supported/centers/srp/science_digest/2024/3/technology

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:

- High-Resolution Passive Profiling to Monitor Contaminated Sediments in Support of Remediation Evaluation and Risk Characterization
- Development, Evaluation, and Technology Transfer of BMPS for Optimizing Removal of PAHS, PCBS, PFAS, and Metals from Stormwater at DOD Sites
- Prevention of Sediment Recontamination by Improved BMPS to Remove Organic and Metal Contaminants from Stormwater Runoff

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 4 resources, events, projects and news items were added to EUGRIS in March 2024. 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. The following resource was posted on EUGRIS:

Remediation Management for Local and Wide-spread PFAS Contamination (2020). This publication (report number FB000332/ENG) was produced by the German Federal Environment Agency. PFAS - as a group of substances - are becoming increasingly important in the treatment of contaminated sites and harmful soil changes. The present work aid "Remediation management for local and area-wide PFAS contaminations" supports the responsible authorities in the pre-selection, evaluation and decision for a suitable and proportionate remediation procedure, shows relevant basic conditions and accompanying measures. Due to the different substance properties of PFAS, the possible remediation procedures must also be evaluated on a substance-specific basis. The advantages and disadvantages, the technical and approval requirements as well as their sustainability are shown for the possible remediation methods. View or download from <https://www.umweltbundesamt.de/en/publikationen/remediation-management-for-local-wide-spread-pfas>

> 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/samephiladelphiaipost.org/dchws/home>.

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>.

Federal Remediation Technologies Roundtable (FRTR): Spring 2024 General Meeting - May 21, 2024, Washington, D.C. and online. In this meeting, FRTR member agencies will revisit artificial intelligence (AI) and machine learning (ML), discussed previously at the Spring 2022 General Meeting. This meeting will focus on progress and results of recent projects providing advanced contaminant plume characterization and predictive modeling, and improved cleanup efficiency. Presentations will highlight case studies where AI/ML has substantially enhanced remedial decisions, remedy implementation and performance monitoring, and reduced needs for extensive sampling. Discussions during the meeting will provide remedial project managers and technical staff with information and best practices for deploying AI/ML technology. Two public attendance options will be available - attending in-person in Washington, D.C. and attending virtually via Zoom. Registration will open soon. For more information and to view recordings of Spring 2022 presentations, please visit <https://www.frtr.gov/meetings1.cfm>.

Tribal Lands and Environment Forum (TLEF) - Eugene, OR, August 12-15, 2024. This is the fourteenth annual forum for environmental professionals from Tribes, USEPA, State/Local/Federal agencies, community organizations, and other interested parties to meet, share knowledge, and learn from one another how to improve management, protection, and restoration of Tribal lands for us and all our relations. This forum will be held in person and online. For more information and to register,

please visit <http://nau.edu/tlef2024>

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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