



TechDirect, November 1, 2024

Welcome to TechDirect! Since the October 1 message, TechDirect gained 51 new subscribers for a total of 44,016. 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.

> EPA Small Business Innovation Research Awardees

EPA Awards to Small Businesses for Developing Environmental Technologies. In October of this year, EPA announced \$2.8 million in funding to seven small businesses to further develop and commercialize their environmental technologies. With these awards from EPA's Small Business Innovation Research program, businesses will be tackling complex challenges including destroying PFAS, cleaning indoor air during wildfires, enhancing recycling systems, reducing food waste, and improving disaster response. One such winning project funds plasma-driven destruction of PFAS in complex water matrices. The technology represents a green approach that has demonstrated effective, cost-efficient, non-selective destruction of PFAS and other contaminants in a range of groundwaters with no secondary waste streams. Learn more about this and other winning projects at

https://cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/recipients.display/rfa_id/729/.

> Upcoming Live Internet Seminars

Advancing Environmental Health Research with Artificial Intelligence and Machine Learning: Session I — AI & ML Applications to Understand Chemical Mixtures, Properties, and Exposures and Their Relationship to Human Health - Monday, November 4, 2024, 2:00PM-4:00PM EST (19:00-21:00 GMT). The NIEHS Superfund Research Program (SRP) is hosting a Risk e-Learning webinar series focused on using artificial intelligence (AI) and machine learning to advance environmental health research. The series will feature SRP-funded researchers, collaborators, and other subject-matter experts who aim to better understand and

address environmental health issues by applying AI and machine learning approaches to complex issues. In the first session, speakers will discuss how they apply machine learning and artificial intelligence techniques to understand chemical exposures and their effects on human health. For more information and to register, see

<https://www.clu-in.org/live>.

PNNL's RemPlex and IAEA Webinar on Sustainable Remediation and Decommissioning in Practice - Tuesday, November 5, 2024, 11:00AM-12:30PM EST (4:00PM-5:30PM GMT).

An international panel explores how to incorporate sustainable outcomes into the planning phases of remediation and decommissioning projects, how these outcomes are measured and vary across the breadth of activities, and specific approaches and initiatives that can provide confidence in reaching sustainable goals. Presented by the Center for the Remediation of Complex Sites (RemPlex) with the International Atomic Energy Agency's Network of Environmental Remediation and NORM Management (ENVIRONET). For more information and to register, see <https://www.pnnl.gov/remplex-seminars>.

ITRC Microplastics Training - Thursday, November 7, 2024, 1:00PM-3:00PM EST (18:00-20:00 GMT).

In response to one of the biggest emerging environmental concerns, ITRC formed the Microplastics Team in 2021 to develop the Microplastics Guidance Document. Plastics have become pervasive in modern life and are now used in a wide range of commercial and industrial applications. Microplastics may result from the degradation and fragmentation of larger plastics, or they may be intentionally produced for specific applications and products. Regardless of their origin, microplastics are now ubiquitous in our environment. Because of their small size and pervasiveness in the environment, microplastics, along with any other contaminants which are adhered to the microplastics, may be inadvertently consumed by humans and other organisms. For more information and to register, see <https://www.itrcweb.org> or

<https://www.clu-in.org/live>.

Federal Facilities Online Academy: Groundwater Policy Overview - Wednesday, November 13, 2024, 1:00PM-3:00PM EST (18:00-20:00 GMT).

Groundwater Policy and Federal Facilities Overview is a two-hour webinar course that provides an overview of U.S Environmental Protection Agency (EPA) groundwater policies and guidance with emphasis on cleanups at federal facilities. The instructional methodology for this course includes lecture and quizzes. 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 the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). 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, see <https://www.clu-in.org/live>.

Regional Climate Training for RCRA Permitting and Hazardous Waste Cleanup: West/Pacific Coast Regions - Monday, November 18, 2024, 1:30PM-3:30PM EST (18:30-20:30 GMT).

The U.S. Environmental Protection Agency's Office of Resource Conservation and Recovery (ORCR) is hosting a training on integrating climate change adaptation into the Resource Conservation and Recovery Act (RCRA) permitting and hazardous waste cleanup process. Focusing on EPA Regions 9 and 10, the training will cover: the regional climate risks to RCRA facilities; the underlying authorities requiring consideration of climate change in the RCRA permitting and hazardous waste cleanup process; the process for conducting a climate vulnerability screening and/or a climate vulnerability assessment (CVA) at a RCRA facility and optional climate adaptation measures appropriate for RCRA permitting and hazardous waste facilities. For more information and to register, see <https://www.trainex.org/classdetails.cfm?classid=9929&courseid=2036>.

Advancing Environmental Health Research with Artificial Intelligence and Machine Learning: Session II — ML & AI Applications to Environmental Engineering & Bioremediation - Wednesday, November 20, 2024, 2:00PM-4:00PM EST (19:00-21:00 GMT). The NIEHS Superfund Research Program (SRP) is hosting a Risk e-Learning webinar series focused on using artificial intelligence (AI) and machine learning to advance environmental health research. The series will feature SRP-funded researchers, collaborators, and other subject-matter experts who aim to better understand and address environmental health issues by applying AI and machine learning approaches to complex issues. In the second session, invited presenters will discuss how they apply machine learning and artificial intelligence to environmental engineering applications including contaminants and bioremediation using biosensors, microbiome compositions, and screening tools. For more information and to register, see <https://www.clu-in.org/live>.

ITRC Sediment Cap Chemical Isolation Training - Thursday, November 21, 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://www.clu-in.org/live>.

Advancing Environmental Health Research with Artificial Intelligence and Machine Learning: Session III — ML & AI Applications to Understand Omics, Metabolomics, & Immunotoxicity and Optimizing Bioengineering Using Datasets, Models, & Mass Spectrometry - Friday, November 22, 2024, 2:00PM-4:00PM EST (19:00-21:00 GMT). The NIEHS Superfund Research Program (SRP) is hosting a Risk e-Learning webinar series focused on using artificial intelligence (AI) and machine learning to advance environmental health research. The series will feature SRP-funded researchers, collaborators, and other subject-matter experts who aim to better understand and address environmental health issues by applying AI and machine learning approaches to complex issues. In the third and final session, speakers will discuss how they apply machine learning and artificial intelligence tools to analyze mass spectrometry and microscopy data and optimize models for understanding metabolomics, metabolite pathways, and immunotoxicology. For more information and to register, see <https://www.clu-in.org/live>.

FRTR Presents...TRAC — A Tool for Tracking Groundwater Restoration Across Multiple Sites - Wednesday, December 4, 2024, 1:00PM-2:00PM EST (18:00-19:00 GMT). Tracking Restoration And Closure (TRAC) is a web-based application that combines infographics, annual statistics, and historical facts to clearly communicate the current status of groundwater contamination cleanup efforts at Department of Energy Office of Environmental Management (DOE-EM) sites across the nation. TRAC is a tool to share information about and provide transparency into environmental remediation progress at these cleanup sites. With TRAC, users can explore robust and consistent geospatial visualization of contaminants of concern above the regulatory cleanup concentrations at three levels of detail: EM complex, EM site, and waste management unit. Each level includes narrative information on key topics, such as cleanup challenges/priorities and technology approaches, and metrics about contaminant plumes, regulatory context/status, and remedy technologies/implementation status. For more information and to register, see <https://www.clu-in.org/live>.

ITRC: Introduction to Hydrocarbons - Thursday, December 5, 2024,

1:00PM-3:00PM EST (18:00-20:00 GMT). Petroleum is a complex mixture of many compounds. Regulatory and technical guidance documents commonly focus on the hydrocarbon components of that mixture, or perceived risks that they present.

However, focusing on a specific area of concern often causes practitioners to overlook other aspects of a release. For example, concerns related to exposure to total petroleum hydrocarbons (TPH) risks may be overlooked while pursuing concerns related to light non-aqueous phase liquid (LNAPL) recovery or petroleum vapor intrusion (PVI). This class is designed to provide a basic overview of hydrocarbon behavior in the subsurface and how to scientifically assess concerns arising from the release of petroleum products into the environment. It will highlight key issues that help identify and manage TPH, LNAPL, and PVI risks together. For more information and to register, see <https://www.itrcweb.org> or <https://www.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:

- Geophysical Characterization of Mine Influenced Groundwater and Surface Water in the Mayflower Section of the Animas River, Bonita Peak Mining District, Silverton Colorado
- Passive Sampling Technology Update

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 5 resources, events, projects and news items were added to EUGRIS in October. 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 (DCHWS West), November 6-8, 2024, Denver, CO. The US EPA and Society of American Military Engineers (SAME) co-sponsor the DCHWS West which will be held in Denver, Colorado. The applications of engineering and science associated with cleaning up hazardous waste sites continue to evolve rapidly. The event's primary goal is to facilitate an interactive engagement between professionals from government and the private sector related to relevant and topical issues. For more information, please visit <https://sites.google.com/samephiladelphiaipost.org/dchws/west-symposium/fall-2024-dchws>

Department of Defense's (DoD) Energy and Environment Innovation Symposium, December 3-6, 2024, Washington, DC. The Department of Defense's (DoD) Energy and Environment Innovation Symposium is the nation's largest conference focusing on the DoD's priority environmental and energy issues. The Symposium will offer a variety

of technical sessions and short courses, over 650 technical poster presentations, and networking opportunities. For more information, please visit <https://www.dodinnovationsymposium.org/Home>

Call for Abstracts! 2025 Federal Environmental Symposium, March 31 - April 2, 2025, Bethesda, MD. The Symposium, hosted by the National Institutes of Health (NIH), will be both an in-person and virtual gathering of federal agencies to provide existing and relevant environmental information to Federal representatives. This event was first offered in 2002 and hosted at the NIH facility. The main purpose is to encourage partnerships, sharing of information, and best practices amongst Federal facilities. NIH will once again host the symposium virtually via MS Teams videoconferencing platform. This year's theme for the Symposium "Supporting the Mission Through Environmental Compliance" focuses on the sharing of best practices, success stories, partnerships, and challenges and achievements of the federal practitioner community as they apply to your Agency's mission. The symposium is also expected to bring together federal agencies and their partnering organizations to provide existing and relevant environmental policy perspectives. To submit a proposal, please visit <https://www.fedcenter.gov/calendar/conferences/symposium2025/cfp/>. Proposals are due by November 15, 2024.

Call for Ideas and Save the Date! 2025 National Brownfields Training Conference, August 5-8, 2025, Chicago, IL. The National Brownfields Training Conference is the largest event in the nation focused on environmental revitalization and economic redevelopment. 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. The Call for Ideas is open through December 20, 2024 for the August 2025 Conference. To submit an idea for the conference, please visit <https://gobrownfields.org/call-for-ideas/>

Call for Abstracts! 2025 Environmental Measurement Symposium, August 4-8, 2025, St Louis, MO. Organized by The NELAC Institute (TNI), the 2025 Environmental Measurement Symposium is a combined meeting of the National Environmental Monitoring Conference (NEMC) and the Forum on Environmental Accreditation. It is the largest conference focused on environmental measurements in North America, and this year is planned as an in-person event for the week of August 4, 2025 in St. Louis, MO. This year's Symposium theme is Building a Quality Culture as the Foundation for Reliable Data. The NEMC Steering Committee is inviting abstracts for oral or poster presentations which are due February 1, 2025. To submit an idea for the conference, please visit <https://www.envirosymposium.group/>.

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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