



TechDirect, November 1, 2023

Welcome to TechDirect! Since the October 1 message, TechDirect gained 74 new subscribers for a total of 43,787. 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 Soil Background & Risk Assessment - November 2, 2023, 1:00PM-3:00PM EDT (17:00-19:00 GMT). While some state and federal agencies and other entities have guidance documents regarding soil background, there is not one comprehensive and widely accepted guidance document that summarizes the state of the science on this topic. The Soil Background and Risk Assessment ITRC guidance document released December 2021 is intended to fill the gap by providing a comprehensive defensible framework for establishing and using soil background in risk assessments.

It focuses on the process of establishing defensible background concentrations of naturally occurring or anthropogenic ambient chemicals that can be used when performing risk assessment at contaminated sites. The target audience for the ITRC Soil Background and Risk Assessment Guidance Document (SBR-1) includes risk assessors, risk managers, and site investigators, which may include federal, state, tribal, and various local agency employees; contractors to these agencies; as well as potentially liable parties and their consultants. For training purposes, the ITRC Soil Background and Risk Assessment team produced four videos, two of which will be viewed during the class. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live>.

ITRC Microplastics - November 7, 2023, 1:00PM-3:15PM EST (18:00-20:15 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>.

Tools for PFAS Site Characterization Webinar Series Session III - November 8, 2023, 2:00PM - 4:00PM EST (19:00-21:00 GMT). The NIEHS Superfund Research Program (SRP) is sponsoring a Risk e-Learning webinar series, hosted by CLU-IN, focused on research efforts to develop tools for sampling, monitoring, detecting, and characterizing per- and polyfluoroalkyl substances (PFAS) contamination. The three-part series will feature SRP-funded researchers and collaborators whose research focuses, in part, on understanding the distribution and fate of PFAS in the environment. Parts 1 and 2 have been archived and are available at <https://www.clu-in.org/live/archive/>. To learn more about each session and to register for part 3, see <https://www.clu-in.org/live>.

ITRC 1,4-Dioxane: Science, Characterization & Analysis, and Remediation - November 9, 2023, 1:00PM-3:15PM EST (18:00-20:15 GMT). 1,4-Dioxane has seen widespread use as a solvent stabilizer since the 1950s. The widespread use of solvents through the 1980s suggests its presence at thousands of solvent sites in the US; however, it is not always a standard compound in typical analytical suites for hazardous waste sites, so it previously was overlooked. The U.S. EPA has classified 1,4-dioxane as "likely to be carcinogenic to humans." Some states have devised health standards or regulatory guidelines for drinking water and groundwater standards; these are often sub-part per billion values. These low standards present challenges for analysis, characterization, and remediation of 1,4-dioxane. The ITRC team created multiple tools and documents that provide information to assist all interested stakeholders in understanding this contaminate and for making informed, educated decisions. This training is a series of six (6) modules. The six individual modules will be presented together live, and then archived on the ITRC 1,4-Dioxane training webpage for on demand listening. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live>.

Conducting Climate Vulnerability Assessments at Superfund Sites: Lessons Learned - November 14, 2023, 1:00PM-2:30PM EST (18:00-19:30 GMT). The U.S. Environmental Protection Agency's Office of Superfund Remediation and Technology Innovation (OSRTI) is delivering a webinar summarizing lessons learned in conducting climate vulnerability assessments (CVAs) at sites on the National Priorities List (NPL). The webinar will cover: The underlying authorities to consider climate change at NPL sites; Key questions addressed through the climate vulnerability assessment process; Tools and data sources used to develop climate projections; Recurring climate vulnerabilities that could affect remedy protectiveness; The associated adaptation measures needed to increase remedy resilience to climate impacts. While the CVA process described in this webinar has been applied mostly to sites within the Superfund Program, it is considered "program neutral" and may be used as a guide for developing a CVA process and conducting CVAs at contaminated sites in other cleanup programs. For more information and to register, see <https://www.clu-in.org/live>.

> New Documents and Web Resources

ITRC PFAS Document Update. This update includes more content across multiple sections including discussions on biosolids, recent claims of PFAS use and occurrence in products, AFFF replacement and clean-out, and PFAS inhalation toxicology. Other sections of the document have also been selected for additional content, including lysimeters, health effects of AFFF, and air emissions treatment. In addition, multiple

external tables have been updated, including the Regulatory Programs Summary, the Analytical Methods Tables, and the Treatment Technology Table. For more information, please visit <https://pfas-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:

- What We Know: 6PPD and 6PPD-Quinone

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

Persistent Chemicals: Detecting, Limiting Exposure To, and Treating PFAS Contamination (GAO-23-106970). The U.S. Government Accountability Office (GAO) publicly released this report on September 27, 2023. According to GAO, examples of how per- and polyfluoroalkyl substances (PFAS) enter the environment include: Manufacturing plants: Industrial processes can discharge PFAS-containing wastewater or emit PFAS into the air; Wastewater treatment plants: Effluent discharged from plants can contain PFAS; Agricultural lands: Biosolids used as fertilizer can contain PFAS and contaminate soil and water; Military or civilian airports: PFAS-containing firefighting foams can contaminate soil and water; and Landfills: PFAS-containing products (e.g., food packaging) disposed of without proper controls can contaminate soil and water. View or download from <https://www.gao.gov/products/gao-23-106970>.

> Conferences and Symposia

Fall 2023 Federal Remediation Technologies Roundtable Meeting - November 7, 2023 in Reston, VA and On-line. The topic for the Fall 2023 Meeting of the Federal Remediation Technologies Roundtable (FRTR) will be Recent Advances in PFAS Characterization Technologies. The science and technology of site characterization for per-and polyfluoroalkyl substances (PFAS) has advanced in the five years since FRTR last addressed the topic in 2018. Federal agency budgets for PFAS remediation have grown substantially during this time. As a result, site characterization efforts such as Remedial Investigations, as well as early response actions, are underway at many Federal facilities. Funding for field-scale projects to further advance PFAS characterization technology and methodologies also has increased substantially. The FRTR 2023 Fall General Meeting provides an opportunity for member agencies to share results of recent and on-going PFAS projects that are improving our understanding of PFAS characterization technologies. Specifically, invited presentations and roundtable discussions will explore current best practices for PFAS site characterization, emerging technologies and methods, case studies and current agency needs for technology transfer and future research. FRTR member-agencies meet semi-annually, usually in the Washington, D.C. area. These meetings are open to the public. For more information and to register to attend in-person or on-line, please visit <https://www.frtr.gov/meetings.cfm>.

Global Summit on Environmental Remediation - November 13-17, 2023, Richland,

WA. The Global Summit is presented by the Center for the Remediation of Complex Sites (RemPlex) in cooperation with the International Atomic Energy Agency (IAEA), in-person at Pacific Northwest National Laboratory with a virtual option. This international forum brings together government, industry, and research institutions to discuss the challenges, barriers, and innovative solutions for successful remediation and long-term stewardship of contaminated sites. The program integrates case studies, technical sessions, a poster session, and optional training workshops-offering networking and knowledge-sharing opportunities for issues facing the international environmental remediation community. For more information, please visit <https://www.pnnl.gov/projects/remplex/2023-summit>.

DOD Environmental Sustainability and Energy Resilience Symposium, November 28-December 1, 2023, Arlington, VA. The Department of Defense's Environmental Sustainability and Energy Resilience Symposium is the nation's largest conference focusing on the DoD's priority environmental and energy issues. The Symposium brings together researchers, technology developers, defense end-users, and regulatory communities to showcase cutting edge environmental and energy technologies and ideas. This event is hosted by the environmental research and energy innovation programs under the Office of the Deputy Assistant Secretary of Defense for Environment & Energy Resilience (DASD E&ER). The Strategic Environmental Research and Development Program (SERDP) and the Environmental Security Technology Certification Program (ESTCP) fund research and demonstration projects, harnessing the latest science and technology to improve DoD's environmental performance, reduce costs, and enhance and sustain mission capabilities. The Operational Energy Capability Improvement Fund (OECIF) and Operational Energy Prototyping Fund (OEPF) programs develop and prototype technologies that provide tactical overmatch for our warfighters and allies. For more information, please visit <https://serdp-estcp.org/events/details/04d444f1-aa19-4e66-bb5c-5163964cc4dd/symposium-2023>

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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