



TechDirect, January 1, 2023

Happy Holidays and may you have a prosperous new year! Welcome to TechDirect! Since the December 1 message, TechDirect gained 52 new subscribers for a total of 40,459. 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 and Risk Assessment - January 24, 2023, 1:00PM-3:00PM EST (18:00-20:00 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 1,4-Dioxane: Science, Characterization & Analysis, and Remediation - January 31, 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 contaminant and for making informed, educated decisions. For more information and to register, please visit <https://itrcweb.org/> or <https://clu-in.org/live/>

ITRC Optimizing Injection Strategies and In situ Remediation Performance - February 7, 2023, 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 under-performing 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>.

ITRC Vapor Intrusion Mitigation (VIM-1), A Two Part Series February 14 and 21, 2023. 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>.

ITRC Environmental Data Management (EDM): Real Life Application of Data Management Planning and Field Data Collection Best Practices - February 23, 2023, 1:00PM-2:30PM EST (18:00-19:30 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. The additional offerings are scheduled for April and May of 2023. You are welcome to register for any of the three, but they do not build upon each other. 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:

- Summary Report Fairbanks International Airport Plumestop® Pilot Study Fairbanks, Alaska
- Environmental Sequence Stratigraphy (ESS)
- Cottage Grove Pilot Study Final Report
- Per- and Polyfluoroalkyl Substances: A Preliminary Evaluation of Groundwater Contamination in the Western States

Superfund Research Program Technology Profile December 2022. A SRP-funded technology has been developed into several products to detect and remove per- and polyfluoroalkyl substances (PAFS) from water. These products use cup-shaped cyclodextrins, sugar molecules bound together into rings, to bind and remove PFAS. View more information at

https://www.niehs.nih.gov/research/supported/centers/srp/science_digest/2022/12/technology/index.cfm.

ITRC's New 2023 Passive Sampling Team Seeking Members. Starting in 2023, the Passive Sampling Technology Team will update the four existing ITRC documents, emphasizing new technologies for passive sampling, media differences, sampling devices, and device limitations/advantages. Case studies will also be updated to support transitioning to passive sampling, bring confidence in the current science, and enable more sustainable management and monitoring of sites. To learn more or register to join the ITRC Team, visit <https://itrcweb.org/teams/active/pst-u>.

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

Progress in the Management of Contaminated Sites in Europe (2022). European Environment Agency produced this report which summarizes contaminated sites in Europe that release potentially toxic compounds into soil, air and water, and can restrict economic development and decrease property values and the attractiveness of communities. Such sites are often located in urban industrial areas and lower income communities. However, they offer potential for urban re-development through land recycling after remediation. A recent conservative projection estimates that the EU has 2.8 million potentially contaminated sites. Current efforts to monitor and remediate these sites vary markedly across Member States. Therefore, coherent efforts supported by an EU-wide policy are needed to fill gaps and speed up the identification and management of sites in need of risk reduction measures and remediation. View or download from <https://www.eea.europa.eu/ims/progress-in-the-management-of>

> Conferences and Symposia

2023 ITRC Annual Meeting - Boston, MA, March 20-23, 2023. This in-person event

will include a plenary session, awards ceremony, receptions, and working group meetings for ITRC's many Technical Teams. In addition to the meeting, ITRC will also host a state-specific PFAS training on Friday, March 24. The ITRC Annual Meeting brings together environmental leaders and professionals from state agencies; Tribes; EPA, DOE, DOD, and other federal agencies; industry; and NGOs to work together in the development of revolutionary, consensus-based environmental guidance. For more information and to register, please visit <https://itrcweb.org/meetings/upcoming>

Call for Ideas! 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! The Call for Ideas is now open - you are invited to submit your ideas for dynamic educational sessions that encourage conversation and participation from fellow attendees. For more information, please visit <https://brownfields2023.org/call-for-ideas/>

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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