



TechDirect, August 1, 2023

Welcome to TechDirect! Since the July 1 message, TechDirect gained 384 new subscribers for a total of 41,036. 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

Evaluating Plant Uptake of Chemical Contaminants in Crops Grown Near Urban Gardening Sites for Human Health Risk Assessment - August 9, 2023, 1:00PM-3:00PM EDT (17:00-19:00 GMT). This seminar, postponed from July, aims to provide an assessment of the potential exposure routes, plant uptake pathways, and remediation practices of chemicals contaminants found in crops grown in urban gardening sites. It will focus on both inorganic and organic pollutants that are considered contaminants of emerging concern (CECs) by the U.S. EPA. The presence of several trace elements and persistent organic pollutants (POPs) in urban soil media were analyzed on the state-level to quantify the potential contamination risk associated with plant uptake mechanisms by crops commonly grown throughout the various regions of the U.S. CECs exposure routes in urban agriculture (UA) scenarios and associated human health risks are assessed. This seminar also serves to provide potential remediation methods for polluted urban soils, with an emphasis on affordability, accessibility, and sustainability of the methods. For more information and to register, please visit <https://clu-in.org/live/>

SERDP ESTCP Removal of Munitions Constituents from Wastewater - August 10, 2023, 12:00PM-1:00PM EDT (16:00-17:00 GMT). This webinar will feature DoD-funded research efforts to develop treatment technologies for munitions in wastewater. First, Dr. Jennifer Weidhaas (University of Utah) will present her research results on developing more efficient, cost effective, and sustainable treatment trains for mixed munitions wastewater. Second, Mr. Brian Hubbard (U.S. Army Program Executive Office Ammunition) will discuss the development, scale-up, and results from several field demonstrations of a technology capable of rapidly and completely destroying insensitive munition constituents in explosives production wastewater. For more information and to register, please visit <https://serdp-estcp.org/webinars>.

PNNL's RemPlex and IAEA "Assessing Environmental Remediation

Technologies: Soils" - August 15, 2023, 11:00AM-12:30PM EDT (15:00-16:30

GMT). At any given site, selection of the most appropriate remedial alternative is driven by a variety of environmental, technical, economic, social, regulatory, and policy-driven factors. Panelists Bruce Marvin and Norbert Molitor will discuss aspects of remediation technologies-such as efficiency, effectiveness, sustainability, maturity and availability, complexity, plus long-term maintenance and monitoring requirements-to be considered in the selection of a given soil remediation approach. The seminar will cover technologies that are available to treat a broad array of contaminant categories (radionuclides, metals and organics). For more information and to register, please visit

<https://www.pnnl.gov/projects/remplex/seminars>.

SERDP ESTCP Developing and Demonstrating PFAS Passive Samplers - August 24, 2023, 12:00PM-1:00PM EDT (16:00-17:00 GMT).

This webinar will feature DoD-funded research efforts to develop and demonstrate PFAS passive samplers. First, Dr. Lee Blaney (University of Maryland, Baltimore County) will discuss the development and performance of anion exchange membranes as passive samplers for PFAS. Second, Dr. Paul Edmiston (The College of Wooster) will talk about the development of the Sentinel passive sampler and its use for groundwater, surface water, and stormwater monitoring. For more information and to register, please visit

<https://serdp-estcp.org/webinars>.

Recent Advances in Consideration of Ecosystem Services in Contaminated

Clean-Ups and Risk Assessments - August 31, 2023, 1:00PM-2:30PM EDT

(17:00-18:30 GMT). This webinar will introduce some recent advances in consideration of ecosystem services in contaminated site cleanups. The team will introduce concepts, tools, and example applications. Then the audience will be shown how to find newly available resources and places to turn to for consideration of ecosystem services in their cleanup efforts. For more information and to register, please visit

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

ITRC Optimizing Injection Strategies and In situ Remediation Performance -

September 12, 1:00PM-3:15PM EDT (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>.

> New Documents and Web Resources

In Situ Thermal Remediation (EPA 600-R-23-062). The purpose of this paper is to briefly describe these commonly used in situ thermal remediation technologies, and how they are deployed to remediate VOC and SVOC contaminated sites. The effects of temperature on the physical properties of common organic contaminants that result

in the effectiveness of these technologies for the recovery or destruction of contaminants are also briefly described. A case study is provided for each of the thermal technologies discussed. In addition, guidance is provided on evaluating, contracting, and implementing thermal technologies within the Superfund process of evaluating alternative technologies, including preparing bid documents for thermal remediation services, reviewing designs, and monitoring the implementation of the remedy. For more information and to download the publication, please visit https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=CESER&dirEntryId=358095

High-Volume Sampling for Vapor Intrusion Assessments. This fact sheet covers high-volume sampling (HVS) as a method to characterize the nature and extent of volatile organic compound (VOC) vapor distributions under large buildings. Case studies at NAS Corpus Christi and NS Norfolk are included as well as a summary of the advantages and limitations of applying HVS. For more information and to download the fact sheet, please visit <https://www.clu-in.org/navfac-hvs-factsheet.pdf>

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:

- Bench-Scale Assessment of NMR and Complex Resistivity (CR) Screening Technologies for Rapid Assessment of PFAS in Soils and Sediments
- Study to Assess Treatment Alternatives for Reducing PFAS in Leachate from State-Owned Landfills
- PFAS Podcast Series: SERDP and ESTCP Research and Demonstrations

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 July 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:

£1 billion Brownfield, Infrastructure and Land Fund. Up to £1 billion is available for projects across England. The fund aims to support both public and private sector partners to unlock strategic housing sites including housing-led, mixed-use opportunities where brownfield, infrastructure or land projects face delivery and/or viability challenges. For more information, please visit <https://www.gov.uk/guidance/brownfield-infrastructure-and-land-fund#eligibility-for-funding>.

> Conferences and Symposia

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! For more information and to register, please visit <https://brownfields2023.org/>

Tribal Lands and Environment Forum - Syracuse, NY August 14-17, 2023. This is

the thirteenth 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 <https://sites.google.com/view/tlef2023/home>

RemTech Europe - Hybrid, September 18-22, 2023. RemTech Europe, an international conference and exhibition on land and water remediation markets and technologies, is scheduled for 18-22 September 2023. The aim of the Conference is to share information on knowledge, innovation and case histories, to encourage the development of remediation processes and the application of new and sustainable technologies. RemTech Europe also brings together experts, problem owners and suppliers of available services and technologies while providing a platform for discussion between stakeholders. The conference will be broadcast fully in English. For more information and to register, please visit <https://www.remtechexpo.com/en/remtech-europe>.

Call for Abstracts - Environmental Sustainability and Energy Resilience Symposium, November 28-December 1, 2023, Arlington, Virginia. 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. Submissions are due August 6. For more information, please visit <https://serdp-estcp.org/events/details/04d444f1-aa19-4e66-bb5c-5163964cc4dd/symposium-2023>

Save the Date! 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. Registration is expected to open in November, 2023. 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.

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