



TechDirect, July 1, 2023

Welcome to TechDirect! Since the June 1 message, TechDirect gained 51 new subscribers for a total of 40,668. 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 - July 18, 2023, 1:00PM-3:00PM EDT (17:00-19:00 GMT).

This seminar 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/>

Recommended Updates to the Soil-to-Groundwater Pathway in the US EPA's 1996 Soil Screening Guidance - July 20, 2023, 1:00PM-3:00PM EDT (17:00-19:00 GMT). As part of a Virtual Student Federal Service internship project, this presentation provides an overview of the history, current use, and recommended improvements of the dilution attenuation factor (DAF) used when calculating soil screening levels (SSL), along with recommendations to address the assumption of an infinite contaminant source when calculating SSLs. This project focuses on the United States Environmental Protection Agency's (U.S. EPA) 1996 Soil Screening Guidance (SSG), which provides guidance for calculating SSLs as implemented in the Regional Screening Level (RSL) and Preliminary Remediation Goal (PRG) calculators. The U.S. EPA's SSG currently utilizes a single default nationwide DAF during the calculation of

SSLs when a risk of soil-to-groundwater contaminant migration is present, which may not reflect the significant hydrologic differences across the U.S. Additionally, the SSG's calculation assumes an infinite source of contaminant is present, which may not be an accurate reflection of the conditions at sites. This project examines the history and initial development of the DAF, reviews potential issues with the current use of the DAF, and provides recommendations for improvement to the DAF calculations, including hydrologic region-specific DAFs, and a calculator to correct the infinite source assumption inherent in SSL calculations. The presentation concludes with the limitations of this analysis and recommendations for future work to improve the DAF and SSG. For more information and to register, please visit <https://clu-in.org/live/>

> New Documents and Web Resources

FY 2022 Superfund Accomplishments Report. Throughout fiscal year 2022, the Superfund program protected human health and the environment nationwide by accelerating cleanups, developing innovative remedies, responding rapidly to emergencies, advancing environmental justice, and supporting sites' return to beneficial use. To read the report, please visit

<https://www.epa.gov/superfund/superfund-accomplishments-report-fiscal-year-2022>

Superfund Research Brief 342: Exposure to PCBs During Nursing Leads to Temporary Diabetes-Related Health Effect. Exposure to synthetic chemicals called polychlorinated biphenyls (PCBs) through a mother's milk could cause short-term glucose intolerance in offspring, according to a study by researchers from the University of Kentucky (UK) and funded by the NIEHS Superfund Research Program (SRP). Intolerance to glucose, signified by high blood levels of the sugar, is a hallmark of diabetes. The study, conducted with mice, builds on earlier SRP-funded work by the same group that found connections between maternal PCB exposure and diabetes risk factors in progeny. View the brief at https://tools.niehs.nih.gov/srp/researchbriefs/view.cfm?Brief_ID=342

ITRC Pump and Treat Optimization Guidance. Groundwater extraction and treatment (aka Pump & Treat (P&T)) is not a new remediation technology, and it is still used for the cleanup of contaminated sites. The driving premise of this document is that these systems need to be evaluated, optimized, and adapted to changing site conditions throughout their life cycle. The goals of P&T optimization are to improve the effectiveness and efficiency of the remedy, maintain or improve receptor protection, ensure adequate maintenance, reduce cost and liability, reduce the environmental footprint, and make the remedy more resilient to environmental changes. This document presents an overview of the P&T optimization process and the tools and resources available to help the user achieve these goals. To view the guidance, please visit <https://pt-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:

- Environmental Restoration Program Perfluorooctanesulfoanate and Perfluorooctanoic Acid Team, Ellsworth Air Force Base, South Dakota
- Evaluating the Importance of Precursor Transport and Transformation for Groundwater Contamination with PFAS

- The Omaha Lead Superfund Site Omaha, Nebraska Innovative Partnerships and Holistic Remedial Approaches Prioritize Community Health
- General Filtration Bed Design for Water Contaminated with Radioactive Cesium

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than three resources, events, projects and news items were added to EUGRIS in June 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.

> Conferences and Symposia

NAVFAC Remediation Innovative Technology Seminar (RITS) - San Diego, CA and Online, July 10-11, 2023. The Remediation Innovative Technology Seminar (RITS) is NAVFAC's showcase for the latest Environmental Restoration (ER) technologies, methodologies, and guidance news. The seminar is developed for Department of the Navy (DON) Remedial Project Managers (RPMs) to share the latest innovations and best practices. Others eligible to attend include Department of Defense (DoD) personnel, federal/state/local regulators, and contractors with an active DON ER contract. DON personnel will be offered priority registration and others are welcome to attend based on availability. For more information and to register to participate virtually, please visit <https://www.eventbrite.com/e/2023-rits-virtual-tickets-617915821857>

EPA to Offer Training on Radiation Risk Assessment - National Harbor, MD, July 22, 2023. EPA will provide training at the 2023 Annual Meeting of the Health Physics Society (HPS) on Radiation Risk Assessment. The all day course includes lectures and demonstrations of using EPA's risk and dose assessment calculators developed by the Superfund remedial program. The target audience for this course is RPMs, OSCs, risk assessors and others that want to obtain a working knowledge on conducting Superfund radiation risk assessments. For more information and to register, please visit <https://www.aahp-abhp.org/civicrm/event/info?reset=1&id=15>

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>

Call for Abstracts - 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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