U.S. ENVIRONMENTAL PROTECTION AGENCY

TechDirect, January 1, 2021

Happy Holidays and may you have a prosperous new year!

Welcome to TechDirect! Since the December 1 message, TechDirect gained 55 new subscribers for a total of 39,752. 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.

> Funding Opportunity

FY 2022 Strategic Environmental Research and Development Program (SERDP) Solicitations. The Department of Defense's (DoD) SERDP is seeking to fund environmental research and development proposals responding to focused Statements of Need (SONs) in the following areas: Environmental Restoration, Munitions Response, Resource Conservation and Resiliency, and Weapons Systems and Platforms. Proposals will be selected through a competitive process. The Core Solicitation provides funding opportunities for basic and applied research and advanced technology development. Core projects vary in cost and duration consistent with the scope of the work proposed. The SERDP Exploratory Development (SEED) Solicitation provides funding opportunities for work that will investigate innovative environmental approaches that entail high technical risk or require supporting data to provide proof of concept. Funding is limited to not more than $250,000 and projects are approximately one year in duration. This year, SERDP is requesting SEED proposals for the Munitions Response and Weapons Systems and Platforms program areas. All Core pre-proposals are due January 7, 2021. SEED proposals are due March 4, 2021. For more information and application instructions, see https://serdp-estcp.org/Funding-Opportunities/SERDP-Solicitations.

> Upcoming Live Internet Seminars

EPA Region 2 Forty Years to Finish - A Case Study of Combe Fill South Landfill

Superfund Site - January 13, 2021, 1:00PM-3:00PM EST (18:00-20:00 GMT). This presentation is a case study of Combe Fill South Landfill Superfund Site listed on the NPL in 1983 with a record of decision (ROD) in 1986, explanation of significant differences (ESD) in 2000 and amended ROD in 2018. HDR and its predecessor company LMS have been working on this site since its NPL listing in 1983. The presentation will highlight: how advancements in high resolution analytical and geophysical methods over this time period had a bearing on the original conceptual site model (CSM), and how the application of evolving technologies resulted in investigative and design improvements to achieve the site's remedial action objectives (RAOs; how the appearance of emerging contaminants - namely 1,4-dioxane - took the remediation timeline through a detour and how delineation and ultimate treatment of emerging contaminants, including PFCs, became the most significant component of this site's history; the data and decision-making process resulting from numerous bench and pilot scale studies for 1,4-dioxane treatment, as well as various innovative and tried-and-true hydrogeologic evaluations in fractured rock; and the use of new design technologies and software (e.g. LiDAR, Autodesk Recap, Autodesk Revit, BIM 360, etc.) to create a 3D model of the existing groundwater treatment facility, evaluate the potential reuse vs new design, and ultimately complete a new treatment facility design. For more information and to register, see https://clu-in.org/live.

ITRC TPH Risk Evaluation at Petroleum-Contaminated Sites - January 14, 2021, 1:00PM-3:15PM EST (18:00-20:15 GMT). The basis for this training course is the ITRC guidance: TPH Risk Evaluation at Petroleum-Contaminated Sites (TPHRisk-1, 2018). The guidance builds on long-standing and current research and experience, and presents the current science for evaluating TPH risk at petroleum-contaminated sites. As a participant in this training you should learn to: recognize the ITRC document as a go-to resource for evaluating TPH risk at petroleum-contaminated sites, recognize how TPH-impacted media interacts with the environment and changes over time, select appropriate analytic method(s) to match site objectives, and apply the decision framework to determine when a site-specific target level may be more appropriate than a generic screening level for TPH. For more information and to register, see https://www.itrcweb.org or https://clu-in.org/live.

SERDP- ESTCP Decision Support Tool for Vadose Zone Remediation of Volatile Contaminants - January 20, 2021, 1:00PM EST (18:00 GMT). This webinar will discuss the updated SVEET2 spreadsheet software developed under project ER-201731. Dr. Jovan Popovic from Naval Facilities Engineering and Expeditionary Warfare Center (NAVFAC EXWC) and his team will discuss the updated SVEET2 software to convey the basis, software interface, and application of the software to support remedial decisions. For more information and to register, see https://www.serdp-estcp.org/Tools-and-Training/Webinar-Series/01-20-2021.

ITRC Remediation Management of Complex Sites - January 21, 2021, 1:00PM-3:15PM EST (18:00-20:15 GMT). This training course and associated ITRC guidance: Remediation Management of Complex Sites (RMCS-1, 2017), provide a recommended holistic process for management of challenging sites, termed "adaptive site management." By participating in this training course we expect you will learn to apply the ITRC guidance document to: identify and integrate technical and nontechnical challenges into a holistic approach to remediation; use the Remediation Potential Assessment to identify whether adaptive site management is warranted due to site complexity; understand and apply adaptive site management principles; develop a long-term performance-based action plan; apply well-demonstrated techniques for effective stakeholder engagement; access additional resources, tools, and case studies most relevant for complex sites; and communicate the value of the guidance to regulators, practitioners, community members, and others. For more information and to register, see https://www.itrcweb.org or https://clu-in.org/live.

Local Governments and Superfund Sites - Supporting Redevelopment and Addressing the Superfund Liability Concerns of Local Governments - January 22, 2021, 2:00PM-4:00PM EST (19:00-21:00 GMT). Local governments can play a critical role in the cleanup, redevelopment, and reuse of contaminated properties. When contamination complicates property acquisition, reuse, or stewardship, local governments can help transform these properties from liabilities into community assets. However, local governments can be reluctant to play an active part in redevelopment efforts due to feeling overwhelmed on how to start or what to do. Also, concerns about potential CERCLA liability at Superfund sites may discourage local governments from this role. This session will share Superfund Redevelopment Program tools and best practices and highlight real-world case examples where local governments, worked with EPA to facilitate the cleanup, redevelopment, and reuse of contaminated properties in their communities. This session also will explore how Superfund liability protections and EPA's enforcement policies protect local governments during the acquisition, cleanup, redevelopment, and reuse of Superfund sites. Speakers will address EPA's newest policies directly addressing the Superfund liability concerns of local governments. This session will empower local governments by providing specific strategies and tools for local governments to successfully return these blighted properties back to productive use while minimizing their liability risk, including how to attract and form productive partnerships between local governments and developers. For more information and to register, see https://clu-in.org/live.

ITRC Incremental Sampling Methodology (ISM-2) Update Training Modules, Session 1 - January 26, 2021, 1:00PM-3:15PM EDT (18:00-20:15 GMT). The newly updated Incremental Sampling Methodology (ISM) training is a series of six modules providing an overview of ISM and presenting five sections from the ITRC guidance document (ISM-2, 2020). After this series, you should understand: Incremental Sampling Methodology (ISM) is a statistically supported technique for assessing the unbiased mean contaminant concentration in soil, sediment, and other solid media which can afford an economy of effort and resources; how the ISM structured composite sampling and processing protocol reduces data variability and provides for representative samples of specific soil volumes by collecting numerous increments of soil (typically, 30 to 100 increments) that are combined, processed, and subsampled according to specific protocols; the key principles regarding heterogeneous soil sampling errors and how ISM reduces those errors to have more confidence in sampling results; and h ow to use the new ITRC Incremental Sampling Methodology (ISM-2) guidance document to learn the principles and approaches of the methodology to improve representative, reproducible, and defensible data to improve decision-making at your sites. For more information and to register, see https://www.itrcweb.org or https://clu-in.org/live.

ITRC Issues and Options in Human Health Risk Assessment - A Resource When Alternatives to Default Parameters and Scenarios are Proposed - January 28, 2021, 1:00PM-3:15PM EST (18:00-20:15 GMT). After participating in this ITRC training course, the learner will be able to apply ITRC's Decision Making at Contaminated Sites: Issues and Options in Human Health Risk (RISK-3, 2015) document when developing or reviewing site-specific risk assessments by: identifying common issues encountered when alternatives to default parameters and scenarios are proposed during the planning, data evaluation, toxicity, exposure assessment, and risk characterization and providing possible options for addressing these issues; recognizing the value of proper planning and the role of stakeholders in the development and review of risk assessments; and providing information (that includes links to additional resources and tools) to support decision making when alternatives to default approaches, scenarios and parameters are proposed. For more information and to register, see https://www.itrcweb.org or https://clu-in.org/live.

Advances in Modeling Groundwater Flow and Transport with MODFLOW -

February 3, 2021, 1:00PM-2:30PM EST (18:00-19:30 GMT). MODFLOW is a popular open-source groundwater modeling software program developed, supported, and maintained by the U.S. Geological Survey. The MODFLOW program, first released over 35 years ago, has evolved into rich suite of software programs for the simulation of groundwater flow, solute transport, and a wide range of other groundwater related processes. In 2017, the U.S. Geological Survey released a new core version of the MODFLOW program. This new version, called MODFLOW 6 (the sixth core version), extends the core MODFLOW capabilities to include robust solutions for complex water table problems, support for generalized meshes with focused resolution within areas of interest, and support for multiple models and multiple types of models within the same simulation. In addition to the Groundwater Flow Model, MODFLOW 6 now contains a Groundwater Transport Model, which can run simultaneously with the flow model or as a separate simulation using the results from a previous groundwater flow simulation. The purpose of this presentation is to describe the MODFLOW suite of programs and highlight some of the new capabilities currently available and under development for MODFLOW 6. For more information and to register, see https://clu-in.org/live.

> New Documents and Web Resources

EPA Releases Interim Guidance on Destroying and Disposing of Certain PFAS and PFAS-Containing Materials. EPA released for public comment new interim guidance that will help protect the public from exposure to these emerging chemicals of concern. Specifically, the new interim guidance outlines the current state of the science on techniques and treatments that may be used to destroy or dispose of PFAS and PFAS-containing materials from non-consumer products, including aqueous film-forming foam (for firefighting). This interim guidance will be available for public comment until February 22, 2021. View or download from https://www.epa.gov/pfas/interim-guidance-destroying-and-disposing-certain-pfas-and-pfas-containing-materials-are-not.

NAVFAC Guidance on Sediment Dredging in Areas Known or Suspected of Containing MEC/MPPEH. A new guidance document released in August 2020, is available for Department of the Navy (DON) Environmental Restoration Remedial Project Managers (RPMs) who are managing and executing sediment dredging projects in areas known or suspected of containing munitions and explosives of concern (MEC) and/or material potentially presenting an explosive hazard (MPPEH). Properly accounting for MEC/MPPEH in areas where dredging will occur is an important aspect of managing restoration projects to ensure the safety of workers, the public, and dredging/process equipment. View or download from https://clu-in.org/NAVFAC-Dredging-MEC-MPPEH-Guidance.

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:

- Assessing the Long-Term Performance and Impacts of ISCO and ISBR Remediation Technologies
- Demonstration of a Long-Term Sampling and Novel Analysis Approach for Distinguishing Sources of Volatile Organic Compounds in Indoor Air
- Post-Remediation Performance Assessment at a Petroleum Impacted Site
- Remedial Action Work Plan for the B.F. Goodrich Superfund Site, Calvert City,

Marshall County, Kentucky
- South State Street MGP Site Bellingham, Washington Final Cleanup Action Plan
- Approaches for Managing Contaminated Sediments
- In Situ Chemical Reduction: State-of-the-Practice and New Advances
- Vapor Intrusion Mitigation Model: VIM Model V2.2
- Minimum Detectable Concentrations with Typical Radiation Survey Instruments for Various Contaminants and Field Conditions
- Proceedings of the Radon Barriers Workshop, July 25-26, 2018, NRC Headquarters, Rockville, MD

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 10 resources, events, projects and news items were added to EUGRIS in December 2020. 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:

INTERSOL 2021 - CALL FOR PAPERS - Soils: Opportunities for the Transition of Territories. The 2021 Conference will include fourmajor themes: Soil, an opportunity as a resource; Soil, an opportunity for the environment; Soil, an opportunity for the development; and Optimize the management of degraded soils. Organizers are accepting abstracts for this event through January 25, 2021. For more information, see https://www.webs-event.com/en/event/intersol.

> Conferences and Symposia

13th Symposium on Design and Construction Issues at Hazardous Waste Sites - March 29-31, 2021. This year, the conference will be held virtually with daily technical presentations from 1:00 PM to 5:00 PM EST. Registration for the virtual event will open in early 2021. The applications of engineering and science associated with cleaning up hazardous waste sites continue to evolve rapidly. Our goal is to facilitate an interactive engagement between professionals from government and the private sector related to relevant and topical issues affecting our field. We will make every effort to mirror all aspects of past symposiums in terms of format and spirit. For more information, see https://www.eventbrite.com/e/design-and-construction-issues-at-hazardous-waste-sites-dchws-2020-registration-60190087171 .

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 (703) 603-9924 or balent.jean@epa.gov. To unsubscribe, send a blank email to $subst('Email.UnSub'). Remember, you may subscribe, unsubscribe or change your subscription address at https://clu-in.org/techdirect at any time night or day.