



TechDirect, September 1, 2020

Welcome to TechDirect! Since the August 1 message, TechDirect gained 54 new subscribers for a total of 39,624. 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 2021 Brownfields Multipurpose, Assessment, and Cleanup Grants. These brownfields grants may be used to address sites contaminated by hazardous substances, pollutants, or contaminants (including hazardous substances co-mingled with petroleum) and petroleum. The Brownfields Program will award approximately 10 Multipurpose Grants for a total of \$8 million; 87 Assessment Grants for a total of \$32 million; and 26 Cleanup Grants for a total of \$13 million. The deadline to submit an application is October 28, 2020. For more information and application instructions, see <https://www.epa.gov/brownfields/multipurpose-assessment-rif-and-cleanup-marc-grant-application-resources>.

US EPA, US Department of Defense, and State Partners Launch Technical Challenge Seeking Innovative Ways to Destroy PFAS in Firefighting Foam. The goal of this challenge is to discover new non-thermal technologies and approaches that can remove at least 99 percent of PFAS in unused AFFF, without creating any harmful byproducts. EPA is pleased to collaborate in the challenge with the U.S. Department of Defense's Strategic Environmental Research and Development Program (SERDP) and Environmental Security Technology Certification Program (ESTCP); the Environmental Council of the States (ECOS) and the Environmental Research Institute of the States (ERIS); Michigan Department of Environment, Great Lakes & Energy (EGLE); and the Colorado Department of Public Health & Environment (CDPHE). To address the need for new non-thermal technologies that destroy PFAS, without generating hazardous byproducts, EPA is offering up to \$50K for the best design concept(s), with the added potential opportunity for field testing of the winning design concept(s) in partnership with EPA and ESTCP. The challenge closes on November 23, 2020. Winners are expected to be announced in early 2021. For more information, see <https://www.epa.gov/innovation/innovative-ways-destroy-pfas-challenge>.

New ITRC Project Teams Announced for 2021. New teams will focus on Environmental Data Management for Best Practices, Performance-Based Optimization of Pump and Treat Systems, and several other topics. Participation in teams will range from 1 to 2 years starting in 2021. For more information, see <https://myemail.constantcontact.com/2021-Proposal-Teams-Selected-.html?oid=1133562077090&aid=GezoD-0GAyk>.

> Upcoming Live Internet Seminars

ITRC Long-term Contaminant Management Using Institutional Controls - September 3, 2020, 1:00PM-3:15PM EDT (17:00-19:15 GMT). Institutional controls (ICs) are administrative or legal restrictions that provide protection from exposure to contaminants on a site. When ICs are jeopardized or fail, direct exposure to human health and the environment can occur. While a variety of guidance and research to date has focused on the implementation of ICs, ITRC's Long-term Contaminant Management Using Institutional Controls (IC-1, 2016) guidance and this associated training class focuses on post-implementation IC management, including monitoring, evaluation, stakeholder communications, enforcement, and termination. The ITRC guidance and training will assist those who are responsible for the management and stewardship of ICs. After attending the training, participants will be able to: describe best practices and evolving trends for IC management at individual sites and across state agency

programs; use this guidance to improve IC reliability and prevent IC failures, improve existing, or develop new, IC Management programs, identify the pros and cons about differing IC management approaches; use the tools to establish an LTS plan for specific sites; and use the elements in the tools to understand the information that should populate an IC registry or data management system. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.

Federal Facilities Online Academy: Military Munitions Policy - September 14, 2020, 1:00PM-3:00PM EDT (17:00-19:00 GMT). This two-hour webinar course provides an overview of the Department of Defense (DoD) Military Munitions Response Program (MMRP), munitions policies, and how the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) is applied to munitions sites. The voluntary Federal Facilities Online Academy program has been developed for EPA RPMs, project managers from other federal agencies, State government, and Tribal groups who work on federal facility Superfund cleanups. Please consider participating in all 12 courses, 11 Webinars and 1 In-Person Training, to obtain a certificate upon completion of the entire Federal Facility Academy series. For more information and to register for upcoming session or view archived sessions, see <https://trainex.org/offeringlist.cfm?courseid=1819>.

ITRC Connecting the Science to Managing LNAPL Sites a 3 Part Series - September 15, 22, and 29, 2020. The newly updated LNAPLs (Light Non-Aqueous Phase Liquids) 3-part training course series is based on the ITRC guidance: LNAPL Site Management: LCSM Evolution, Decision Process, and Remedial Technologies (LNAPL-3, 2018) and focuses on connecting the science to managing LNAPL sites and helping you: build upon your understanding of LNAPL behavior in the subsurface (Part 1), develop your LNAPL conceptual site model and LNAPL remedial goals (Part 2), and select/implement LNAPL technologies (Part 3). After this training series, the expectation is that you will have the skills and understanding to use ITRC science-based resources to improve decision making at your LNAPL sites. For regulators and other government agency staff, this improved understanding can hopefully be incorporated into your own LNAPL programs. It is expected that participants will attend this 3-part training series in sequence. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live>.

ITRC TPH Risk Evaluation at Petroleum-Contaminated Sites - September 17, 2020, 1:00PM-3:15PM EDT (17:00-19:15 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>.

Answering the Bell: A Developer's Perspective on the Expanding Market and Opportunities for Superfund Redevelopment - September 30, 2020, 10:00 AM-12:00 PM EDT (14:00-16:00 GMT). Interested in creative site redevelopment strategies from an experienced developer? During this webinar, Michael Goldstein, a pioneer in contaminated property redevelopment, will share why he thinks there is such intense interest in Superfund site redevelopment. From his vast experience and accomplishments as a Brownfield and Superfund site developer, attorney, and fund manager, he will discuss his views on the future market trends, collaboration with EPA and investment opportunities for Superfund redevelopment. The webinar will also provide real-life lessons learned and tips for private developers and local governments seeking to redevelop Superfund sites. For more information and to register, see <https://clu-in.org/live>.

> New Documents and Web Resources

ITRC Integrated DNAPL Site Strategy. This 2011 document is now officially available as an interactive web document. Originally a downloadable PDF, the Integrated DNAPL Site Strategy (IDSS) guidance document describes key concepts and recent developments to help managers develop successful integrated strategies for chlorinated-solvent sites. This updated IDSS-2 contains direct links to the Integrated Site Characterization, Characterization and Remediation of Fractured Rock, and Optimization documents, making this new web document a more interactive, wide-ranging educational experience. Readers will be able to click on a link to any of the three documents above and be transported to the appropriate sections within the IDSS document. View and use at <https://idss-2.itrcweb.org>.

Superfund Research Program (SRP) Research Brief 308: Using Fungi to Clean up Contaminated Soil. Native fungal communities point to a new way of cleaning up contaminated soil. After conducting a study to characterize fungi found in soil contaminated with polycyclic aromatic hydrocarbons (PAHs), researchers at the NIEHS-funded Superfund Research Program at Duke University discovered a group of fungi that may be promising for remediation. View more information at https://tools.niehs.nih.gov/srp/researchbriefs/view.cfm?Brief_ID=308.

USGS Research on Variability in Composition of an Oil Spill after more than 30 Years of Natural Attenuation.

The objective of the project is to improve the understanding of the mobilization, transport, and fate of crude oil in the shallow subsurface. The U.S. Geological Survey Toxic Substances Hydrology Program began an interdisciplinary research project in 1983 at the site of a crude-oil spill near Bemidji, Minnesota. View more information at

https://www.usgs.gov/mission-areas/environmental-health/science/variability-composition-oil-spill-after-more-30-years?qt-science_center_objects=0#qt-science_center_objects.

Special Issue on Geophysics Applied to Contaminant Studies, FastTIMES. This 2020 special issue from the Environmental and Engineering Geophysical Society (EEGS) includes multiple articles highlighting the use of geophysical tools in site characterization and clean up. Articles discuss include Delineation and Characterization of a Chlorinated Solvent Plume at a Former Drum Recycling Facility Using Membrane-Interface Hydraulic Profile Tool Technology, Could Emerging Geophysical Technologies Characterize PFAS Contamination in Source Zones?, and Geophysical Methods for Contaminant Management: the Case for Biochar along with many others. View more information at https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=CPHEA&dirEntryId=349612.

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:

- 3rd Semiannual Voluntary Remediation Program Progress Report Former Georgia Department of Transportation District 4 Maintenance Headquarters and Lott Lumber Property
- Voluntary Remediation Program Revised Compliance Status Report Former Vogue Cleaners Columbia Square Shopping Center Martinez, Columbia County, Georgia
- Final Report Demonstration and Validation of the Horizontal Reactive Media Treatment Well (HRX Well®) for Managing Contaminant Plumes in Complex Geologic Environments
- "A-Street Ditch" Sediment Remediation Pilot Study - Wilmington
- Statewide Assessment of Karst Aquifers in New York With an Inventory of Closed-Depression and Focused-Recharge Features
- High Resolution Delineation of Contaminant Concentrations, Biogeochemical Processes, and Microbial Communities in Saturated Subsurface Environments
- Extending The Applicability of Compound-Specific Isotope Analysis To Low Concentrations Of 1,4-Dioxane Phase II
- Using Fungi to Clean up Contaminated Soil
- Annual Performance Report 1 January 2018 - 31 December 2018; Five Year Remedy Performance Evaluation East Multnomah County, Troutdale Sandstone Aquifer Remedy
- Fifth Five-Year Review Report for Teledyne Semiconductor/Spectra-Physics Lasers, Inc. Superfund Site Santa Clara County, California
- 2018 Annual Report Tektronix, Inc. - Evaluation Area 1 Beaverton, Oregon
- Reactive Gas Process for In Situ Treatment of 1,2,3-Trichloropropane in Vadose Zone Soils
- PFAS Fate, Transport and Treatment
- Assessing the Ecological Risks of Per-and Polyfluoroalkyl Substances (PFAS) at Aqueous Film Forming Foam Sites Workshop

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 9 resources, events, projects and news items were added to EUGRIS in August. 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

ASTSWMO 2020 RCRA Corrective Action Conference, September 1-3, 2020. The virtual conference will feature the theme, "RCRA Corrective Action: 2020 and The Road Ahead", to acknowledge 2020 as the milestone year for achieving RCRA corrective action goals and the work that remains beyond 2020. Session topics will reflect the theme. For more information and to register, see <http://astswmo.org/event/astswmo-2020-rcra-corrective-action-conference/>.

2020 Design and Construction of Hazardous Waste Sites Conference (DCHWS), October 26-28, 2020. The annual fall conference will be co-sponsored by the SAME Philadelphia Post, the SAME Denver Metro Post, and the U.S. Environmental Protection Agency. This year, the conference will be held virtually with daily technical presentations from 2:00 PM to 5:00 PM MST. Registration will open on August 31, 2020. For more information, visit the DCHWS Conference website at www.dchws.org.

2020 SERDP and ESTCP Symposium, November 30-December 4, 2020. The Symposium will continue as a

virtual conference in response to the COVID-19 pandemic. The SERDP and ESTCP Symposium is the nation's largest conference focusing on the Department of Defense's priority environmental and installation energy issues. The Symposium brings together environmental and energy researchers and technology developers with the defense end-user and regulatory communities to showcase cutting edge environmental technologies and ideas. The 2020 Symposium will offer 16 technical sessions, a number of short courses, more than 450 technical poster presentations, exhibitors from funding and partnering organizations, and a variety of networking opportunities for the more than 1,000 attendees. For more information and to register, see

<https://web.cvent.com/event/a0cfb891-60fa-4233-8cc6-189bbf947195/summary>.

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. 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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