

TechDirect, July 1, 2011

Welcome to TechDirect! Since the June 1 message, TechDirect gained 255 new subscribers for a total of 38,296. If you feel the service is valuable, please share TechDirect with your colleagues. Anyone interested in subscribing may do so on CLU-IN at <http://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 ground water.

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.

> Special Announcements

EPA announces Apps for the Environment challenge!

The U. S. Environmental Protection Agency has challenged software developers to step up to the forefront of innovation and create applications that help communities make informed decisions about the environment and human health. If you are not a developer, you can still participate by submitting ideas for apps, and by passing on this announcement to others you believe may be interested in this exciting effort! Submissions are due September 16, 2011. For more information follow #GreenApps on Twitter or check out the website at <http://www.epa.gov/appsfortheenvironment/>, where you can enter the challenge, submit ideas for apps, join the developer mailing list, and find about weekly webinars (Wednesdays 2:00 PM eastern time).

Open Positions Supporting EPA.

The following employment opportunities, which may of interest to hazardous waste professionals, are being advertised as a public service for the CLU-IN audience: 1 Chemist Position with EPA's Technology Innovation and Field Services Division, Analytical Services Branch in Arlington, VA and 1 Chemist Position with EPA's Environmental Response Team in Las Vegas, NV. For more information and application instructions, see <http://www.clu-in.org/jobs/>.

> Upcoming Live Internet Seminars

Addressing the Potential Liabilities Associated with Siting Renewable Energy on Contaminated Lands - July 6, 2011, 2:00PM-3:30PM EDT (18:00-19:30 GMT). This webinar will focus on addressing the potential liabilities associated with siting renewable energy on current and formerly contaminated lands and mining sites including thousands of acres of Brownfield, Superfund, mining, and other potentially contaminated sites with potential for utility scale renewable energy facilities. Siting renewable energy on these types of sites also offers significant benefits to the communities as well as the states in which they are located. Many current and formerly contaminated sites have infrastructure in place such as transmission lines and roads, thereby reducing the need for local government investments. Renewable energy can

provide a reuse option for contaminated sites that don't have other viable uses, or are located in sensitive communities. It also avoids development of greenfields that might otherwise be used to site these facilities. In addition, these facilities may generate tax, land use, and royalty revenues and provide construction and maintenance jobs. During this session, representatives from the U.S. EPA's Center for Program Analysis and Office of Site Remediation and Enforcement will present an update on EPA's RE-Powering America's Land initiative as well as introduce a new fact sheet explaining tools available for liability relief at sites where the re-use is intended to be renewable energy generation. Lastly, the session will feature a case study from Pittsfield, MA where renewable energy projects and their associated liabilities were successfully developed and addressed. For more information and to register, see <http://clu-in.org/live> .

Community Engagement: Train the Trainer - July 7, 2011, 1:00PM-3:00PM EDT(17:00-19:00 GMT). NIEHS-funded programs have played cutting edge roles in the development and implementation of "Train the Trainer" strategies. Superfund Research Program grantees at the University of Arizona have trained community health advocates (promotoras) on topics including pesticides, arsenic, environmental toxicology, and fate and transport of environmental contaminants. Denise Moreno Ramirez will discuss her work to develop and test training modules appropriate for promotora groups in Arizona, Sonora, and the US-Mexico Border region. Worker Education and Training grantees provide hazardous materials first responder training to Native American Tribes. Kenny Oldfield from Jefferson State Community College and April Sells from the Poarch Band of Creek Indians, Alabama, will discuss their work in building an emergency response capability not just for the tribe but also for their region of the state. For more information and to register, see <http://clu-in.org/live> .

ITRC Decision Framework for Applying Monitored Natural Attenuation Processes to Metals and Radionuclides in Groundwater - July 12, 2011, 2:00PM-4:15PM EDT(18:00-20:15 GMT). Sites contaminated with metals and radionuclides present unique challenges to the development of effective remedial alternatives that also provide long-term protection to human health and the environment. The high costs of ongoing conventional treatment, total removal, and/or management combined with the scale of potential health and environmental risks make it important to evaluate attenuation-based remedial alternatives. This training and the associated ITRC Technical and Regulatory Guidance document, A Decision Framework for Applying Monitored Natural Attenuation Processes to Metals and Radionuclides in Groundwater (APMR-1, 2010), is intended for anyone involved with evaluating, investigating, remediating or managing a site that involves metal and radionuclide contaminants in groundwater. This training and document provides: introduction to key attenuation processes for metals and radionuclides; information on incorporating MNA into remedial alternatives for metals/rads; and an overview of the decision framework on MNA for metals and radionuclides in groundwater within the larger evaluation framework of a contaminated site. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live> .

OSC Readiness Presents...RCRA for OSCs - July 13, 2011, 1:00PM-3:00PM EDT (17:00-19:00 GMT). RCRA for OSCs explains the Resource Conservation and Recovery Act (RCRA) requirements that apply or are relevant and appropriate to most cleanups under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This session will focus on specific technical and regulatory issues that OSCs address in treating, transporting, and disposing of waste. For more information and to register, see <http://clu-in.org/live> .

ITRC Incorporating Bioavailability Considerations into the Evaluation of Contaminated Sediment Sites - July 14, 2011, 11:00AM-1:15PM EDT (15:00-17:15 GMT). ITRC's web-based Technical and Regulatory Guidance, Incorporating Bioavailability Considerations into the Evaluation of Contaminated Sediment Sites

(Sed-1, 2011) and associated Internet-based training are intended to assist state regulators and practitioners with understanding and incorporating fundamental concepts of bioavailability in contaminated sediment management practices. This guidance and training describe how bioavailability considerations can be used to evaluate exposure at contaminated sediment sites, the mechanisms affecting contaminant bioavailability, available tools used to assess bioavailability, the proper application of those tools, and how bioavailability information can be incorporated into risk-management decisions. This guidance and training also contain summaries of case studies where bioavailability has been assessed and considered in the contaminated sediment remedial decision making process. This guidance and training provide insight on how bioavailability assessments can be used to understand, mitigate, and manage risk at a contaminated sediment site, often at a reduced overall project cost. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.

OSC Readiness Presents...Natural Resource Trustees and the Laws They are Required to Enforce - July 27, 2011, 1:00PM-3:00PM EDT (17:00-19:00 GMT).

Natural Resource Trustees and the Laws They are Required to Enforce provides a general understanding of natural resources, Federal, State, and Tribal Natural Resource Trustees, and Trustee resources. The session will provide practical information on the definition of natural resources and examples of resources under Federal, State, and Tribal trusteeship. Participants will also learn the legal and regulatory basis for EPA's notification and coordination activities with Natural Resource Trustees. For more information and to register, see <http://clu-in.org/live>.

Curso de Capacitación sobre Remediación de Sitios Contaminados - August 1 and 2, 2011.

Una buena caracterización de los sitios contaminados es esencial antes de embarcarse en proyectos de restauración. Para tal fin, es necesario obtener datos de calidad y características acordes a las necesidades del proyecto y que conformen con normativas medioambientales en vigor. En este seminario de dos días se tratarán los procedimientos administrativos para la caracterización de sitios, los procesos de supervisión y verificación del cumplimiento normativo, y los plazos de respuesta de la autoridad. Metas del seminario: (1) describir los tipos de análisis químicos y físicos para la caracterización de sitios contaminados (métodos, equipos, y limitaciones); (2) interpretar los resultados de los principales tipos de análisis utilizados en la caracterización de sitios contaminados; (3) describir la preparación y el contenido de un estudio de caracterización de pasivos ambientales; y (4) proporcionar estudios de casos reales sobre evaluación de los riesgos ambientales y de salud. Para obtener más información o para inscribirse en este seminario gratuito dirigirse a <http://clu-in.org/live>. This internet seminar will be presented in Spanish.

OSC Readiness Presents...Constitutional Issues and the OSC - August 3, 2011, 1:00PM-3:00PM EDT (17:00-19:00 GMT).

Constitutional Issues and the OSC focuses on providing participants with an overview and basic understanding of the U.S. Constitution and those laws that have a direct effect on the OSC. Participants will gain information on such topics as takings, due process, liability, and just compensation. For more information and to register, see <http://clu-in.org/live>.

OSC Readiness Presents...Debris Management Issues during Natural Disasters - August 23, 2011, 1:00PM-3:00PM EDT (17:00-19:00 GMT).

The Debris Management Issues during Natural Disasters session will discuss debris-related roles of Emergency Support Function-3 (ESF-3) and ESF-10: the division of responsibilities and coordination between the two ESFs during natural disaster and contaminated debris responses. For more information and to register, see <http://clu-in.org/live>.

OSC Readiness Presents...RAD Emergency Response Plan - August 25, 2011, 2:00PM-4:00PM EDT (18:00-20:00 GMT).

RAD Emergency Response Plan will

provide participants with a basic understanding of the RAD Emergency Response Plan. The session will also provide an update and status on the EPA Protective Action Guides (PAGs) and other resources available to OSCs regarding radiation. For more information and to register, see <http://clu-in.org/live> .

ssed and considered in the contaminated sediment remedial decision making process. This guidance and training provide insight on how bioavailability assessments can be used to understand, mitigate, and manage risk at a contaminated sediment site, often at a reduced overall project cost. For more information and to register, see

<http://www.itrcweb.org> OR <http://clu-in.org/live> .

> New Documents and Web Resources

New CLU-IN Characterization and Monitoring Focus Area on Passive (no purge)

Samplers. Passive sampling can be defined in the broadest sense as any method based on the free flow of contaminant molecules from the sampled media to a receiving phase in a sampling device. Depending upon the sampler, the receiving phase can be a solvent (e.g., water), chemical reagent, or porous adsorbent (e.g., activated carbon). While there are many different designs for passive samplers most have a barrier between the sampled medium and the receiving phase. The barrier determines the sampling rate that contaminants are collected at a given concentration and can be used to selectively permit or restrict various classes of chemicals from entering the receiving phase. There are three generic forms of passive (no purge) samplers: thief (grab) samplers, diffusion (equilibrium) samplers, and integrating (kinetic) samplers. All are deployed down a well to the desired depth within the screened interval or open borehole to obtain a discrete sample without using pumping or a purging technique. View and use at <http://www.clu-in.org/passsamp> .

Green Remediation Best Management Practices: Sites with Leaking

Underground Storage Tank Systems (EPA 542-F-11-008). The U.S. Environmental Protection Agency (EPA) Principles for Greener Cleanups outline the Agency's policy for evaluating and minimizing the environmental footprint of activities undertaken when cleaning up a contaminated site. Use of the best management practices (BMPs) identified in EPA's series of green remediation fact sheets can help project managers and other stakeholders apply the principles on a routine basis, while maintaining the cleanup objectives, ensuring protectiveness of a remedy, and improving its environmental outcome. Almost 495,000 releases of petroleum from federally regulated underground storage tanks (USTs) have been reported to EPA as of September 2010. Of these, over 93,000 UST site cleanups remain. The Association of State and Territorial Solid Waste Management Officials (ASTSWMO) estimates that cleaning up UST system releases costs the states approximately \$700 million each year, in addition to federal expenditures under the Leaking Underground Storage Tank (LUST) Trust fund and costs paid by responsible parties. Use of green remediation BMPs to remediate these sites can help minimize the environmental footprint of cleanup activities and improve corrective action outcomes. The practices for UST cleanups are intended to complement rather than replace federal requirements for corrective actions (40 CFR Part 280, subpart F). The practices also may enhance state-administered UST programs, which have state-specific corrective action requirements (June 2011, 6 pages). View or download at <http://clu-in.org/techpubs.htm> .

Independent Design Review: Grants Chlorinated Solvents Plume, Superfund Site, Grants, Cibola County, New Mexico, EPA Region 6 (EPA 542-R-11-005). The Grants Chlorinated Solvents Plume Superfund Site in Grants, Cibola County, New Mexico was selected by EPA OSRTI based on a nomination from EPA Region 6. The remedy is in the early design stage and has an estimated cost of \$29.5 million. Several

pre-design activities, including additional subsurface investigation and pilot tests, are ongoing and will be evaluated prior to the preliminary design (expected Fall/Winter 2008) and the final design. Results from activities conducted after the IDR site visit are not included in this report and are reserved for future discussion between the IDR team and the site team (May 2011, 49 pages). View or download at <http://clu-in.org/techpubs.htm> .

Applied NAPL Science Review - June 2011 Issue. This scientific ejournal provides technical insight into the science behind the characterization and remediation of light and dense non-aqueous phase liquids (NAPLs). The 6th issue of volume one focuses on perched LNAPL. View or download the latest issue at <http://www.h2altd.com/knowledge-center> .

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 28 resources, events, projects and news items were added to EUGRIS in June 1-24, 2011. 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:

New Resources posted to the SURF USA Website. The Sustainable Remediation Forum (SURF) was initiated in late 2006 to promote the use of sustainable practices during remedial action activities with the objective of balancing economic viability, conservation of natural resources and biodiversity, and the enhancement of the quality of life in surrounding communities. Several new documents were posted to the SURF website. View or download at <http://www.sustainableremediation.org/library/guidance-tools-and-other-resources/> .

SURF Canada Formed. The mission of SuRF Canada is to establish a Canadian network group to promote 'sustainable remediation' that aims to give systematic consideration to the three dimensions of sustainability (social, economic and environmental), in decision-making about rehabilitation of and management of contaminated sites. The network will bring together public and private organizations and launch an information and awareness initiative in Canada. View or download more information at <http://www.surfcanda.org/> .

> Conferences and Symposia

EPA's National Homeland Security Research Center - Region 9 Workshop, San Francisco, CA, July 14, 2011. This workshop will introduce tools, technologies, methods, and research products from ORD's National Homeland Security Research Program. Research program staff will present information and demonstrate tools on: water security, technology testing and evaluation, laboratory response to homeland security events, risk assessment research and indoor and outdoor decontamination. For more information and to register, see <http://www.trainex.org/1274> .

Training Opportunities for Small and Disadvantaged Businesses (SDBs). The U.S. EPA Technology Innovation and Field Services Division (TIFSD) is offering training that is designed to build the technical capacity of SDBs in the site characterization and remediation field. The training is part of an exciting new initiative designed to build the technical capacity of SDBs as they compete for environmental cleanup jobs in a greener workforce. The following courses are scheduled to be offered in New Orleans, LA: Superfund 101, August 8-12, 2011 (<http://trainex.org/254>); Best Management Practices for Site Assessment, Site Remediation, and Green Remediation Footprint Reduction, August 29, 2011 (<http://trainex.org/1228>); and Triad Training for Practitioners, August 30-September 1, 2011 (<http://trainex.org/796>). For additional information on this initiative, visit <http://clu-in.org/smallbusiness> .

Vapor Intrusion Pathway: A Practical Guideline ITRC 2-day Classroom Training, Novi, MI (Detroit area), July 18-19, 2011. Led by internationally recognized experts, this 2-day ITRC classroom training will enable you to learn the latest strategies to conduct site screening and investigations; determine what tools are appropriate to collect quality data and evaluate the results; apply multiple lines of evidence to ensure quality decision-making; build solutions for VI issues through understanding of mitigation options; and network with environmental professionals dealing with this interdisciplinary and complex pathway. Interactive learning with hands-on exhibits, classroom exercises, and frequent Q&A sessions will reinforce these course objectives and contribute to a practical understanding of this difficult pathway. For more information and to register, see <http://www.itrcweb.org/crt.asp> .

LNAPLs: Science, Management, and Technology ITRC 2-day Classroom Training, Minneapolis, MN, September 20-21, 2011. Led by internationally recognized experts, this 2-day ITRC classroom training will enable you to develop and apply an LNAPL Conceptual Site Model (LCSM), understand and assess LNAPL subsurface behavior, develop and justify LNAPL remedial objectives including maximum extent practicable considerations, select appropriate LNAPL remedial technologies and measure progress, and use ITRC's science-based LNAPL guidance to efficiently move sites to closure. Interactive learning with classroom exercises and Q&A sessions will reinforce these course learning objectives. For more information and to register, see <http://www.itrcweb.org/crt.asp> .

Call for Abstracts and Registration Now Open!! Innovative Approaches to Mining Cleanup and Reuse Workshop, Arlington, VA, October 6th, 2011. This workshop is sponsored by the U.S. EPA Office of Superfund Remediation and Technology Innovation and the International Committee on Contaminated Land. Abstracts for presentations are welcome through July 29, 2011. The workshop will facilitate the information exchange and networking among professionals from the public and private sectors, domestic and international, on mining site cleanup and reuse and specifically address: building sustainability into mining site cleanup, innovations in mining site cleanup technologies, and engaging communities in site cleanup and reuse decisions. For more information, to register, and to submit an abstract for consideration, see <http://www.MiningWorkshop.org> .

Call for Poster Abstracts!! Partners in Environmental Technology Technical Symposium & Workshop, Washington, D.C., November 29-December 1, 2011. This event is sponsored by the Strategic Environmental Research and Development Program (SERDP), the Department of Defense's (DoD) environmental science and technology program, and the Environmental Security Technology Certification Program (ESTCP), DoD's environmental technology demonstration and validation program. The comprehensive technical program for this event will feature 15 technical sessions and four short courses. Technical sessions will highlight research and innovative technologies that address DoD's increasingly complex environmental challenges. Short courses will offer unique training opportunities on recent advancements in select technologies and alternative approaches for environmental restoration and munitions response. For more information and to submit a poster abstract by July 29, 2011, see <http://symposium2011.serdp-estcp.org> .

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. Currently there are 24 conferences and courses featured. We invite sponsors to input information on their events at <http://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 Jeff Heimerman at (703) 603-7191 or heimerman.jeff@epa.gov. Remember, you may subscribe, unsubscribe or change your subscription address at <http://clu-in.org/techdirect> at any time night or day.

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