

## Message #116: October 2006

Welcome to TechDirect! Since the September 1 message, TechDirect gained 328 new subscribers for a total of 25,936. 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> . 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.

### ***Upcoming Live Internet Seminars***

#### **Jump-Starting Ecological Restoration - Soil Health - October 5.**

This Internet Seminar will provide site managers with the basics of soil science and available tools to build a beautiful soil in a single season. Examples of projects where different residuals have been used to create a healthy soil environment on contaminated sites will be presented. Participants will gain the tools necessary to evaluate the conditions of the soils at their sites, identify locally available and cost-effective residuals that would effectively improve these soils, and gain familiarity with a number of different application options for incorporating these amendments into site soils. For more information and to register, see <http://clu-in.org/studio> .

#### **Pharmaceuticals and Personal Care Products in the**

**Environment: Part 2 of 3 - October 10.** What pharmaceuticals and personal care products (PPCPs) are being detected and which ones among the thousands of these chemicals should be targeted for monitoring? This second session of the EPA webinar on PPCPs looks at two research projects on this issue done within EPA's Office of Research and Development. Mitch Kostich will talk about an innovative approach to better identify the PPCPs that have the most critical need for further research and Susan Glassmeyer will talk about PPCPs in wastewater discharges from sewage treatment plants. For more information and to register, see <http://clu-in.org/studio> .

**Uses of Spatial Analysis and Decision Assistance (SADA) - October 11.** Spatial Analysis and Decision Assistance (SADA) is free software that incorporates tools from environmental assessment fields into an effective problem solving environment. These tools include integrated modules for visualization, geospatial analysis, statistical analysis, human health risk assessment, ecological risk assessment, cost/benefit analysis, sampling design, and decision analysis. This seminar will highlight the tools used, but is not a tutorial for the software. For more information and to register, see <http://clu-in.org/studio> .

**ITRC Site Investigation and Remediation for Munitions Response Projects - October 12.** This training provides an introduction and overview of the processes, tools, and techniques used in investigation and remediation. These concepts are illustrated using an example munitions response site. Major steps in each process are identified and key regulatory considerations discussed. This training also identifies additional sources for more detailed information on key aspects of investigation and remediation. State regulators and others who need to understand the general processes involved in these critical aspects of the munitions response process will benefit from this training. For more information and to register, see <http://www.itrcweb.org> Or <http://clu-in.org/studio> .

**Three Sediment Remedy Webcasts: Technical Considerations for Evaluating and Implementing Capping, Dredging, and Monitored Natural Recovery - October 17, 23, and 30.** EPA is hosting a series of three internet seminars that will provide practical information on how to evaluate the technical suitability of capping (October 17), dredging (October 23), and monitored natural recovery (MNR) (October 30) for contaminated sediments. Each seminar focuses on the issues and limitations associated with each option including information on designing remedies that maximize long-term effectiveness and minimize short-term impacts. Participants will learn about the equipment for and design/implementation of capping and dredging, discuss key issues in evaluating and monitoring capping, dredging, and MNR, and become familiar about resources, references, and web sites useful in evaluating sediment remedies. For more information and to register, see <http://clu-in.org/studio> .

**ITRC Guidance for Characterization, Design Construction and Monitoring of Mitigation Wetlands - October 19.** This seminar is the second in a series of wetland trainings beginning with the ITRC Technical and Regulatory Guidance Document for Constructed Treatment Wetlands (WTLND-1). To improve the success of wetland mitigation projects, this training presents comprehensive guidance

for regulators, environmental professionals, or owners to use to understand, characterize, design, construct, and monitor mitigation wetlands. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/studio> .

**Pharmaceuticals and Personal Care Products in the Environment: Part 3 of 3 - October 24.** This third webcast will describe work done by a California Publicly Owned Treatment Works (POTW) that showed potential endocrine disrupting effects from wastewater discharges as well as research results showing endocrine effects on aquatic organisms. Jeffrey Armstrong of the Orange County, California Sanitation District will present Wastewater Treatment Plant Perspectives: Preliminary Data Suggesting ED Effects of Discharge to the Pacific Ocean and Marsha Black of the University of Georgia will cover Endocrine Effects of Selective Serotonin Reuptake Inhibitors (SSRIs) on Aquatic Organisms. For more information and to register, see <http://clu-in.org/studio> .

**ITRC Environmental Management at Operating Outdoor Small Arms Firing Ranges - October 31.** The training uses a logic diagram to describe the appropriate steps an environmental professional or range manager should use to establish an operational understanding of a range and the impact it can have on the environment if left unattended. It assists the user to define the environmental characteristics at a range that could potentially impact the environment and lists the appropriate questions that range operators should ask when evaluating the potential for environmental impact. The training briefly describes a variety of new and conventional technologies and techniques (i.e., best management practices) available to prevent environmental impact on the range. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/studio> .

## ***New Documents and Web Resources***

**Considerations Regarding Application of Permanganate for Remedies in Tennessee.** This white paper was put together by Tennessee members of the State Coalition For the Remediation of Drycleaners. The paper presents their program's experience using in-situ chemical oxidation as a remediation technology in the Tennessee Drycleaner remediation program (June 2006, 11 pages). View or download at [http://www.drycleancoalition.org/download/tn\\_MnO4\\_injections\\_2006.pdf](http://www.drycleancoalition.org/download/tn_MnO4_injections_2006.pdf) .

**The Remediation Technologies Development Forum: Major Accomplishments: 1992-2006 (EPA 542-F-06-005).** The U.S. Environmental Protection Agency (EPA) established the

Remediation Technologies Development Forum (RTDF) in 1992 to enhance the development and application of innovative hazardous waste characterization and treatment technologies. One of the RTDF's defining features is that it fosters collaboration between the public and private sectors. Eight self-managed RTDF Action Teams formed over the years. Each brought together representatives from government, industry, and academia to further develop and promote a specific technology or address a specific environmental problem area. Action Team members provided the knowledge and the resources (both in terms of monetary contributions and in-kind services) needed to conduct laboratory and field demonstrations and develop reports, guidance documents, and training products related to their teams' topic of interest. This factsheet highlights the RTDF Action Teams' major accomplishments (August 2006, 4 pages). View or download at <http://clu-in.org/download/rtdf/542f06005.pdf> .

**Evaluating, Optimizing, or Ending Post-Closure Care at MSW Landfills Based on Site-Specific Data Evaluation (ALT-4).** This document was produced by the Interstate Technical and Regulatory Council (ITRC). Post-closure care (PCC) at a municipal solid waste (MSW) landfill ensures that a solid waste facility is managed after final closure so that it does not pose a threat to human health and the environment (HH&E). Traditionally, 30 years has been considered the minimum period that PCC must be performed. However, there is no national-and to some extent no consistent state-based structured process for evaluating, optimizing, or potentially ending PCC. This guidance illustrates a methodology to systematically evaluate the condition of the closed landfill, the waste it contains, the setting and the relevant decisions to manage, reduce, or potentially end PCC activities according to the reduced threat to HH&E (September 2006, 164 Pages). View or download at <http://www.itrcweb.org/Documents/ALT-4.pdf> . Order hard copies at <http://www.itrcweb.org/gd.asp> .

**Fractured Bedrock Focus Area updated!** Published reports and conference presentations of characterization and remediation of contaminated ground water in fractured bedrock sites are collected and summarized in the website. The site contains 90 case studies, which are evenly split between pilot studies and full scale application. Almost half of the sites have, or are suspected of having NAPL. Over a third of site managers have chosen bioremediation and one quarter have chosen pump and treat and another quarter have chosen oxidation for a remediation technology. Only one technical Impracticability waiver has been requested and five No Further Action certificates were issued by the state regulatory agencies. Seventy-five percent of the sites are located in New York, New Jersey, Massachusetts, and Pennsylvania. For more information,

see <http://clu-in.org/fracrock> .

**NATO/CCMS Pilot Study: Prevention and Remediation Issues in Selected Industrial Sectors Athens, Greece June 4-7, 2006.** The NATO/CCMS Pilot Study on Prevention and Remediation in Industrial Sectors held a meeting in June, 2006 on the topic of Small Sites in Urban Areas--dealing with the unique issues of small enterprises located in densely populated areas. The presentations from the meeting are now available for viewing at <http://clu-in.org/athens> . The agenda and other background material on the Pilot Study are available at <http://www.nato.int/ccms> .

**Technology News and Trends - current issue (EPA 542-N-06-005).** This issue of TNT highlights the use of soil amendments in remediation, revitalization, and reuse of disturbed land in diverse industrial, rural, and urban settings. Using various waste products to reclaim previously unusable or devalued land, these soil- amendment applications illustrate that industrial residuals can provide a cost-effective means for in-situ remediation. Such success stories reflect the Agency's growing efforts to identify innovative technology solutions for remediation and revitalization, to remove obstacles impeding redevelopment, and to develop measures for evaluating the various stages of ecological damage and repair (October 2006, 6 pages). View or download at <http://clu-in.org/download/newsltrs/tandt1006.pdf> .

**EUGRIS Corner.** New Documents on EUGRIS, the platform for European contaminated soil and water information. See the following link to access the following three documents: <http://www.eugris.info/Whatsnew.asp>.

- International Centre for Soil and Contaminated Sites 2006, Manual for Biological Remediation Techniques - The manual of the German Federal Environment Agency gives a review of the spectrum of different biological remediation techniques. Individual procedures are described in a compact form and fields of application with their respective advantages and drawbacks are outlined.
- Department for Environment, Food and Rural Affairs - DEFRA 2006, River Basin Planning Guidance Released. Defra and the Welsh Assembly Government are issuing this guidance to the Environment Agency on river basin planning, setting out their expectations in relation to the principles and key steps of the river basin planning process and the content of the documents which the Agency must produce.
- Department for Environment, Food and Rural Affairs - Defra, Water Framework Directive Web Page. The Water Framework Directive (WFD) is the most substantial piece of EC water

legislation to date. It requires all inland and coastal waters to reach 'good status' by 2015. It will do this by establishing a river basin district structure within which demanding environmental objectives will be set, including ecological targets for surface waters.

- NITRABAR Project Introductory Factsheet. Remediation of Agricultural Diffuse NITRAtE Polluted Waters through the Implementation of a Permeable Reactive Barrier. Essentially, the system is a narrow trench, installed between the field and a water body, which is filled with a mixture of natural materials. As groundwater, runoff and field drainage waters pass through the system the nitrates are converted to nitrogen gas by microorganisms which attach themselves to, or live in between, the materials. It is expected that this approach will achieve an 85% reduction in the nitrate level in waters passing through the system. The project aims to demonstrate the application of the NITRABAR system in the agricultural setting and enable others to replicate the system throughout Europe. The system will be installed at the eco- millennium environmental centre, Ballymena, Northern Ireland.

## ***Conferences and Symposia***

**Reminder! Alternative Landfill Cover Workshops.** These 2.5-day workshops will be held in Chicago, IL (Oct. 16-18), Denver, CO (Nov. 28-30) and Riverside, CA (Jan. 23-25, 2007). Often called evapotranspiration (ET) covers, these innovative designs are of considerable interest to the solid waste industry due to performance, cost, and long-term stability. The workshops are intended to teach consultants and engineers how to design and submit quality proposals for ET covers, and to teach regulators how to evaluate those proposals. Participants will get an understanding of the hydraulic properties of these covers, how to optimize designs with models, and how to ensure that the final product is environmentally protective. The most current research on field performance, monitoring, economics and construction techniques will be presented. For more information and to register, see

<http://www.landfillcover.dri.edu/> .

**Reminder! Land Revitalization Summit, October 30- November 1, Austin, Texas.** U.S. EPA Region 6 will host its first Land Revitalization Summit to promote land revitalization as a part of State and Federal cleanup programs. The meeting will allow state agencies, municipalities, developers, lenders, brokers, and others to discuss ways that government can better assist in achieving faster,

protective cleanups that will support redevelopment. For agenda and registration information, see <http://www.lrsymmit.com>, or call Kathy Thomas at (214) 665-2229, or email [LRsymmit@epa.gov](mailto:LRsymmit@epa.gov) .

**High Resolution Site Characterization & Monitoring November 14-15, Long Beach, California.** This symposium will bring together an invited group of top researchers, practitioners, and regulatory experts from around the globe to describe the "state of the science" regarding efficient, high-resolution subsurface site assessments and remediation monitoring. An optional third day will demonstrate how the data is collected in the field. For more information on speakers and course outline, please see <http://grac.org/hires.asp> .

**Reminder! Partners in Environmental Technology Technical Symposium & Workshop, Washington, DC, November 28-30.** This event is sponsored by the DoD Strategic Environmental Research Development Program (SERDP) and the DoD Environmental Security Technology Certification Program (ESTCP). It will provide attendees: (1) concurrent technical sessions covering the latest in environmental research results and technical innovations; (2) poster sessions featuring more than 300 technical posters; (3) exhibit booths offering information about funding opportunities in related research programs; (4) two sessions providing a summary of SERDP and ESTCP program development and opportunities to conduct research and demonstrations; and (5) networking opportunities with more than 800 environmental professionals. For agenda and registration information, see <http://www.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 86 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](mailto:heimerman.jeff@epa.gov). Remember, you may subscribe, unsubscribe or change your subscription address at <http://clu-in.org/techdrct> at any time night or day.