Message #115: September 2006

Welcome to TechDirect! Since the August 1 message, TechDirect gained 177 new subscribers for a total of 25,636. 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

ITRC Remediation Process Optimization Advanced Training • September 12. Remediation Process Optimization (RPO) is the systematic evaluation and enhancement of site remediation to ensure that human health and the environment are being protected over the long term at minimum risk and cost. The purpose of this ITRC training is to present an overview of the material covered in five technical fact sheets that ITRC's RPO Team produced to enhance site remediation optimization and decision-making. The training modules provide additional information and techniques to improve project schedules, effectively manage resources, emphasize risk, and discuss tools to efficiently cleanup contaminated sites. For more information and to register, see http://www.itrcweb.org or http://clu-in.org/studio .

ITRC Perchlorate: Overview of Issues, Status, and Remedial Options • September 19. Improved analytical methodology has increased the known extent of perchlorate contamination in the U.S. A variety of remediation technologies are currently commercially available and being used for perchlorate remediation. This training, based on ITRC's Perchlorate: Overview of Issues, Status, and Remedial Options (PERC-1), explains why perchlorate is a hot topic in the environmental community including up-to-date information on sources, occurrences, toxicity and exposure, regulatory status and

remediation alternatives. For more information and to register, see http://www.itrcweb.org or http://clu-in.org/studio .

ITRC Triad Approach: A New Paradigm for Environmental Project Management • September 21. This seminar discusses the relationship of the Triad to previous regulatory guidance, and offers a discussion of issues that may affect stakeholders. The ITRC guidance document, Technical and Regulatory Guidance for the Triad Approach: A New Paradigm for Environmental Project Management (SCM-1), serves as the basis for this training course. For more information and to register, see http://www.itrcweb.org or http://clu-in.org/studio .

Jump-Starting Ecological Restoration • September 21. This seminar will examine the relevance and importance of ecological restoration in the Superfund program and discuss implementation strategies and specific techniques to speed the recovery of disturbed and contaminated land. Participants will learn why ecological restoration is important to the Superfund program; gain an understanding of the relationship between land disturbance, functioning ecological systems, and how restoration projects are managed; and learn various techniques. The seminar also will address in-situ remediation of metal contaminated soils. For more information and to register, see http://clu-in.org/studio .

EPA Pharmaceuticals in the Environment - September 26. The U.S. EPA Office of Research and Development is hosting a series of Internet webcasts throughout the fall on pharmaceuticals in the environment. This first webcast on pharmaceuticals and personal care products (PPCPs) in the environment provides an overview of the issue as well as an idea of what activities are occuiring in the EPA Regions. Registration for this seminar will open Friday, September 8. See http://clu-in.org/studio .

ITRC Planning and Promoting of Ecological Reuse of Remediated Sites • September 28. This training is based on the ITRC Technical and Regulatory Guideline: Planning and Promoting Ecological Land Reuse of Remediated Sites (ECO-2, 2006). The document presents a process to promote ecological land reuse activities considering natural or green technologies instead of more traditional remedies. The guidance demonstrates that natural or ecological end-uses are valuable alternatives to conventional property development or redevelopment. Ecological benefits and a process for calculating their value are included in the guidance and reviewed in this training. For more information and to register, see http://www.itrcweb.org or http://clu-in.org/studio .

ITRC What's New with In Situ Chemical Oxidation? • October 5. This seminar presents updated guidance and technology advancement information for In Situ Chemical Oxidation. Topics include a regulatory discussion related to ISCO implementation; details on the chemistry behind ISCO technology; considerations for system design and application, including health and safety; and performance evaluation information. The course is based on the ITRC's In Situ Chemical Oxidation of Contaminated Soil and Groundwater, Second Edition (ISCO-2, 2005), with sections on technology overview and applicability, remedial investigations, safety concerns, regulatory concerns, injection design, monitoring, stakeholder concerns, and case studies. For more information and to register, see http://www.itrcweb.org or http://clu-in.org/studio .

New Documents

New Cost and Performance Information on Cleanup Technologies. The Federal Remediation Technologies Roundtable (FRTR) recently announced the release of 39 new case study and technology assessment reports. These reports document the cost, performance, and lessons learned in implementing a wide range of hazardous waste site cleanup technologies in the field, ranging from large-scale demonstrations to full-scale applications. With these new additions, a total of 715 reports are now available in four areas - 383 cost and performance case study reports describing the use of remediation technologies; 164 reports describing the use of site characterization and monitoring technologies; 101 case studies describing long-term monitoring/optimization of remediation technologies; and 67 reports describing the assessments of remediation technologies at hazardous waste sites. For more information, see http://www.frtr.gov/costperf.htm .

Abstracts of Remediation Case Studies, Volume 10 (EPA 542-R-06-002). This new report, published by the Federal Remediation Technologies Roundtable (FRTR), is a collection of abstracts summarizing nine cost and performance case studies on the use of remediation technologies at contaminated sites. The case studies include several different technologies for treating soil or groundwater contamination or both, with 3 reports on soil cleanup, 3 reports on groundwater and 3 reports on both soil and groundwater. View or download the volume of abstracts at http://clu-in.org/techpubs.htm. For hard copies, call (800) 490-9198 or fax to (513) 489-8695.

Final Report: Edible Oil Barriers for Treatment of Perchlorate-Contaminated Groundwater (ESTCP ER-0221). This final technical report was published by the U.S. DoD Environmental

Security Technology Certification Program (ESTCP). It documents the demonstration of emulsified edible oils for remediation of perchlorate in groundwater. The primary objective of this project was to evaluate the cost and performance of an emulsified oil permeable reactive barrier (PRB) to control the migration of perchlorate plumes at DoD installations. The performance of the PRB was evaluated by monitoring the distribution of the oil emulsion in the aquifer, the impact of the oil injection on the aquifer permeability and groundwater flow paths, and the changes in contaminant concentrations and biodegradation indicator parameters both up gradient and down gradient of the PRB. Data obtained during the pilot test were used to demonstrate the cost-effectiveness of emulsified edible oils for remediation of perchlorate and chlorinated ethanes in groundwater through enhanced biodegradation (February 2006, 196 pages). View or download at

http://docs.serdp-estcp.org/viewfile.cfm?Doc=ER%2D0221%2DFR%2D01%2Epdf .

Cost & Performance Report: In Situ Remediation of a TCE-Contaminated Aquifer Using a Short Rotation Woody Crop Groundwater Treatment System (ESTCP ER-9519). This ESTCP field-scale demonstration project was conducted to evaluate the capability of Eastern cottonwood trees (Populus deltoides) to intercept and treat groundwater contaminated with trichloroethylene (TCE) and cis-1,2-dichloroethene (cDCE) at the Carswell Golf Course (CGC), within the Naval Air Station Joint Reserve Base (NAS-JRB) Fort Worth, Texas. Eastern cottonwood trees are classified as a short rotation woody crop (SRWC) because they are fast-growing, easy to regenerate, and a commercially viable source of pulp for paper products. The study was undertaken to determine the potential for a short rotation woody crop groundwater treatment (SRWCGT) system to control hydraulically the migration of a contaminated groundwater plume and to biologically enhance the subsurface environment to optimize in situ reductive dechlorination of the detected chlorinated ethenes (May 2006, 81 pages). View or download at http://docs.serdp-estcp.org/viewfile.cfm?Doc=CU%5F9519%5FC%26P%2Epdf.

Grant Guidelines To States For Implementing The Delivery Prohibition Provision Of The Energy Policy Act Of 2005 (EPA-510-R-06-003). The U.S. EPA Office of Underground Storage Tanks issued this guidance on August 7, 2006. Title XV, Section B of the Energy Policy Act of 2005 amends Subtitle I of the Solid Waste Disposal Act, the original legislation that created the underground storage tank (UST) program. The UST provisions of the Energy Policy Act focus on preventing releases and direct EPA to help states comply with new UST requirements. EPA and states, working closely with other stakeholders, developed the delivery prohibition grant

guidelines, which describe the procedures states must use for prohibiting delivery to underground storage tanks that are ineligible to receive product. States receiving federal funds must implement the delivery prohibition requirements by August 8, 2007. EPA regions will incorporate the guidelines into their future grant agreements with states (August 2006, 11 pages). View or download at http://www.epa.gov/oust/fedlaws/final_dp.htm.

Strategy for an EPA/Tribal Partnership to Implement Section 1529 of the Energy Policy Act of 2005 (EPA-510-R-06-005). The U.S. EPA Office of Underground Storage Tanks issued this guidance on August 7, 2006. Title XV, Section B of the Energy Policy Act of 2005 amends Subtitle I of the Solid Waste Disposal Act, the original legislation that created the underground storage tank (UST) program. The UST provisions of the Energy Policy Act focus on preventing releases and direct EPA to help states comply with new UST requirements. EPA and tribal representatives collaborated extensively to develop a strategy for underground storage tank programs in Indian Country. The strategy identifies key issues and actions to: strengthen the relationships between EPA and tribes; improve information sharing; enhance tribal capacity; and further the cleanup and compliance of underground storage tanks in Indian Country. EPA will continue to work closely with our tribal partners to implement the strategy and report to Congress regarding strategy implementation by August 8, 2007 (August 2006, 154 pages). View or download at http://www.epa.gov/oust/fedlaws/final_ts.htm.

Planning and Promoting Ecological Land Reuse of Remediated Sites (ECO-2). This report was published by the Interstate Technology and Regulatory Council (ITRC). It describes key decision points in a flow diagram format and defines the practicality of applying natural or green technologies to traditional remediation processes. Ecological benefits have not traditionally been designed into, nor credited to, the value of the reusable land until successful remediation was completed. Now, natural and green technologies can improve the ecology of the site as long as they support the intent of the land's use and do not jeopardize the elimination or reduction of the human or environmental risk. Consideration of ecological benefits, as well as the end use of an environmentally impacted site, is an integral component of the remediation process (July 2006, 154 pages). View or download at http://www.itrcweb.org/Documents/ECO-2.pdf. Hard copies available in mid September at http://www.itrcweb.org/product_request.asp?DOCID=view.

Vendor Spreadsheets. EPA created the REACH IT System to compile and share information on treatment and characterization technologies for a range of contaminant types and media. Over time,

this system was populated with information on over 500 remediation technologies and 260 characterization technologies. With the evolution of on-line search services and engines and the development of a range of other resources on technologies and vendors coupled with resource limitations, EPA discontinued the on-line REACH IT System in 2006. Upon discontinuation of the EPA REACH IT System, a fully searchable database is no longer available. However, limited technology and vendor information is preserved in the form of two vendor summary lists. See http://clu-in.org/vendor/vendorinfo/.

EUGRIS Corner. EUGRIS is 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.

- NICOLE Workshop Report: Data Acquisition for a Good Conceptual Site Model. This report provides a summary of a May 2006 meeting in Carcassonne, southern France. Invited papers at this workshop presented examples from real contaminated land case studies to emphasize the importance of good quality data acquisition for the development of robust and appropriate conceptual site models, combining information on geology, biology and the chemistry of the subsoil. The emphasis was on innovative and cost effective data collection methods in support of the site management decision making processes rather than ‘wanting to know what is in the soil’. The workshop included an excursion to the area of a former gold mine that has been undergoing an extensive remediation programme which is nearing completion. A range of presentations were given on-site illustrating some of the remediation methods tested and employed (May 2006, 42 pages).
- Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects. This report was produced by the UK Ministry for the Environment, Heritage and Local Government (2006). The Guidelines provide guidance on the preparation of Project Construction and Demolition Waste Management Plans for certain classes of project, which exceed specified threshold limits. The requirement for such Plans extends equally to both public and private sector developments. They provide clients, developers, designers, practitioners, contractors, sub-contractors and competent authorities with an agreed basis for determining the adequacy of C&D Waste Management Plans (July 2006, 32 pages).
- Review of the EU Sustainable Development Strategy (EU SDS)

& 8722; Renewed Strategy. This report was published by the Council of the European Union (2006). This document sets out a single, coherent strategy on how the EU will more effectively live up to its long-standing commitment to meet the challenges of sustainable development. It reaffirms the need for global solidarity and recognizes the importance of strengthening our work with partners outside the EU, including those rapidly developing countries which will have a significant impact on global sustainable development (June 2006, 29 pages).

Conferences and Symposia

Reminder! Alternative Landfill Cover Workshops. The U.S. EPA will conduct a series of workshops regarding design and permitting of alternative final landfill covers. These 2.5-day workshops will be held in Austin, TX (Sept. 26-28), 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 cross program 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. The Region is now evaluating agenda topics and soliciting speakers for the meeting. For agenda and registration information, see http://www.lrsummit.com, or call Kathy Thomas at (214) 665-2229, or email LRsummit@epa.gov.

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. Remember, you may subscribe, unsubscribe or change your subscription address at http://clu-in.org/techdrct at any time night or day.