

ENGINEERING FORUM TELECONFERENCE MINUTES

June 7, 2006

TOPICS IN THIS MONTH'S MINUTES:

TECHNICAL PRESENTATION

NEW EF CO-CHAIR

SPRING 2006 NARPM CONFERENCE

FALL 2006 TSP MEETING

DOCUMENT REVIEW REQUEST

Technical Presentation

Mike Gill (Region 9 HSTL) arranged for Tom Sale, Gary Amato, and Mitch Olson (Colorado State University (CSU), Center for Contaminant Hydrology) to give a presentation entitled "Source Zone Remediation via Admixing Zero Valent Iron and Clay." Zero valent iron (ZVI) has been successful in remediating VOC-contaminated groundwater when used in permeable reactive barriers (PRBs). Taking this well known chemical breakdown process one step further is a technology known as ZVI-Clay technology. After mixing the ZVI with clay, the mixture can be injected into source areas contaminated with halogenated compounds. The technology uses a combination of a reactive media (iron) and a stabilizing agent (typically clay) to both rapidly breakdown the solvents and fix both the reactant and the solvents in a mass of very low hydraulic permeability that greatly reduces future migration into or from the source area. This technology has been used successfully at both a DuPont site in Martinsville (VA) and at the U.S. Marine Corps Camp LeJeune dry cleaner site. The ZVI/clay mixture has demonstrated a 99.99% reduction in carbon tetrachloride (99% reduction in total CVOCs) within two years at the DuPont site and between 90 and 99.9% reduction in TCE within 8 months of treatment at Camp LeJeune. The contractor's cost for implementing the technology at these two sites has been between \$70 and \$80 per cubic yard.

The ZVI-Clay technology was featured in the February 2006 issue of the EPA Technology News and Trends (see page 3 of the following web link: <http://www.clu-in.org/download/newsletters/tnandt0206.pdf>) and was presented in May at the Battelle conference in Monterey, CA and again at the Region 9 EPA office. Although the technology has proven effective in the field and the laboratory, there are certain geotechnical limitations that must be considered when determining whether to use it at a given site. Large equipment is used to mix the product and dig the holes, so it may not be feasible to use this technology in urban areas with many buildings and underground utilities.

Tom noted that the technology is available now and is ready for field use. Feasibility studies and brochures are available, and CSU has signed agreements with two consulting firms and several vendors to install and market this technology. For more information, contact Tom (Thomas.Sale@ColoState.edu; tel: 970-491-8413), Gary (garyamato@msn.com; tel: 970-219-4999), or Mitch (mitcello@engr.colostate.edu; tel: 970-491-8720) directly.

New EF Co-Chair

Jon Bornholm (Region 4) will assume Bernie Schorle's (Region 5) co-chair position during the NARPM conference in June. Jon will serve as co-chair until spring 2008. Sharon Hayes' (Region 1) co-chair term expires during the fall 2006 meeting.

Spring 2006 NARPM Conference

The spring 2006 NARPM conference will be held the week of June 19 at the Wyndham New Orleans Hotel at Canal Place. Approximately 14 EF members plan to attend.

Fall 2006 TSP Meeting

The Ground Water Forum has the lead in planning the Fall 2006 TSP meeting, which will be held in Long Beach (CA) in conjunction with the California Groundwater Resources Association meeting the week of November 13. The EF co-chairs will distribute a draft agenda when it becomes available. EF members should begin thinking about potential topics for the engineering-related sessions and business sessions. A field trip involving vendor demonstrations of various technologies is being planned for Thursday (November 16).

Document Review Request

Kathy Yager (TIFSD) has requested that EF members review and comment on two pump and treat documents that were distributed on May 31. Comments on these OSWER documents are due to Kathy by July 7. Steve Kinser (Region 7) will consolidate all EF comments and forward them to Kathy. EF members should send comments to Steve no later than June 27.

ATTENDEES

Ray Cody, Region 1

Sharon Hayes, Region 1

Hilary Thornton, Region 3

Jon Bornholm, Region 4

Leo Romanowski, Region 4

Tony Holoska, Region 5

Bernie Schorle, Region 5

Steve Kinser, Region 7

Bill Rothenmeyer, Region 8

Mike Gill, Region 9 HSTL

Kelly Madalinski, TIFSD

Lindsay Lien, USACE

Gary Amato, Colorado State University

Mitch Olson, Colorado State University

Tom Sale, Colorado State University

Keith Arnold, EMS, Inc.

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