



HIGHLIGHTS

HIGHLIGHTS OF THE SPRING 2005 TECHNICAL SUPPORT PROJECT MEETING

For a second consecutive year, EPA's Technical Support Project (TSP) teamed with the National Association of Remedial Project Managers (NARPM) for their 2005 annual training conference in Phoenix, AZ, May 23-27. The TSP's three technical forums—the Engineering, Federal Facilities, and Ground Water Forums—seek to further their goal of improving technical outreach within the regions by integrating their training with NARPM. This year, 15 regional TSP members participated as trainers or presenters in various training workshops, information sessions, panel sessions, and paper sessions. The forums also met individually in business sessions to discuss current and future forum activities. This newsletter highlights these activities. During their business sessions, Ground Water Forum members and invited speakers presented technical discussions of ongoing research and field work. These presentations are also summarized below, and the slides can be found in electronic format on the TSP's webpage at www.epa.gov/tio/tsp/meetings.htm. For more information on the topics highlighted, or if you wish to become involved in forum activities, please contact your regional TSP representative listed on page 4 of this newsletter.

Contents

| | |
|---------------------------|--------|
| Ground Water Forum | Page 1 |
| Next Meeting | Page 2 |
| Federal Facilities Forum | Page 2 |
| Engineering Forum | Page 3 |
| Emerging Contaminants | Page 3 |
| Technical Support Project | |
| Regional Contacts | Page 4 |

New Members

The TSP is always seeking new members to participate in activities of the Ground Water, Engineering, and Federal Facilities Forums. If you are interested, please contact your regional TSP representative or a forum co-chair listed at the end of this newsletter. A complete list of contact information is available at www.epa.gov/tio/tsp/member.htm.

Ground Water Forum

In addition to their regular forum business discussions, Ground Water Forum hosted several technical presentations:

- Lynn Wood and Michael Brooks of EPA's Ground Water and Ecosystems Research Division (GWERD) in Ada, OK, presented results of their research project to assess the benefits of aggressive in-situ DNAPL source-zone remediation. Their work involved comparing mass flux measurements (using flux meters and an adaptation of integral pumping tests) before and after the remedial actions at four sites.
- Marc Zimmerman (U.S. Geological Survey) discussed two field efforts that involve: 1) determining the effectiveness of push point samplers to collect samples of pore water in shallow sediment for volatile organic

compound (VOC) analysis; and 2) comparing the effectiveness of stainless steel push point samplers and nylon screen diffusion samplers in detecting metal-enriched ground water in streambed sediments. The first study found that push point samplers can capture shallow pore water without drawing in surface water and can provide for fine-scale mapping of VOCs and other constituents. The second study found pluses and minuses with both types of samplers and identified some systematic differences in concentration measurements of some metals.

- Ruth Israeli (Region 2) described a bench-scale treatability test of in-situ chemical oxidation that involved comparing the use of modified Fenton's reagent and potassium permanganate as oxidants at a site contaminated with TCE and DCE.

[continued on page 2]



Next Meeting

The Fall 2005 TSP meeting is scheduled for the week of October 24th at the AmeriSuites Riverwalk in San Antonio, Texas. The theme of this meeting will be optimization. Speakers will be invited to make presentations on treatment optimization, with a special focus on case studies. Training in long-term ground-water monitoring optimization modeling will also be offered at the Air Force Center for Environmental Excellence (AFCEE) at Brooks Air Force Base.

If you are interested in participating in this meeting, contact your regional forum representative listed at the end of this newsletter.

[continued from page 1]

The bench-scale test was followed by a field-scale pilot study of Fenton's reagent. Ruth summarized the lessons learned from both tests and emphasized a need in the Agency for in-depth, applications-oriented guidance for emerging technologies.

- Joel Hennessey (Region 3) explained to the forum members how to use census data to determine ground-water use near sites as well as national and regional usage trends. Joel also explained how to use GIS viewers to depict census data on aerial photographs and topographic maps.

To obtain more information about these technical topics, please visit www.epa.gov/tio/tsp//meetings.htm to view the full slide presentations.

During follow-on business sessions, Bernie Zavala (Region 10) summarized his participation on the Waste Research Coordination Team (WRCT) and encouraged other forum members to get involved. The WRCT is a multi-year planning process for working

with all 10 regions to determine research needs for EPA's Office of Research and Development.

Helen Dawson (Region 8) provided an update on the ongoing revisions to *OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils*. By the end of summer, she hopes to send a revised version of the document to forum members to review. She encouraged the forum to be active in indoor air issues noting these issues involve stratigraphy, determining whether ground-water samples are representative, changes in the water table level, and other hydrogeologic information.

Ken Lovelace (OSRTI) summarized the effort by EPA's Office of Superfund Remediation and Technology Innovation to develop guidance on "remedy closure" for ground-water remedies and exit strategies for achieving remedy closure. Development of an exit strategy for the goal of plume restoration would include criteria for determining: when to shut down the pump and treat system; when ground-

water levels have reached non-pumping steady state; that cleanup goals have been attained and will be maintained with the system off; and triggers for terminating or restarting monitoring or the remedy, if necessary.

The Ground Water Forum is working on additional issue papers, including finalizing a joint paper with the Ecological Risk Assessment Forum on ground water to surface water contamination; planning a multi-level well sampling comparison study; and reviewing papers on site characterization for monitored natural attenuation, the inherent uncertainty associated with sample measurements, and ground-water sampling using direct push technology.


Federal Facilities Forum

The Federal Facilities Forum conducted a regional "roundup" of hot issues affecting federal facilities in each EPA region. Concerns raised by the regional representatives included performance-based contracts, perchlorate, BRAC'05, alternate concentration limits, and FUDS. Jim Woolford, Director, Federal Facilities Restoration and Reuse Office (FFRRO), addressed the Agency's response to many of these concerns

[continued on page 3]



Award Spotlight



OSWER awarded Ground Water Forum member Bernie Zavala (Region 10) a bronze medal for continuous service in bringing ground-water expertise to the program.

[continued from page 2]

during an earlier NARPM training workshop.

John Quander (Technology Innovation Program) distributed final copies of the Federal Facilities Forum's issue paper *Perchlorate Treatment Technology Update* (EPA 542-R-05-015) now available on www.cluin.org. Following an overview of the occurrence and toxicity of perchlorate and its physical and chemical properties, the paper describes a number of perchlorate treatment technologies, the factors affecting their performance, potential limitations, and performance and cost data.

The forum plans to continue their work on the issue of perchlorate by reviewing and commenting on a paper on the monitored natural attenuation of perchlorate, which GWERD is drafting. The forum also will review an issue paper on UXO being prepared by EPA's National Risk Management Research Laboratory (NRMRL) in Cincinnati. Members discussed potential topics for future issue papers, including how to address sampling for asbestos and lead at ammunition plants where buildings containing these contaminants have been burned or demolished in the past.

For the fall 2005 TSP meeting, the forum is considering inviting federal land management operations staff to discuss mining operations and other hazardous waste sites on non-DOD/DOE federal facilities.

Engineering Forum

The Engineering Forum has finished compiling and analyzing the data from an expertise survey that they prepared

and distributed to remedial project managers (RPMs) early in 2004. The purpose of the survey was to:

- gauge EPA's in-house engineering expertise;
- identify specific areas of strengths and weaknesses;
- identify training needs; and
- possibly influence future hiring.

Sharon Hayes (Region 1) and Bill Rothenmeyer (Region 8) presented the survey results to NARPM members. With 39% of the RPMs responding, the forum found that 63% of RPMs reported having at least one engineering degree and an average of 13 years of experience in the Superfund program. On average, RPMs are managing 5.1 sites. The survey shows that work on these sites is shifting toward the tail end of the Superfund process pipeline (i.e., toward remedial action and post-construction activities). The top five training needs identified in the survey were ground-water modeling, indoor air contamination issues, bioremediation, technical impracticability waivers, and sediment issues. A need for a more advanced level of training on these topics was suggested. The forum is looking to receive comments on the draft survey report from the NARPM co-chairs before presenting it to regional and national Superfund management later this year.

Dave Reisman (NRMRL) reported that NRMRL will soon complete the second drafts of Engineering Bulletins on the topics of bioremediation, remediation of PCBs, and mining issues. The Engineering Forum plans to review and comment on the new drafts. In addition, the paper, *In-Situ Contaminated Soil Treatment Technologies*, is nearing completion.

The *Screening Data Collection Paper* being developed jointly between the Engineering Forum and the U.S. Army Corps of Engineers is ready for a final review. The paper, which is also being developed into an ASTM guide, will help RPMs to select and obtain the desired physical and chemical treatment process design data at contaminated sites early in the investigation stage. The deadline for forum submission of comments to Ed Mead (Corps of Engineers) on the latest draft is July 2005. At that time, the paper will be formatted for review by EPA's Science and Ecosystem Support Division in Athens, GA.

Possible future activities for the forum include developing a checklist of close-out considerations to add to the Preliminary Close Out Report guidance and writing an issue paper discussing geotechnical issues to consider when redeveloping brownfields sites.

Emerging Contaminants

The technical presentation of the TSP's Fall 2004 meeting centered around the theme of emerging contaminants—chemicals that have no MCLs yet have emerged as potential threats to human health and the environment. Experts from EPA, state regulatory agencies, academia, and consultants presented information on the occurrence, uptake, and treatment of these chemicals, in particular perchlorate, 1,4-dioxane, and NDMA. The forums also traveled to the Aerojet facility and McClellan AFB outside of Sacramento, CA, to tour treatment facilities for these compounds. Information on these topics and more can be found on the TSP webpage at www.epa.gov/tio/tsp/download/2004_fall_meeting/tech_minutes.pdf.

Technical Support Project Regional Contacts

| | GROUND WATER FORUM | FEDERAL FACILITIES FORUM | ENGINEERING FORUM |
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| REGION 1 | Bill Brandon Ernie Waterman Richard Willey | Christine Williams* | Ray Cody Sharon Hayes* |
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* Denotes Forum Co-Chair