

ER TEC 2001

Highlights of the Environmental Restoration Technology End User Conference

July 17-19, 2001

Westin Peachtree Plaza
Atlanta, Georgia, USA

Sharing Technology Deployment Experiences



"We cannot sustain stabilization decisions for a hundred years without better science and technology . . . no one wants a legacy of the legacy."

Gerald Boyd
Opening address speaker
DOE Headquarters



ER TEC 01

Sharing valuable experience

During the three days of activities at the fourth Environmental Restoration Technology End User Conference – ER TEC 2001, 240 attendees from 28 states shared technology deployment experiences that are being used around the world. Attendees from DOE, DOD, EPA, state regulatory agencies, and representative from universities and industry participated.

Equally important were the interactions at the exhibits, on tours and beyond the presentations to discuss ideas and reach mutual goals.

The opening address speaker for the conference was Gerald Boyd, deputy assistant secretary, Office of Science and Technology, at DOE headquarters. Mr. Boyd, introduced by Tom Heenan, DOE SR, had praise for SRS's efforts in technology development and deployment. Nationally, however, he called for a greatly increased research focus on cleanup methods.

The themes of the meetings were that we have real problems with real solutions. Natural remedies using phytoremediation and bioremediation were in the forefront of popular topics.

Following are a few of the presenters with descriptions of their **topics**:

■ Lee Newman, University of South Carolina, described how her work with the Savannah River Technology Center was a success when a hybrid poplar **phytoremediation** system was designed, installed and began operation this year at SRS. Soil conditions were a key factor for the irrigation and tree health.

■ Jim Kuper, Savannah River Site, explained how **dynamic underground stripping** has been 50 times faster than other removal technologies for cleanup of solvents at the M Area site.

■ Jeff Harlow, Navy Weapons Station in Yorktown, Virginia, described cleanup using full-scale **bioremediation** of soil that contains organic explosives.

■ Tom Early, NASA's Launch Complex 34, spoke on **DNAPL cleanup** using in situ chemical oxidation and electrical resistance heating technologies. Stressed was the importance of testing the technologies repeatedly to detect ways to improve engineering of the technology.

■ Gregory Rucker, Savannah River Site, described how **software modeling** can be used internationally to expedite and evaluate "what if" scenarios for remedial actions by pre-loading geotechnical parameters and calculating runs for up to 200 contaminants at a time. This results in reduction of runtime and cost savings.

■ Michael Kuperberg, researcher from Florida State University, shared how most cleanup in the central eastern European area is biology based because the up front costs are lower and the technologies are easier to apply. **Bioremediation** is one of the most popular to break down microbial contaminants.

■ Amy Dindal, Oakridge National Lab, explained how performance verification of **field analytical technologies** can assist in site characterization and monitoring activities.

■ Richard Hammond, EPA Region 8, shared his experience with **net meetings**, to discuss comments and resolutions on environmental documents, thus saving significant travel dollars.

"We need to research and define new technologies while also improving our stewardship in the communities."

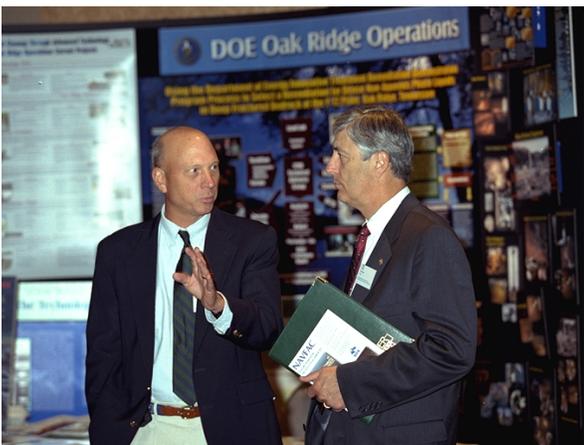
Dr. Charles Powers

Keynote speaker

CRESP exec. director; professor at Rutgers University



Informative and illustrative exhibits featuring the latest innovations in ER technologies



Represented were 32 exhibits and a poster session from the private sector, state, and federal agencies, and academia. These wide ranging exhibits were both informative and illustrative of the latest innovations in environmental restoration technologies.

Ernie Carter, exhibitor for the Earth Saw technology, brought a small scale demonstration of Earth Saw — a bottom barrier method designed to meet DOE needs for in situ construction that will last for thousands of years with an impermeable cap.

“For project success the keys to technology transfer and regulatory acceptance are using credible data . . . planning and involving stakeholders early in the process.”

Randy Parker
Conference keynote speaker
U.S. EPA National Risk Management Research Laboratory

Hap Thron, DOE-HQ, agreed with his colleagues that the format of having the exhibitors in the meeting room added to the interactions for increased communications.

Heather Homes-Burns, SRS Solid Waste Engineer, noted that the environmental management discussions verbalized the need for vadose zone cleanup solutions that will encourage building on others efforts.

Jimmy Mackey, SRS Citizens Advisory Board member, was interested in learning more about technologies at the exhibits and through the presentations so he could be more informed in making CAB recommendations.

“Participants have agreed that the conference is a valuable tool to spread the use of new, effective and economical cleanup methods.”

Tom Heenan
Conference welcome speaker
Assistant Manager for Environmental Science and Technology, DOE-SR

Attendees:

- 14 EPA
- 11 SCDHEC
- 2 State Agencies
- 34 DOE
- 3 DOD
- 176 Private Industry and Exhibitors

240 Total

About the Conference Hosts

The fourth annual Environmental Restoration Technology End User Conference was hosted by the Department of Energy, Savannah River Operations and is co-sponsored by the Department of Defense, Office of Under Secretary of Defense for Environmental Security and the Environmental Protection Agency Region IV. ■

In the field -- tour of ER activities in the Atlanta vicinity



During the tours of the Plasma Application Research Facility at the Georgia Institute of Technology, participants saw first hand several projects relating to the remediation of waste materials and contaminated soils using plasma technology. The visits showcased poster displays of past projects, plasma equipment and a demonstration of the in situ plasma vitrification process.



“Attending the conference and tours provided critical “Lessons Learned” and contact information for future reference and learning. I see future cleanup becoming more efficient and responsible. This was evidenced during the Lockheed Martin Facility tour.”

Myounghee Noh

Myounghee Noh and Associates
Environmental Research and
Consulting Services
Aiea, Hawaii

Touring the Lockheed Martin facility near Marietta, GA, project manager Michael Laney showed us how common our remediation problems have become. Like many other sites, the base is working to stop contaminated groundwater migration. Nine soil vapor extraction wells have helped extract almost 5,000 pounds of TCE, a degreaser that was used over the years for manufacturing processes. During the tour a mobile geophysical data collection platform was visited to see how geophysical data is collected for real-time analysis. The general objective of the United States Geological Survey (USGS) project is to support and enhance environmental remediation activities at this AFP 6, with emphasis on contaminant hydrology. To date, three sites have been identified for groundwater extraction and treatment systems at the Dobbins Base.



As evidenced by what was learned during the conference activities, expanding the science and technology road to build a research agenda with calculated risks while learning from others across the nation will maintain credibility for the cleanup efforts.

Visit the WEB address to reference the ER TEC 01 conference for more information:
<http://www.srs.gov/general/srenviro/erd/tec/tecsum.html>