Prospectus for

Workshop on Engineered Barrier Performance Related to Low-Level Radioactive Waste, Decommissioning, and Uranium Mill Tailings Facilities

The U.S. Nuclear Regulatory Commission's Offices of *Nuclear Regulatory Research* (RES) and the *Federal and State Materials and Environmental Management Programs* (FSME) are organizing a *Workshop on Engineered Barrier Performance Related to Low-Level Radioactive Waste, Decommissioning and Uranium Mill Tailings Facilities*. This workshop is being coordinated with the States (e.g., Texas, South Carolina, Utah, Colorado, Washington, and New York) and Federal Agencies (e.g., DOE, EPA, USGS, and DOE National Laboratories).

Technical Topics:

Workshop will focus on engineered surface covers and bottom liners designed to isolate waste by impeding surface water infiltration into the waste systems or by retarding the migration of contaminants from the waste disposal site. Topics will include engineered barrier performance, modeling, monitoring, and regulatory experiences at low-level radioactive waste, decommissioning, and uranium mill tailings sites.

Workshop Dates: August 3-5, 2010

Location: U.S. Nuclear Regulatory Commission Headquarters Auditorium, 11545 Rockville Pike, Rockville, Maryland

Attendance: Participants will include invited speakers and panelists; and Federal and State staff and contractors, selected experts, representatives from Tribes, and NRC technical staff and management. The public is welcome to attend and observe.

Registration: Although there is no registration fee, prior registration is encouraged to assist NRC security.

Documentation: Extended abstracts and PowerPoint presentations will be submitted prior to the workshop.

Proceedings: A workshop summary of presentations, significant insights, and recommendations will be posted on the NRC Public Website as a NUREG/CP publication.

Remote Viewing: Workshop may be viewed **live** via **WebStreaming** at http://video.nrc.gov/live/.

For questions on WebStreaming please contact Danita C. Stenberg at 1-202-590-0090 or 301-415-5166 or Danita.Stenberg@nrc.gov

Workshop Objectives:

Facilitate communication among Federal and State staff and contractors, and selected experts, on current engineered barrier issues and technical and regulatory experiences; discuss lessons learned and new approaches for monitoring and modeling; prepare recommendations to address maintenance of engineered barrier performance over time; identify topics for future research and the potential need to update technical guidance.

Workshop Organizing Committee:

Susan Jablonski (State of Texas, TCEQ)
Craig Benson (Univ. of Wisconsin for DOE-EM)
W. Jody Waugh (SM Stoller for DOE-LM)
William Albright (Desert Research Institute/Univ. of Nevada)
Brian Andraski (USGS)
Loren Setlow, Linda Fiedler, and Steven Rock (EPA)

U.S. NRC staff: Thomas Nicholson, Hans Arlt, Stephen Salomon, Jacob Philip, David Esh, George Alexander, and Mark Fuhrmann

Program Format:

- Introductory session to present workshop objectives, technical themes and topics, and goals.

- Working sessions will include:

  - ***Session 1*** - State and Federal agencies presenting an overview of their research activities and findings with an emphasis on practical insights on monitoring, modeling and confirming short- and long-term performance of engineered systems.
    Session Chairs: Susan Jablonski, State of Texas; Brian Andraski, USGS; Stephen Salomon and Jacob Philip, NRC
  - ***Session 2*** - Degradation Processes and Performance Evolution of Engineered Barriers and Covers.
    Session Chairs: Craig Benson, UWI and W. Jody Waugh, S.M. Stoller LLC
  - ***Session 3*** - Experience with Monitoring Devices and Systems Used to Measure Performance
    Session Chairs: William Albright, DRI/UNV and Craig Benson, UWI
  - ***Session 4*** - Modeling Experiences in Performance Assessment and Evaluation of Performance Monitoring.
    Session Chairs: David Esh, NRC/FSME and Thomas Nicholson, NRC/RES
  - ***Session 5*** - Experience with Model Support and Multiple Lines of Evidence to Gain Confidence in Long-Term Performance.
    Session Chairs: Hans Arlt, NRC/FSME and George Alexander, NRC/FSME
  - ***Session 6*** - Recommendations on Assessing Engineered Barrier Performance, Identifying Future Research Needs, and Improving Guidance Documents.
    Session Chairs: Thomas Nicholson, NRC/RES and Hans Arlt, NRC/FSME

- At the end of each working session, a panel discussion will respond to questions and will review significant insights and recommendation to be summarized for discussion in the final session.

- Summary session to review working session discussions and to document their significant insights and recommendations for incorporation into the workshop proceedings.

Public Comment and Questions:

At the end of each day from **5:30 to 6:00 p.m. EDST**, the public will be provided an opportunity to make comments or provide questions. Call-in number is **1-888-566-6344** with passcode **15103** after 5:25 p.m.