SRNL™
SAVANNAH RIVER NATIONAL LABORATORY
Operated by Savannah River Nuclear Solutions, LLC

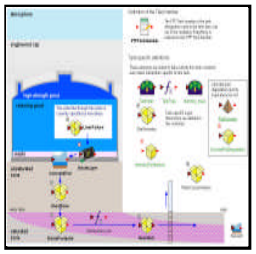
We Put Science To Work

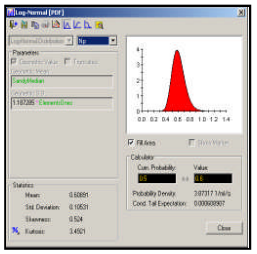
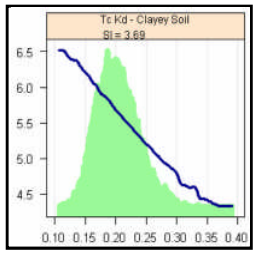
High-Level Waste Corporate Board Performance Assessment Subcommittee

John E. Marra, Ph.D.

Associate Laboratory Director

November 6, 2008



DOE-EM HLW Corporate Board Meeting

Richland, WA

Office of Environmental Management
safety ❖ performance ❖ cleanup ❖ closure

Background – Performance Assessment Process

Performance assessments are the *fundamental risk assessment tool* used by the DOE to *evaluate and communicate* the *effectiveness and long-term impact* of waste management and cleanup decisions. This includes demonstrations of compliance, NEPA analyses, and decisions about technologies and waste forms.

Background – Process Perception

EM-2 'Precepts' for Improved High-Level Waste Management (HLW Corporate Board Meeting – April 2008)

- **Improved Performance Assessments (PA)**
  - The PA process is not consistently applied amongst the major HLW sites
  - PA development always seems to be a 'research effort'
  - Quality assurance (QA) is inconsistent and sometimes problematic

HLW Corporate Board Action

Charter Performance Assessment Subcommittee

- **Goal - to develop a *guidance document* for Performance Assessments. The guidance should address both methodology and the use of data to help promote consistency in the preparation and application of performance assessments across the DOE complex.**
- **Objectives:**
  1. Develop a body of knowledge relating to the preparation and application of performance assessments across the DOE complex.
  2. Draft a guidance document, based upon the agreed-upon body of knowledge (and any desired improvements), in a clear and easy to understand style;
  3. Complete a draft guidance document one-year from the date this charter is approved.

Excerpted from:
PA SC Charter Rev 6.doc

EM-11 Proposed Action

Low-level Waste Federal Review Group (LFRG) has proposed a 'Performance Assessment and Risk-Based Modeling Consistency Initiative'

- **Problem Statement – '… credibility of these analyses is … weakened by inconsistencies across sites … regarding modeling approaches, input data, parameter assumptions, and scenarios.**
- **Proposal Objectives:**
  1. Improve the Department's performance assessment and risk-based decision making capabilities by increasing the quality, credibility, consistency, and efficiency of the Department's performance assessments and risk-based modeling, and
  2. Maintain an enduring performance and risk assessment capability, resulting in greater defensibility of the Department's decisions over the long term.

Launching a Performance Assessment Community of Practice

- **Joint sub-committee of HLW and LLW Corporate Boards to provide strategic guidance on Performance Assessment (PA) and Composite Analysis (CA) Consistency**
  - Consistency across PAs/CAs and between PAs/CAs and other environmental assessments (e.g., RCRA, CERCLA, NEPA)
  - Support from DOE staff, LFRG, CRESP, National Labs, others
  - Review current PAs for consistency and best practices
  - Identify key issues/areas for improvement; develop workshops with all key stakeholders (Sites, NRC, States, EPA, Tribes, etc.) to evolve basis for approaches to identified issues
  - Identify best paths for implementing improvements
  - C-Tank Farm at ORP as pilot demonstration of PA improvements and test bed for PA maintenance improvements
- **LFRG – Establish joint EM-10 and EM-20 co-chairs**
  - Serves as post-PA development review process (e.g., quality verification)
- **Use Performance Assessment Assistance Team (PAAT) to provide foundation for up-front consistency and quality (Joint EM-10, EM-20)**
  - SRNL lead in conjunction with other National Labs
- **Site-specific Consistency Groups to provide consistency in assumptions across various environmental assessments at individual sites**

Proposed HLW Board Corporate Board Action

Approve formation of Community of Practice

- **EM-10 and EM-20 to provide candidates for co-chairmanship of combined effort**

☒ ***HLW Corporate Board (and LLW Corporate Board) approve integrated Charter***