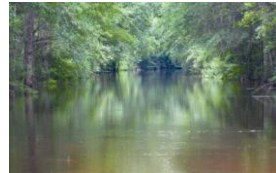




Savannah River Site



EFCOG-SAWG Safeguards & Security Integration with Safety Analysis

**Janice H. Hearn
Washington Savannah River Company**

May 22, 2007

How did SRS Do That?

- **Background**
- **Requirements & Guidance**
- **Implementation of Project**
- **Results**
- **Lessons Learned**
- **Conclusions**

Why Did They Do It?

- **Safety Analysis excludes events of sabotage & terrorism**
- **S&S Project, DBT03, included variety of modifications, weapons & ammunition**
- **Could an accidental discharge cause a release of nuclear material?**
- **Need to allow changes, weapons & ammunition but eliminate release concern**

What were Rules of Engagement?

- **DOE Order 413.3(A): Project Management**
- **DOE Order 470.3A & 470.4: Roles & Responsibilities for DOE S&S Program**
- **10CFR830, DOE Order 420.1, DOE-STD-3009: Safety Basis Analyses Requirements for Nuclear Facilities**

How did It Play Out?

- **Physical modifications no effect on Safety Basis: Normal design path, work packages and construction with Unreviewed Safety Question Screenings or Evaluations**
- **Addition of device made of ceramic and plastic: Fire loading and criticality evaluations required**
- **Addition of weapons and ammunition: Both tested against (empty) storage drums; Tests well documented and witnessed by all concerned organizations**
- **Increased helicopter flights: New frequency (of impact) calculation**

Thumbs Up or Thumbs Down?

- **Composite design: allowed, but only in certain analyzed configurations**
- **Weapons: allowed via new S&S Program**
- **Helicopter flight changes via new S&S Program**
- **Technical Safety Requirement (TSR) on S&S Program requires any proposed changes to SSSP/MSP to be approved by Engineering. Also Authorization Agreement signed by WSRC, DOE and WSI-SRS**

Did SRS Learn Anything?

- **To properly integrate S&S with SA, need:**
 - **Time (much more than you'd expect)**
 - **Clear Communication (ensure listener hears what speaker is saying. Well written reports)**
 - **Compromise where possible**
 - **Flexibility (allow for changes at “last minute”)**
 - **Shortcuts where possible (review current hazard events for similarities)**
 - **Get Legal Department involved early (wording, new contractual agreement)**

Looking Back

- **EFCOG Topical Report on Security & Safety Integration very good but issued after DBT03**
- **Summary**
 - **Successful: On time, good quality, within budget**
 - **Security Systems Toolbox recommended by EFCOG would have been helpful**
 - **DBT03 resulted in a new Administrative Control and new contractual agreement between Protective Force, Contractor Operator and DOE**