

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 13, 2010

**TO:** T. J. Dwyer, Technical Director  
**FROM:** M. T. Sautman and D. L. Burnfield, Site Representatives  
**SUBJECT:** Savannah River Site Weekly Report for Week Ending August 13, 2010

**Savannah River National Laboratory (SRNL):** Savannah River Nuclear Solutions (SRNS) selected Terry A. Michalske, Ph.D., as Director of SRNL. He previously worked at Sandia National Laboratory.

**H-Canyon:** The site rep reviewed the Plan of Action (POA) for the spent fuel/3009 upgrade Documented Safety Analysis (DSA) readiness review. The main body of the POA mentioned performance-based techniques and evolutions; however, the attached lines of inquiry (LOI) did not require field observations. For example, the LOIs for conduct of operations, training, radiological protection, and emergency preparedness did not require the observation of any evolutions or drills. The LOIs verified that procedures had previously been reviewed and approved, but did not ensure the procedures actually worked in the field and were followed by operators. Furthermore, the LOIs focused on facility modifications, but not on the implementation of limiting conditions for operations and administrative controls. Since this review examines the implementation of a major DSA upgrade, the site rep provided information about recent Board and DOE expectations for conducting implementation validation reviews. SRNS is currently revising the H-Canyon POA.

**Criticality Safety:** The site rep met with SRNS and DOE nuclear and criticality safety staff to further discuss Board staff concerns with the revised Criticality Safety Program Description Document and the classification of some H-Canyon criticality controls (see 7/9/10 report). The proposed control classification guidance does not always ensure that anticipated/unlikely criticality scenarios end up with a minimum set of controls explicitly credited in the Technical Safety Requirements. The site rep also discussed the reliance on non-safety equipment to drive operator actions, use of specific administrative controls, and DOE approval of criticality controls.

**Solid Waste Management Facility (SWMF):** Workers installed a glovebag over the Pad 16 sump and then sampled it. The laboratory determined that the liquid contained therein was contaminated with readings as high as 7500 decays per minute per milliliter  $\alpha$ . (See July 30, 2010 report). Management established a team of experienced personnel to recommend the necessary actions for resuming drum mining in SWMF. This team identified hazard based "binning" criteria for the drums. The criteria include: radiological inventory, the presence of liquids within the drum, and the condition of the drum as determined by a visual inspection. Based upon these criteria the team concluded that approximately 60% of the drums can be moved in the near future. The team recommended that movement of drums with increased hazard (i.e. Plutonium-239 equivalent curies  $\geq$  180, contain liquids, or in bad condition) may be authorized on a case-by-case basis by the facility manager or higher after specific controls for this drum movement/mining activity are developed.

**L-Area:** The SRNS Facility Self Assessment (FSA) for resuming spent fuel shipments to H-Area continues. Last week, the site rep watched a dry run in which operators encountered minor issues with procedure steps and cross threading. SRNS postponed the final phase of the FSA until the event recorders are installed in the locomotives and training of railroad personnel is complete.

**Saltstone:** SRR processed approximately 82,000 gallons of material from tank 50 this week. The shift manager shut down the last processing run when the dry feed flow rate differed from the set point. Saltstone management is reviewing the data to determine the cause of this difference before resuming processing.