

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 5, 2016

**TO:** S. A. Stokes, Technical Director  
**FROM:** M. T. Sautman and Z. C. McCabe, Site Representatives  
**SUBJECT:** Savannah River Site Weekly Report for Week Ending August 5, 2016

**H-Canyon:** The contractor commenced their Readiness Assessment (RA) for the Target Residue Material project. Because of the high rental cost of the shipping cask, the DOE RA team is observing the field evolutions concurrent with the contractor RA team. This is allowed by DOE Order 425.1D, *Verification of Readiness to Start Up or Restart Nuclear Facilities*, and the DOE team has established protocols to maintain their independence from the contractor team. The site representatives have observed all of the field activities including cask receipt, unloading preparations, and a drill. RA field activities will continue through next week.

SRNS is attempting to begin operation of the First Uranium Cycle Solvent Extraction Process (1<sup>st</sup> U) with fissile material for the first time in nearly five years. Processing was delayed temporarily when the sample results for the first cycle feed tank indicated that the nitric acid and aluminum nitrate were within the range specified in the procedure, but the total nitrates concentration was just outside the lower limit in the procedure. Engineering reviews of supporting calculations indicated that the combined concentrations were within the defined acceptable range, but not the defined operating range. SRNS engineers concluded it was permissible to restart operations because the operating range was for process optimization and not safety. Subsequently, SRNS began cold streams and identified an issue with a process pump prior to processing fissile material. SRNS is planning to replace the pump and to restart 1<sup>st</sup> U operations today.

**Commercial Grade Dedication (CGD):** The site representatives reviewed SRR data and SRR is not experiencing the backlogs and delays similar to those discussed in previous reports (see 7/15/16 and 7/29/16 weekly reports), partly because SRR is utilizing previously prepared CGD documents under the NQA-1-2000 code of record.

**SRNS Radiological Protection (RP) Program:** SRNS reviews of contamination events, company cumulative doses, highest individual doses, leak collection devices, plastic huts, and contamination area size show stable or improving conditions. Staffing of RP inspectors, first line managers, and health physicists is a challenge because of high attrition, insufficient graduates from local technical schools, and market competition. The program is also having to replace a large number of radiological monitoring equipment (i.e., personnel contamination monitors, smear counters, and alpha probes) due to equipment obsolescence and diminishing spare parts.

**Structural Integrity Program (SIP):** As a result of the issues described previously (see 7/8/16 weekly report), SRR performed a self-assessment of the SIP for Tank Farms, the Defense Waste Processing Facility (DWPF), and Saltstone. The self-assessment identified nine opportunities for improvement including assigning a higher priority to the SIP to ensure sustainability, and improving the way data is retained to better facilitate tracking and trending the data. Additionally, SRR has determined that the reinforced concrete exhaust tunnel for the DWPF should be included in the SIP inspections going forward. SRR is planning to do an extent of condition review of the DWPF SIP to ensure that there are no other structures, systems or components that should be included in the SIP inspections.