DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 15, 2014

TO: S. A. Stokes, Technical Director
FROM: M. T. Sautman and D. L. Burnfield, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending August 15, 2014

Mr. John Pasko and Mr. Todd Davis visited eight defense nuclear facilities.

HB-Line: After years of preparation, SRNS commenced production of plutonium oxide. SRNS transferred a batch of previously dissolved plutonium from H-Canyon to HB-Line. SRNS held a post-job review to address a few minor conduct of operations and interface issues.

Saltstone: Based on recent successful runs, SRR was planning to increase the dry feed rate from 30 to 33 tons/hour. However, before waste feed could be introduced Monday, nearby maintenance workers heard the new grout pump making noises and operators shut down the pump. An investigation determined that the manufacturer had not properly torqued some bolts. This allowed some of the shims inside the pump to slide out and become damaged. This damage resulted in debris inside the pump casing that SRR will have to remove. SRR received new shims and grouting should resume next week.

Work Planning: Construction services revised their desktop instructions for developing work instructions for planned work to address inconsistent and incorrect formatting of hold points, sign offs, warnings, etc. (See 5/23/14 report). Refresher training will be provided to all construction work planners.

Structure, System, and Component (SSC) Performance Monitoring: SRR issued a major revision to their procedure which draws heavily on the Electric Power Research Institute guidelines. The approach emphasizes defining failure modes and degradation mechanisms for each SSC function, directly linking a degradation indication for each monitoring parameter, and developing system performance monitoring plans. Monitoring would focus on both direct (e.g., vibration) and indirect (e.g., corrective maintenance backlogs, unplanned limiting condition for operations entries) degradation. Furthermore, action plans include predefined actions to be implemented when assigned acceptance bands are reached. The scope goes beyond just safety class and safety significant SSCs to include all active SSCs that perform important defense-in-depth functions as defined in the facility's safety basis.

Tank Farms: SRR excavated a section of high-level waste transfer line in F-Tank Farm whose outer containment pipe had not passed a pressure test during a routine integrity testing surveillance. (See 7/18/14 report). Based upon visual and ultrasonic inspection of the containment pipe, SRR is repairing it by welding similar metal patches onto sound base metal. Independent structural experts and SRNL reviewed the planned repairs and agreed the life of the patch should be equivalent to the life of the remainder of the pipe. The site rep attended the SRR management meetings where the repairs were discussed and reviewed the repair procedure with SRR safety professionals.