DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 24, 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 January 24, 2014

Cold Weather Recovery: Operations continued to be limited as SRNS and SRR spent much of the week fixing leaks, repairing or replacing damaged equipment, and restoring systems. At H-Canyon transuranic waste remediation and fuel dissolution were on hold due to issues with the breathing air systems and lack of steam, respectively. SRNS had to curtail a planned dry run at HB-Line for the facility self-assessment team due to process water issues. SRNS continues with the repair of the fire protection systems in H-Area Old Manufacturing. Because of the extent of the damage to these systems, SRNS will likely not be able to complete the repairs before the limiting conditions for operations (LCO) expire. This would require SRNS to prepare a response plan. SRNS is also working to restore the cooling capacity of H-Area New Manufacturing before the warm weather returns and becomes a mission related problem. SRR continued to repair the failed grout line at Saltstone. A DOE/NNSA team will be reviewing the loss of steam event and developing recommendations.

Rec. 2005-1: In a September 2009 letter, the Secretary of Energy stated that SRS would begin repackaging 26 high-risk items in DOE Manual 441.1-1, *Nuclear Material Packaging Manual* – compliant packaging in FY 2011 and complete the other 81 items in 2014. However, due to lack of incremental funding, DOE did not implement this as planned. In September 2013, DOE directed SRNS to execute the implementation plan. In November 2013, SRNS reported that full M441.1-1 implementation would require 30 months and partial implementation (packaging items in M441.1-1 compliant containers) would take 20 months once DOE provided funds. This week, DOE directed SRNS to complete an assessment of 160 items to determine whether they could be exempt from M441.1-1. However, DOE withheld direction to proceed with implementation of the rest of M441.1-1 due to the lack of a finalized FY 2014 budget. The recently passed budget may have sufficient funds to begin the procurement of Los Alamos-designed SAVY 4000 containers.

The site rep reviewed the form, treatment, packaging, and surveillance of plutonium items that are not packaged in DOE-STD-3013 containers in K-Area. The site rep also reviewed how SRNS is handling authorization to ship requests for plutonium items that have identified deficiencies or shipper nonconformance reports. The review identified one gap. DOE is crediting the 9975 shipping container as the nuclear material storage package. However, the current 9975 surveillance program only includes those 9975s housing 3013 containers, not those packaged per the Interim Safe Storage Criteria (ISSC). Since the number of ISSC-compliant containers will be significantly increasing and M441.1-1 requires a surveillance program, the site rep believes it would make sense to include the ISSC 9975s in the scope of the 9975 surveillance program.

Tank Farms: SRR credits the pump pit/pump tank active ventilation system, which is HEPA filtered, to protect the collocated worker from overflow and aerosolization events. To prevent aerosolization events, SRR uses a suite of controls including maintaining the maximum ventilation flow rate below 300 cfm. As part of the annual Documented Safety Analysis update, SRR determined that the maximum flow through H Diversion Box-8 was incorrectly identified as 75 cfm. In the process of investigation this error, SRR found that the flow rate through this diversion box actually exceeded 500 cfm. Based upon an extent of condition review, SRR determined that similar conditions exist at other similar transfer facilities and declared a Potential Inadequacy in the Safety Analysis (PISA). They later upgraded it to a positive Unreviewed Safety Question (USQ). SRR is implementing compensatory controls to preclude aerosolization events in the affected transfer facilities.