

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 29, 2017

TO: S. A. Stokes, Technical Director
FROM: M. T. Sautman, Resident Inspector
SUBJECT: Savannah River Site Resident Inspector Report for Week Ending Dec. 29, 2017

Defense Waste Processing Facility: SRR filled the new melter with feed to 29 inches and then paused for the holidays. The upper electrodes are energized. Tomorrow, workers will install the pour spout insert and pouring of the first can will occur afterwards.

SRR declared a Potential Inadequacy in the Safety Analysis (PISA). Processing vessels that contain an agitator have a removable 60-gallon capacity oil drain catch tank (ODCT) attached the side of the vessel. If the contents of these ODCTs were to spill, it is uncertain whether all of the contents would reach the sump due to the configuration of trenches and tank supports. Thus there could be some localized pool fires if the lube oil ignited although it is not anticipated that this would be severe enough to prevent safety related equipment from performing its safety function. This additional fuel, however, could increase the amount of sludge that is vaporized in an organic pool fire (due to Isopar™ L in the strip effluent). In order to place the facility in a safe condition, SRR has prohibited the addition of lube oil to remote canyon and pump pit agitator gearboxes.

DOE approved the Evaluation of the Safety of the Situation for the crushed canisters in the Vitrification Building PISA. The evaluation concluded no compensatory actions were needed.

System Plan: SRNS submitted their first Environmental Management Operations (EMO) System Plan to DOE to DOE. The first plan addresses spent nuclear fuel, enriched uranium, and heavy water while the second volume focuses on surplus plutonium. The plans outline the recommended future missions for storage and disposition for both surplus plutonium and excess uranium. They also outline the use of the associated facilities and align with the liquid and solid waste system plans.

Tritium Facilities: The contractor Readiness Assessment for the Portable Z-Bed Recovery Station Startup identified one finding with a pre-start corrective action and seven findings with post-start corrective actions. (See 12/1/17 weekly report). The pre-start corrective action addressed the need to revise a procedure which could not be performed as written.

Conduct of Operations: SRNS is incorporating their new standard process for entering and exiting Limiting Conditions for Operations and mode changes into their Control of Equipment and System Status procedure. (Previously it was implemented via facility standing orders). SRR had previously implemented a similar process into their facility procedures. SRNS also plans to use the Safety Requirement Management System currently being used in SRR facilities at their facilities too. (See 11/3 and 11/10/17 weekly reports).

Savannah River National Laboratory: Earlier this Fall, SRNS awarded contracts for the new A-Area fire water tank, pump house, and equipment skid. Construction is scheduled to begin early next year once DOE approves the critical decision package.