

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 7, 2015

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 7, 2015

Health Physics: Extremity dosimetry (finger ring) is used when high doses to the hands are projected. SRNS issued the finger rings to SRR without ensuring the thermo-luminescent chip is inserted and did not detect their error until the finger rings were returned to be read. SRNS promptly told SRR that the dose could not be determined. SRR conducted a dose investigation and determined that the dose to the workers was small. SRNS is implementing corrective actions to ensure this error does not occur again.

L-Area: On Sunday, L-Area personnel were conducting operations to prepare a cask-car for shipment to H-Area. While the cask was being prepped, a radiological control operator (RCO) performed a survey of the inner containment bag that they had positioned on the railcar awaiting placement of the cask. The RCO found contamination levels at or above the levels necessary to post the railcar as a high contamination area (HCA). Because of several communication, conduct of operations, and management mistakes, the area was not immediately posted and a second RCO was directed to resurvey the containment bag and did so while wearing the required personal protective clothing for a contamination area vice an HCA. RCO later correctly posted the area as a HCA and an airborne radioactivity area.

In response to DOE feedback, SRNS also conducted a gap analysis that compared the state of readiness preparations at L-Area to the findings from recent DOE and contractor readiness reviews conducted at H-Canyon and 235-F. DOE allowed SRNS to commence their Readiness Assessment for the basin modification to receiving National Research Universal/National Research Experimental Fuel.

Saltstone: SRR resumed grouting at Saltstone after replacing the grout pump and completing other recovery actions (see 7/17/15 report). Shortly after completing a routine flush sequence during the first hour of salt processing, the grout hopper high level alarm activated. This automatically stopped the dry feed to the mixer and transitioned the feed from salt solution to inhibited water. Engineers suspect this false signal may have resulted from water leaking into a pressure switch when the bubbler dip tubes were flushed. Since this instrument provides redundant readings and is located in the hopper vapor space, SRR intends to replace the instrument and resume operations without flushing this item.

K-Area: The site rep observed a coached emergency preparedness drill involving a truck that catches fire and explodes, breaching a transuranic (TRU) waste drum and injuring the driver. Due to poor communication and coordination between the Fire Department (FD) and facility personnel, the FD drove their fire engine inside the simulated hot zone. (This also happened during a recent 235-F drill - see 5/8/15 report). The site rep identified that several of the workers at the initial scene were never surveyed for contamination. Although the firemen who put out the fire and directly handled the TRU waste drum should have been highly contaminated, the controllers did not tell the radiological protection inspectors that they found any contamination on their gloves after handling the firemen's gloves and bunker gear. The inspectors also failed to change their gloves after contact in many cases, which is not consistent with site training.