

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 13, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: M. T. Sautman and Z. C. McCabe, Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending July 13, 2018

Staff Activity: Deputy Technical Director K. Herrera was on site July 9-10 to observe a puncture drill at 235-F and visit H-Canyon, K-Area, and H-Area New Manufacturing. R. T. Davis and P. Merry discussed the Salt Waste Processing Facility safety basis with DOE-SR and Parsons personnel. Additionally, D. Cleaves and D. Minnema were onsite for resident inspector augmentation and to observe the drill, fresh air hood work, and a radiological review at 235-F.

Savannah River National Laboratory (SRNL): SRNL personnel held a Facility Radiological Action Team (FRAT) meeting to discuss an upcoming entry into the High Activity Waste (HAW) piping gallery. This evolution is part of the continued effort to characterize the amount of material-at-risk in the HAW piping gallery in order to determine if the facility Hazard Category is exceeded (see 3/9/2018 report).

K-Area: K-Area personnel identified a dripping leak on a corroded section of pipe that is part of the legacy confinement heat removal system. The pipe is directly connected to the disassembly basin and has approximately 20 inches of basin water above the inlet. If the pipe were to fail, several thousand gallons of water would drain into several clean and contaminated areas below. K-Area personnel have procured plugs for the inlets from C-Area and are planning to install them early next week. This system is isolated in L-Basin.

Solid Waste Management Facility (SWMF): SWMF personnel had a forced delay (~1 day) in the implementation of a revision to the safety basis because of a software error. The error only manifests itself when a specific combination of limiting condition for operation database changes are done at the same time. The database has been corrected and the safety basis implemented; SWMF personnel are working on fixing the software error before the next revision.

Tank Farms: SRR began the Implementation Verification Review (IVR) for operating the 3H Evaporator with leak sites. The staff observed level of knowledge interviews with engineering staff. A Limiting Condition for Operation associated with the loss of the active ventilation system involves the installation and operation of a portable ventilation system. The IVR team has requested a demonstration of the system installation since that has not been performed.

Saltstone: While spiked simulant tests did not see an increase in the hydrogen generation rate due to organics, recent tests with Tank 50 waste exhibited higher than expected generation rates. SRR is looking at the feasibility of modeling flammable gas diffusion through grout, better predicting peak grout temperatures, or taking more gas samples.

Defense Waste Processing Facility: While inserting a bubbler into the melter with a crane, the bottom tip of the bubbler contacted the melter causing the bubbler to fall off the hook. This is the second time this has happened out of sixty times due to the bubbler design and tight clearances. SRR is looking at options to reduce the frequency of dropping a bubbler.