

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 15, 2019

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 November 15, 2019

Salt Waste Processing Facility (SWPF): Messrs. David Cleaves, Don Owen, Robert Quirk, and Scott Seprish observed the contractor's Operational Readiness Review (CORR). The staff observed field evolutions, a drill, interviews, and other ORR activities.

The SWPF includes the alpha strike process (ASP), caustic-side solvent extraction (CSSX), and the Alpha Finishing Facility (AFF). SWPF receives waste from Tank Farms and sends strip effluent to the Defense Waste Processing Facility and sends decontaminated salt solution to Tank Farms and these transfers must meet the receiving facility's waste acceptance criteria. The Implementation Plan stated that the "CORR will include all SWPF systems described above, as well as actual operational performance demonstrations of those systems that will prove SWPF process flow paths." The CORR observed CSSX. While ASP was conducted to prepare feed for CSSX, it was not observed by the CORR. A tank farms to SWPF transfer was to be conducted on the simulator, but was cancelled when all CORR observers left before the transfer started. No AFF demonstrations have been planned so far. Emergency preparedness drills performed previously and this week have focused on a deflagration and contaminated, injured workers. The CORR activities observed by the staff have not included demonstrations of alarm response and other abnormal operations (e.g., process upsets) to see how operations staff would respond and possibly navigate their Technical Safety Requirements. Some of the evolutions do not appear to have been practiced much beforehand as evidenced by procedures that could not be performed as written, the proficiency of the workers, and techniques not worked out in advance.

235-F: DOE's position is that Recommendation 2012-1 can be closed because the risk to workers will be less than 100 rem after planned actions make large fires incredible. SRNS re-evaluated the risk of a seismic event. The new SRNS calculation estimates the unmitigated dose consequence to co-located workers to be 165 rem. SRNS says this risk is mitigated to 84.5 rem by crediting worker emergency response to leave the area to reduce aerodynamic entrainment from 8 to 2 hours. The co-located workers include office workers in nearby administrative buildings who do not receive any training on 235-F hazards or seismic emergency response. The analysis also assumes an 84% reduction in the release by crediting a cell and glovebox seismic impact fraction (SIF). The SIF is a concept in the transuranic waste standard that was intended to look at debris falling on waste containers. The basis for this number has not been seen by the staff.

K-Area: While disassembling a can cutter inside a glovebox, workers accidentally cracked the inner and outer layers of the ½ inch thick safety glass. No contamination was released and this panel was planned to be removed during the ongoing outage.

H-Area New Manufacturing: After a lock out/tag out (LO/TO) was removed, an operator identified that a holder was still signed on the LO/TO order. The holder was not exposed to any hazardous energy as a result of this error.