

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 5, 2018

TO: S. A. Stokes, Technical Director
FROM: M. T. Sautman and Z. C. McCabe, Resident Inspectors
SUBJECT: Savannah River Site Resident Inspector Report for Week Ending January 5, 2018

Salt Waste Processing Facility (SWPF): Parsons constructed a temporary tank farm to store waste simulant that will be used during future testing of the plant. Bitter cold temperatures caused residual process water in the system to freeze, resulting in 18 leaking isolation valves, a cracked casing in a transfer pump, and a leaking mechanical seal in another pump.

In response to previous events, Parsons is conducting a proficiency verification for key administrative tasks for their shift operations managers. (See 10/6 and 10/27/17 reports). The resident inspector (RI) observed the proficiency verification for demonstrating the proper response to a plant alarm and executing the suspension of an in-process procedure. Afterwards, the RI provided feedback to plant management that there was little demonstration and a fair amount of leading questions during the proficiency verification. Management decided to redo the proficiency verification and the conduct was significantly improved the second time.

Tank Farms: SRR declared a Potential Inadequacy in the Safety Analysis (PISA) because the credited area radiation monitors are not reliable in detecting the airborne radiation certain accidents would produce (e.g., aerosolization).

Defense Waste Processing Facility: SRR began filling canisters using the new melter last week and is currently filling up the fifth canister. SRR plans to continue filling canisters until they deplete the feed currently in the facility. Melter operations will then pause until early April to allow SWPF tie-in modifications and resolution of a PISA to complete.

H-Canyon: H-Canyon personnel have been performing an extent of condition review on the H-Canyon instrument air lines on 58 vessels since they identified the issue with the suspect liquid level reading on a vessel (see 12/1/17 and 12/8/17 reports). With approximately half of the verifications complete, H-Canyon personnel have identified leaks in seven vessels' instrument air lines, four of which provide the safety basis required purge to the vessel headspace to prevent the buildup of flammable hydrogen gas.

Savannah River National Laboratory (SRNL): In December SRNL personnel were tasked with relocating an electrical component used to control an in-cell crane. The component had the male end of an abandoned legacy Amphenol© connector exposed a few inches above the floor. SRNL personnel de-energized and relocated the component a few feet above the original position, per their work instructions. SRNL personnel then performed a post-maintenance test on the crane, which would not function. Through troubleshooting the crane, they noted that the Amphenol© connector was energized (120volts). SRNL personnel then de-energized the component and halted further work. Further investigation determined that it is likely that pins in the Amphenol© were likely energized since the mid-1960s. SRNL personnel have notified the rest of the site of their issue and are performing an extent of condition review of similar components.