

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 18, 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 January 18, 2019

Salt Waste Processing Facility: An operator chose the wrong transfer route on the Basic Process Control System (BPCS) and inadvertently transferred nitric acid to a tank rather than waste simulant. After a few minutes, he realized the desired sending tank's level was not decreasing and shut down the transfer. The acid caused a very small temperature increase when it mixed with a much larger volume of caustic solution in the receipt tank. The desired transfer route was 1 of 26 options on a drop-down menu for the pump. The operator chose the wrong route which did not require a confirmation and was not verified by another person before initiating. Workers are trained to monitor the tank level in the sending and receiving tanks, but this is not required. Material balances are conducted for transfers from an outside facility and a supervisor will check the route if they are transferring to an outside facility. Thus, there is little defense-in-depth if a worker selected the wrong route inside the facility. Parsons implemented a standing order to require personnel to verify the transfer route when there are multiple options.

Savannah River National Laboratory: Construction personnel failed to sign in on the appropriate radiological work permit (RWP) task for an evolution in a contamination area, planned to span months. The task required the area to be posted as an airborne radiation area (ARA). Radiological Protection Department (RPD) personnel did not post it as an ARA, but construction personnel were wearing respiratory protection for a potential asbestos hazard. The appropriate personnel (not including an RPD inspector assigned to this work in January) were present for the formal pre-job brief (PJB) on this portion of the work; however, it was held in October. Construction personnel did not have any additional (formal or informal) PJBs focused on this portion of the work with all personnel people involved since. Prior to starting this portion on January 10, construction personnel did discuss the work with RPD personnel, who misunderstood which part of the work package they were on and told them to sign in on the wrong task. The issue review following this event failed to discuss several appropriate lines of inquiry until the resident inspector raised questions. For instance, the SRNS personnel discussed the event as if the most recent formal PJB occurred in early December, but the documentation shows otherwise. Further, questions regarding the dates and content of PJBs led him to conclude that several individuals involved with this work did not understand the difference between an informal and formal PJB or the requirements for an adequate one.

Emergency Preparedness (EP): At the encouragement of DOE, SRNS conducted a tabletop drill focusing on the three days after the simulated seismic event that involved H-Canyon and the tritium facilities in the 2018 annual EP site exercise (see 5/18/18 report). The resident inspector agrees that accident recovery is a topic that would benefit from better guidance and practice. However, this drill could have proven more effective if prior training had been conducted. During the drill, the facilitator spent much of the time telling the players what they should be thinking about and doing at the expense of having the participants demonstrate this themselves.

Tank Farms: SRR began operating the Tank Closure Cesium Removal system.