

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 12, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: Z. C. McCabe, Resident Inspector
SUBJECT: Savannah River Site Activity Report for Week Ending October 12, 2018

Severe Weather: The SRS was closed to non-essential personnel for twenty-four hours effective 2000 Wednesday due to Hurricane Michael. SRS personnel made preparations earlier in the week and the storm passed without any significant damage or impacts.

Defense Waste Processing Facility (DWPF): Operations personnel violated the DWPF technical safety requirements (TSR) when they failed to enter a specific limiting condition of operation (LCO) for the Recycle Collection Tank (RCT) during the execution of the safety grade nitrogen (SGN) purge surveillance procedure. The surveillance evolution (an infrequent task) involved the entry and exit of several LCOs. Operations personnel discussed the evolution with DWPF operations, engineering, and safety management at length. However, these discussions focused on the strategy for entering and exiting an LCO associated with the SGN purge (a safety class back-up to the primary purge system) being inoperable. The surveillance procedure included over one hundred times where the operability of the SGN purge would change; thus, DWPF personnel determined that they would only enter each applicable condition once at the beginning and declared the SGN purge inoperable.

The procedure stated that the evolution could be performed with the RCT in any mode, so operations personnel did not transition it to standby from operations mode. The LCO specific to the RCT purge only requires a certain amount of flow; it does not specify the source of the purge (i.e., SGN or primary). However, the SGN LCO requires all vessels in operations mode to have the minimum purge requirements met through only the *primary* (emphasis added) purge system. Operations personnel did not recognize this distinction in their review of the TSRs prior this evolution. At one point the procedure directed operations personnel to isolate the primary purge system. They ensured that the SGN purge (although declared inoperable) was providing the required minimum purge for the RCT, which was not in accordance with the LCO required action. Operations personnel on the following shift recognized the error and made the appropriate notifications. Had operations personnel recognized the requirement to provide the minimum purge for the RCT via the primary purge system while in operations mode, they could have either placed the RCT in standby mode or entered a subsequent LCO condition. The subsequent LCO condition would have led them to verify the RCT was getting the minimum required purge through either SGN or primary system. Therefore, despite the violation no further physical actions were necessary to ensure safe operation of the facility. SRR personnel will perform a root cause analysis of this event.

Tank Farms: An operator incorrectly closed two valves during the execution of a procedure that stated to verify (i.e., not ensure) the valves were open which led to an inadvertent transfer at the Modular Caustic Side Solvent Extraction Unit (MCU). The operator misread the position indicators and believed he had opened the valves. Additionally, the individual reading the procedure failed to read the steps in their entirety and only instructed the other operator to “open [the valve]” as opposed to reading the “verify” steps verbatim as expected.