

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 26, 2022

TO: Christopher J. Roscetti, Technical Director
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SUBJECT: Savannah River Site Activity Report for Week Ending August 26, 2022

Defense Waste Processing Facility (DWPF): Previously, the resident inspectors (RI) conducted a walkdown of DWPF and discovered an impaired safety related alarm that did not have any local indication of the impaired status (see 7/29/22 report). The RIs brought the issue up of alarm tracking and tagging to DOE and facility management, which prompted DOE to do a self-assessment. The assessment identified four findings where DWPF is not complying with site procedures on alarm status for the control of equipment and system status. Additionally, the RI was unable to complete a full assessment of suppressed distributed control system alarms and bypassed interlocks at DWPF due to numerous inconsistencies noted during the initial review on 8/10/22. Based on multiple RI field observations and the DOE assessment, DWPF personnel have demonstrated less than adequate implementation of alarm status. Similar review of other liquid waste facilities identified additional weaknesses, albeit not as egregious.

Savannah River Tritium Enterprise (SRTE): During an annual preventive maintenance on a chiller unit, the group dispatched an Auxiliary Systems Operator (ASO) to request the shift operations manager's (SOM) permission to open an interior domestic water valve. After waiting a few minutes, a mechanic decided to open the valve before the ASO obtained proper permission. The mechanic incorrectly opened a fire inspection test valve. Within 10 seconds, the mechanic realized their error and closed the fire water valve, opened the nearby domestic water valve, and evacuated when the fire alarms went off due to activation of fire water. During the issue investigation, the question came up on why the domestic water was isolated for freeze protection preparations in July. The facility plans to move freeze protection isolations back to September and have tagged valves that are isolated due to freeze protection. There was also discussion on whether a timeout should have been called when the mechanics did not see water at the outdoor water spigot. This may have precluded the mechanic from locating and opening a valve inside the building prior to receiving permission from the SOM. Because of previous events where personnel corrected issues prior to calling a timeout (see 6/3/22 and 7/1/22 reports), SRTE is in the process of developing guidance on when they expect personnel to call a timeout immediately and when to immediately correct the issue.

Tank Farms: On August 11, construction personnel obtained approval to complete a work order for modification of a tank purge and annulus ventilation power supply, which included two single point lockouts (SPLT). Installing the second SPLT also caused several other safety related systems to alarm. Further investigation revealed that the engineer reviewing the work orders did not realize that the second point would be controlled by a SPLT vice a complex lockout with a separate review. Thus, they did not review the second SPLT. Additionally, the SOM released the work but did not adequately review the impacts of the work package. Tank Farms personnel cited multiple competing priorities as an error precursor to the SOM's error. This is the second recent event that identified the SOM's workload as a contributor. Since this event, Tank Farms implemented a work release SOM to assist with the workload, a preexisting measure that was removed during the COVID-19 pandemic.