

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 27, 2025

TO: Technical Director
FROM: Savannah River Site Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending June 27, 2025

Saltstone: Saltstone personnel used an outdated version of a procedure for grout processing, resulting in multiple failures to implement new controls. The latest revision to the procedure incorporated changes as a result of a Potential Inadequacy in the Safety Analysis (PISA) declared last year when the drainwater for Saltstone Disposal Units (SDU) exceeded the amount assumed in the accident analyses. The facility implemented a new compensatory measure, via procedure, to maintain drainwell levels below a certain height, which change based on the grout height in the SDU. The investigation into the usage of the outdated procedure revealed that it is common practice to have unofficial copies of procedures in the control room that can only be used after version verification. However, personnel did not check the version on multiple occasions, and personnel verified after the issue was identified that drainwater volumes were within the allowed limits and that no violation of PISA controls or the safety basis occurred as a result of the procedure violations.

Additionally, it was identified that personnel had failed to remove an administrative lock and properly start an agitator as part of procedure execution for pre-startup prerequisites. A control room operator (CRO) instructed the field operator to initiate steps to ensure the administrative lock for one of the salt solution receipt tank's agitator disconnect switch was removed, and that the agitator disconnect switch was placed in the "on" position. The field operator verbally confirmed that this was done, and the CRO signed off on that step in the procedure. The CRO then turned over the procedure to a second CRO, who later signed off on a step confirming that the administrative lock had been removed and the disconnect switch was in the "on" position. This sign-off was based on communications with the first CRO during the procedure turnover. Saltstone personnel identified several contributing factors to this error. For instance, the current field design of the distributed control system in the control room only indicates the variable frequency drive command status and does not reflect the actual field status of the agitator disconnect switch position. This left the CRO without accurate indication in the control room. Also, neither CRO checked the field or control lock logbooks. While these actions are not procedurally required, Saltstone personnel noted that reviewing the logbooks could have revealed that the field operator had not properly completed or documented the field actions. Personnel from the next shift discovered the issue and suspended the procedure after reviewing the logbooks. Management personnel have stopped the practice of having non-controlled copies of procedures kept in the control room. The facility has executed a conduct of operations stand down and briefing, established senior supervisory oversight for prescribed evolutions, and implemented a management control plan to monitor performance.

As a compensatory measure, until procedures are revised, shift operations managers are to verify the drainwell levels prior to startup. The resident inspectors note that a pre-job brief is not required for performing procedure prerequisite steps, which is consistent with the practice during this evolution; however, the investigation report concludes that failure to properly start the agitator could pose a risk to equipment if undetected in future operations.