

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 28, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: B. Caleca, P. Fox, and P. Meyer, Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending June 28, 2024

222-S Laboratory: Test personnel inadvertently isolated a sanitary water supply that provides water to the 222-S Laboratory, while performing fire system flow tests, causing a loss of pressure to the facility's fire suppression system. Upon noting the pressure loss, they re-established the original system lineup to restore system pressure. They also determined that a valve, which was not included in the test procedure and was closed instead of open, was blocking the planned flow path for the test. Facility management held a fact-finding meeting to identify the reasons for the valve being out of position. Based on information provided, the attendees determined that it is likely that the valve has been incorrectly positioned since it was installed as part of a system upgrade completed in 2019. That determination indicates a potential weakness in processes that support system turnover after construction, and in the processes that support the tracking of system and equipment status. Additionally, a lack of clarity regarding ownership of the valve resulted in a failure to annually cycle the valve per NFPA requirements. Cycling of the valve would have discovered the incorrect valve position. Lastly, the procedure used for the test assumed that all system valves were in their normal position at the beginning of the test without performing a confirmation valve lineup to validate the assumption. Consequently, the lack of expected redundancy, which would have prevented the pressure loss, was not discovered prior to establishing abnormal lineups to support the test. The resident inspector notes that this fact-finding meeting was managed well and was exceptionally well supported by both HLMI and HMIS managers and subject matter experts, resulting in an effective examination of the event.

Waste Treatment Plant: While Low-Activity Facility operations personnel were preparing the Melter #1 to receive the tuning feed for the first time, a component failure caused an abnormal melter power supply lineup, which required termination of the evolution. The operators responded appropriately and were able to recover one side of the power supply to restore heating for the glass pool. Facility personnel will perform repairs and then resume system tuning.

242-A Evaporator: Resident inspectors met with facility management to discuss their progress in addressing corrective actions derived from the contractor readiness assessment (RA), independent review team (IRT) assessment, and recent event investigations, which were performed after water was inadvertently sent to double shell tank AW-102 on two separate occasions (see 5/17/2024, 5/24/2024, 5/31/2024 and 6/21/2024 reports). Facility management has created a matrix of corrective actions adding additional pre- and post-start actions to the list generated after the RA. One key pre-start activity is the performance of a water run. Due to space constraints in AW-102, only one water run can be performed prior to the first evaporator campaign. Performance of this water run will preclude a water run during the DOE RA. Consequently, DOE RA team members will observe this water run alongside contractor coaches and IRT observers. As of this report, operators had successfully filled the evaporator vessel and expect to start transfers to the liquid effluent retention facility basins this weekend.