

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 18, 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 October 18, 2024

Low-Activity Waste Facility: Plant management determined that the plant, procedures, and operating personnel are ready to conduct the Cold Commissioning Management Assessment (CCMA). The assessment will be conducted by an independent team led by the BNI Chief of Nuclear Safety and Operations. The assessment will begin on October 21.

Test Bed Initiative (TBI): WRPS completed the TBI processing campaign, which processed just under 2000 gallons of tank waste (see 10/4/2024 and 10/11/2024 reports).

242-A Evaporator: If heat is lost to the evaporator, personnel are required to isolate and drain systems such as raw and fire water piping that can be damaged from low temperature events such as the one that damaged multiple systems at the facility in 2022 (see 1/6/2023 report). The site services contractor, HMIS, may not be able to respond in a timely fashion to drain fire systems during back shifts or weekends. Resident inspectors also previously noted that the procedure was unclear regarding which systems facility operators would manipulate and those that HMIS personnel would manipulate. WRPS and HMIS reached an agreement allowing WRPS operators to direct HMIS firefighters on how to drain fire piping but had not yet practiced this scenario. A resident inspector observed an operational drill held by WRPS to demonstrate this process and verify their low temperature response procedure. Based on the drill performance, operators identified several potential issues with the procedure that could delay actions to protect plant piping as well as ambiguity in expectations regarding the level of direction and support facility personnel needed to provide. The feedback from facility personnel was adequately captured and should allow necessary revisions to the procedure to prevent recurrence of freeze events.

An HFO Safety Basis Review Team completed their review of a proposed change to the 242-A Evaporator safety basis and presented their results to the HFO Senior Review Board (SRB). This change implements the use of a safety-significant temperature monitoring system for the evaporator. This control was added to preclude damage to evaporator safety systems like the damage experienced during a December 2022 freeze event (see 1/6/2023 and 1/20/2023 reports). The SRB agreed the amendment was ready for submittal to the Safety Basis Approval Authority.

222-S Laboratory: While performing operational acceptance testing of a newly installed programmable logic controller (PLC) used to control two lines of main power to the laboratory, workers discovered the unit was not functioning as expected. Because of this, personnel were concerned that the PLC could erroneously close the tie breaker and energize part of the system. This work was intended to be protected from hazardous energy by a lockout/tagout (LOTO); however, the malfunctioning PLC called into question the established LOTO boundary. Personnel suspended work and secured the area. After further investigation, management declared a LOTO violation.