

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 11, 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 11, 2024

Test Bed Initiative (TBI): WRPS commenced processing tank waste supernatant using the TBI system (see 10/4/2024 report). The team accomplished the system startup without incident and subsequent operations have been uneventful. Since startup, the system has processed and transferred over 600 gallons of liquid waste into Department of Transportation approved shipping totes. Based on delay tote radiation readings, the system is meeting design expectations and successfully removing most suspended radioactive particulate and cesium from the supernatant liquid. After completing the planned 2000-gallon campaign, WRPS personnel will draw samples from the totes for laboratory analysis to confirm the waste meets disposal criteria prior to shipping the totes to facilities in Nevada and Texas for grouting and disposal.

Low Activity Waste Facility: Plant engineers briefed plans and work sequencing for recovery of the Melter #1 east discharge seal head (see 9/20/2024 and 9/27/2024 reports), and for tuning melter feed and pour parameters. The tuning process will be closely controlled and is designed to establish confidence in container level detection systems and the container overfill protection strategy. The process will also identify melter air flow and glass pool levels that best support consistent pour rates and achieve targeted performance expectations. This effort leverages lessons learned from the Melter #1 tuning process, and the results will be used to modify operational procedures to support effective and consistent glass production.

Hanford Site: Hanford Field Office held a meeting to present the updated Hanford Site 5-Year Plan to the public. The revised plan focuses on the tank waste mission and on meeting obligations established in the recent holistic negotiation agreement. Consequently, the plan's near-term activities target work needed to start and sustain the Direct Feed, Low Activity Waste mission, as well as timely action to progress tank retrievals and implement agreed actions to mitigate the impact of leaking waste tanks. Because of tank waste mission prioritization, Central Plateau risk mitigation activities will be reduced. Ongoing work at the Reduction Oxidation Plant and PUREX Facility, as well as other risk mitigation work are being curtailed. Those facilities will be returned to a surveillance and maintenance status. However, DOE will continue deactivation work related to the 324 Building, and work that supports the restart of transuranic waste shipments and placement of cesium and strontium capsules into dry storage in 2028. DOE is receiving public comments on the plan through October 31.

242-A Evaporator: A resident inspector observed a safety basis training session for operations personnel presented by safety basis and process engineering personnel. Management developed the training to improve operator knowledge of the safety basis prior to the resumption of readiness activities (see 7/12/2024 report). The inclusion of a process engineering subject matter expert facilitated discussions about the potential mechanisms for accidents, including historical facility examples that prompted the development of additional hazard controls. Managers engaged operators during the session to encourage dialogue, which enhanced the training.