

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 2, 2025

TO: Technical Director
FROM: Hanford Site Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending May 2, 2025

DNFSB Staff Activity: DNFSB headquarters staff met with contractor and DOE subject matter experts to discuss the techniques used for dispersion modeling of material releases to support the hazard analyses performed for the High-Level Waste facility project. Participants discussed interpretation of current DOE guidance, pre- and post-processing of data for the analysis, and underlying assumptions for contractor models.

Capsule Storage Area (CSA): A DOE team started their review of operational readiness for the CSA to receive dry storage casks. The resident inspectors observed the performance of the DOE operational readiness review (ORR) with a focus on conduct of operations, safety basis implementation, and emergency response and planning.

Low-Activity Waste (LAW) Facility: WTCC held a kick-off meeting with the team that will perform the contractor ORR, which starts next week. The contractor ORR team will focus most of its efforts on areas not evaluated during the contractor cold commissioning assessment (CCMA) (see 11/8/2024 report), including WTCC's implementation and management of safety basis controls, and their implementation of the radiological control and waste management safety management programs. The team will also review follow-up items from the CCMA.

Waste Treatment and Immobilization Plant (WTP): The WTP site was placed in a take cover condition twice because of a leak in the ammonia reagent system that resulted in high ammonia concentrations near the anhydrous ammonia storage facility. The events did not result in any substantial ammonia exposures to WTP site personnel. Contractor personnel are working to identify and repair or isolate the leak source so the system can be placed back online to support the introduction of nitrated simulant feed to the LAW Facility. The nitrated feed will be used to further tune LAW Facility systems and to support completion of the environmental performance demonstration test, which is scheduled to occur prior to the start of hot operations.

Test Bed Initiative (TBI): DOE shipped TBI pretreated liquid tank waste (see 10/18/2024 report) to licensed treatment, storage, and disposal (TSD) facilities in Clive, Utah and Andrews County, Texas. TSD facility personnel will mix the 2000 gallons of Hanford Site tank waste (1000 gallons per location) with grout prior to disposal at those locations.

Central Waste Complex (CWC): CWC personnel discovered three compromised safety-significant (SS) waste containers while de-stacking stored containers and replacing wooden pallets to improve the fire protection posture within the waste buildings. Facility personnel overpacked the containers to restore required conditions. While the resident inspectors anticipated the discovery of an increased number of compromised containers during the ongoing campaign, the discovery rate is higher than expected. The discoveries indicate a need to review radiological postings for the waste storage buildings and the surveillance procedures for the SS containers.