DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO:	Acting Technical Director
FROM:	Hanford Resident Inspectors
SUBJECT:	Hanford Activity Report for the Week Ending February 7, 2025

242-A Evaporator: A DOE Readiness Assessment (RA) team presented the findings and observations of its assessment to the contractor and field office personnel (see 1/31/2025 report). The team determined that WRPS had demonstrated readiness of the facility to operate and that HFO management demonstrated their readiness to perform oversight of the evaporator's operations, contingent upon resolution of the team's findings. Since the suspension of the assessment in July, the team noted significant improvements in procedures, operations, and plant equipment (see 7/12/2024 report). The team identified three pre-start findings, including that the facility does not have a compliant lightning protection system or compensatory measures to protect facility equipment. Among the four post-start findings, the RA team observed continued weaknesses in conduct of operations and emergency preparedness. The team noted that where deficiencies were observed, such as the emergency preparedness drill and maintenance work, personnel were staffed out of the tank farms central shift office rather than the evaporator. Evaporator operators had comparatively strong conduct of operations and facility knowledge.

High-Level Waste (DFHLW) Facility: A resident inspector observed a DFHLW Facility safety design integration team meeting that reviewed presentations on the current revision of the DFHLW criticality safety evaluation report (CSER) and the development plan for the chemical safety management program. The CSER study concluded that a criticality event is not credible, given controls on the waste feed enforced through the waste acceptance criteria. However, these controls require sampling of double-shell waste tanks to ensure fissile mass parameters are below specified limits. The resident inspector conveyed his concern that obtaining representative samples of dense fissile particles from the tank farms may be technically unachievable, based on past studies of heavy particle behavior and high uncertainty in waste tank inventories. Additionally, the resident inspector noted that verification of the waste acceptance criteria will only occur in the tank farms and not upon receipt at the HLW facility.

Central Waste Complex (CWC): In preparation for expedited shipments of transuranic (TRU) waste containers to the Waste Isolation Pilot Plant (see 3/29/2024 report), CPCCo is planning to establish an outdoor loading capability. A resident inspector attended two hazard evaluation sessions. Certified 55-gallon TRU drums would be loaded into 14-pack assemblies inside an existing waste storage building, then transported by forklift outside where the assemblies would be placed into TRUPACT-II containers for offsite shipping. The sessions were well organized and attended by knowledgeable facility personnel and subject matter experts.

Waste Treatment Plant (WTP): A resident inspector observed the classroom and practical demonstration of the radiological worker II initial course for WTP employees. The instruction was generally effective, though the course format, using computer-based training prior to the classroom portion, limited student engagement. The resident inspector shared their observations with the instructor and radiological control management.