

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 28, 2025

TO: Technical Director
FROM: Hanford Site Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending February 28, 2025

Low-Activity Waste (LAW) Facility: Each LAW Facility melter has eighteen bubbler assemblies that agitate the glass pool to enhance melter output. Because of the corrosive nature of the glass pool, plant personnel must periodically replace the bubblers. Without controls, this work would expose facility personnel to heat, chemical, electrical, fall, and radiological hazards. The plant was designed with equipment that workers use during bubbler replacement to eliminate the electrical hazard and provide physical barriers between them and other hazards. However, because of design flaws and operability issues, plant personnel have encountered significant difficulty in successfully performing bubbler replacements using the equipment. As a result, most of the bubblers are past due for replacement. To resolve the current problem, plant management has decided to perform the bubbler work using an expanded set of administrative controls and increased reliance on personal protective equipment instead of using the physical barriers.

A resident inspector (RI) spoke with radiological control personnel on their recent efforts to improve the effectiveness of proficiency demonstrations used for training in simulated radiological areas (see 2/21/2025 report). Based on feedback from workers and the RI, craft-specific personal protective equipment to be used in the LAW facility will be used during proficiency demonstrations of electrical and hot work in radiological areas. The RI also observed a week-long proficiency demonstration of scaffolding work in radiological areas. The Radiological Control technicians (RCTs) noted to the RI that the original script did not capture the key differences in this activity and had made several enhancements that were being fed back into both proficiency development and LAW facility operations. The RI observed that both RCTs and workers were actively engaged in improving the activity.

Central Waste Complex: Facility personnel previously discovered a waste box at the outside storage area with a fissile mass value exceeding the container limit (see 11/24/2025 report). After review, they determined the fissile material is more concentrated in some areas than what is assumed in the Criticality Safety Evaluation Report (CSER). Because of this circumstance, the current CSER is inapplicable and, therefore, a technical safety requirement specific administrative control related to criticality safety was not met. CPCCo analysts have further concluded that a new CSER will be required to address the mass limits and controls for this container. Facility personnel are developing a timely order to address operational restrictions and inspection frequency to ensure double contingency is maintained.