

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 18, 2025

TO: Technical Director
FROM: Hanford Site Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending April 18, 2025

Low Activity Waste (LAW) Facility: An independent contractor team completed a joint Management Self-Assessment (MSA) and Independent Verification Review (IVR) for the LAW Facility. The primary focus of the team was to review areas not entirely covered under the previous Cold Commissioning Management Assessment, such as safety basis implementation, radiological protection, and radioactive waste management (see 10/25/2024 and 11/1/2024 reports). The team found that personnel were knowledgeable and engaged, and radiological program demonstrations used a conservative approach. The team identified cases where key documents were missing elements or not approved. They also identified gaps in the training of personnel required to understand and implement facility technical safety requirements (TSRs) and incomplete documentation of compensatory measures for a positive Unreviewed Safety Question Determination (USQD) in the facility's safety basis. Finally, the team noted multiple instances of documents supporting TSRs either being incomplete or not adequately controlled to protect assumptions in the safety basis. Conditional upon the completion of four pre-start findings, the LAW facility will have its contractor operational readiness review in May.

The resident inspector notes that there was also a substantial HFO presence observing LAW facility operations independently from the MSA/IVR team. The HFO team focused on field execution of work and radiological control implementation. The resident inspector and HFO personnel observed instances where radiological control technicians were tasked with performing survey activities without being notified of new procedures, violations of radiological boundary control, and issues with tabletop work packages that reflected a lack of As Low As Reasonably Achievable principles for radiological work planning. The observations indicate weaknesses in radiological control performance not noted during the MSA/IVR team's closeout brief.

Low-Level Burial Grounds: CPCCo completed their root cause evaluation of the event involving a worker's leg sinking into a subsidence in the burial grounds (see 12/20/2024 report). The root cause was identified as inadequate processes to ensure workers are protected from known hazards and risks when observing and evaluating subsidences. Going forward, workers will be prevented from walking on top of active trenches, and alternative methodologies, such as drone surveys, will be evaluated to determine whether waste has been exposed in a subsidence.

Tank Side Cesium Removal (TSCR) System: H2C engineers previously identified an error in a structural calculation used to show that the TSCR enclosure can fulfill its safety functions during natural phenomena hazard events. A contractor review committee determined that the error represented a potential inadequacy in the safety analysis (see 3/28/2025 report). A revised calculation has determined that the TSCR system enclosure will still perform its required safety functions with the additional loading that was missed in the previous calculation, resulting in a negative USQD. The applied compensatory measures will remain in place until HFO reviews the USQ determination results and approves their removal.