DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 3, 2026

Hanford Site Resident Inspectors Activity Report for Week Ending April 3, 2026

Tank Farms: A resident inspector attended an H2C Job Hazards Analysis and team planning meeting as part of a broader observation of Hanford Site work planning and control processes. The scope of the work was to install supports for sample lines on the SY tank farm exhauster. The work activity was classified as a level 3 work order, which is lower-risk work that still requires simple written instructions and a limited set of controls. The resident inspector notes that the work planner came prepared, attendees included relevant subject matter experts and craft workers required to perform the work, and the hazards and controls selected appeared appropriate for the scope of work. Instead of a traditional walkdown, the work planner used a combination of photos of the as-found condition and photo mapping of the work area to perform a virtual walkdown at the meeting. H2C has made scans of many of their facilities to aid in work planning and reduce the number of walkdowns required for lower-risk work and includes functions like photogrammetry to measure clearances in work locations.

High-Level Waste (HLW) Facility: A resident inspector observed a Safety Design Integration Team (SDIT) meeting to discuss the results of a hazards analysis of proposed alternative controls for the Uninterruptible Power Electrical (UPE) system that powers several controls, including the C5 Ventilation (C5V) confinement system fans. BNI engineers were asked to evaluate the consequences of only powering C5V fans from emergency diesel power to reduce the UPE size. Without C5V ventilation to maintain differential pressures inside the HLW confinement system, power loss in certain plant configurations or power loss induced by an earthquake can cause a spray leak that exposes facility workers to high radiological and chemical consequences. The BNI analysis indicated that differential pressures would be restored well before releases exceeded high-consequence thresholds. The resident inspector and SDIT participants questioned the decision to propose including a performance requirement for the emergency generators to restart within the amount of time their analysis estimated a worker could hypothetically be exposed to a high consequence, as well as additional operational costs from not having uninterrupted power to maintain differential pressures. The SDIT generally agreed with the approach to remove UPE power for the C5V fans but advised their nuclear safety engineers to remove the time-based performance criteria for a consequence-mitigation criterion.

100-K Area: The contractor held an in-progress ALARA review (IPAR) to discuss a failure to follow radiological control requirements while performing heavy equipment maintenance. The control requires that when previously inaccessible areas are exposed, they be controlled as a contamination area until a radiological control technician (RCT) can perform surveys to ensure contamination levels are safe. In this case, work was performed on an excavator hub that was exposed by the removal of the track. Radiological control personnel found no contamination on the equipment or individual. The IPAR had excellent participation from all the workers involved. Participants discussed contributing causes including multiple work activities being performed simultaneously, limited RCT availability, adequacy of procedures, inadequate coordination between the field work supervisor and RCTs, and an inadequate pre-job brief of the specific work scope and radiological requirements.