

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 26, 2025

TO: Technical Director
FROM: Hanford Site Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending September 26, 2025

242-A Evaporator: DOE and H2C briefed the Board on the status of installing automated seismic and fire hazard controls at the 242-A Evaporator, which are necessary to protect workers from flammable gas deflagrations or detonations, as well as on the designed reliability of the automated seismic hazard control. The topics respond to concerns the Board previously communicated to DOE in letters dated 06/27/2023 and 06/12/2025. H2C reported that ongoing design efforts are consistent with the schedule previously provided to the Board and that adequate funding is available to support ongoing efforts. In response to a question from the Board, the H2C briefer stated that H2C was working to accelerate the procurement and installation of the systems but could not commit to an earlier completion because of the evaporator operating schedule, which supports the site's liquid waste treatment mission. H2C further stated that, while the design of the seismic dump control did not achieve a SIL-2 performance level, the system is adequately reliable with a designed capability that predicts one failure in every 57 demands on the system. They also cited the presence of additional non-independent and uncredited backups as a reason for considering the design adequate. DOE briefed the Board that it does not consider the absence of defined reliability requirements for safety instrumented systems not related to new facilities or major modifications an issue because DOE reviews and approves all safety analyses and related changes prior to implementation of the controls.

Under certain circumstances, operators must increase the minimum ventilation flow rate for a double shell tank (DST) while adding waste, water, or chemicals to control flammable gases that may be released during the additions. This action is defined in a Tank Farm technical safety requirement (TSR). After completing the transfer of waste to a DST for an evaporator campaign, operators terminated the increased ventilation flow before completing all required procedural actions. H2C management determined that this error is not a TSR violation because the TSR does not explicitly state when the increased flow can be terminated. A subsequent fact-finding determined that the applicable procedures lack clarity, and the issue was exacerbated by inadequate activity control.

Waste Encapsulation Storage Facility (WESF): The contractor readiness assessment (CRA) team completed their assessment of CPCCo's readiness to move cesium and strontium in storage capsules to dry cask storage. While they determined that eight of the nine CRA objectives were met, the "Operations and Procedures" objective was not met. The team's findings included instances of procedure noncompliance, procedure discrepancies such as inappropriate action verb use, steps with multiple actions, inadequate formatting, and incorrect references. The team also noted that the implementation of conduct of operations at the facility is not fully effective, and there were instances of work being performed by individuals who were not fully trained. The CRA team stated that the operations staff had adequately demonstrated readiness, pending resolution of the pre-start findings and development of a corrective action plan for the post-start finding.