

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 31, 2023

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca, P. Fox, N. Huntington, and P. Meyer, Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending March 31, 2023

Hanford Site: The DOE Chief of Nuclear Safety was onsite to meet with contractor and field office personnel to discuss ongoing high priority nuclear safety work. The resident inspectors participated in walkdowns at the Solid Waste Operations Complex (SWOC) and the Waste Treatment Plant High-Level Waste (HLW) facility. They also observed sessions related to resolution of issues with the fire protection systems at SWOC, and several sessions related to HLW. Additionally, they participated in discussions regarding DOE and contractor actions related to the July 19, 2022, Board letter on the 242-A evaporator's proposed safety strategy, and the February 28, 2023, Board letter on safety basis integration of the Direct-Feed Low Activity Waste project.

105-KW Basins: Resident inspectors observed a Hazard Review Board (HRB) that reviewed three work packages developed to support pumping filtered basin water onto tanker trucks to dewater the 105-KW basins. The HRB members questioned what criteria were being used to determine when to change filters, requested a mock pre-job briefing, and discussed what process will be used to sample water pumped from the basins. Two support contractors representing the DOE field office noted that the work instructions appeared to function as procedures and not work instructions, and that there were inconsistencies in the action limits of the radiological work permit (RWP). Facility personnel stated that the RWP presented to the HRB was flawed and that a replacement was already under development to improve the content and format. The HRB noted this pending change and approved the three work packages with comments.

Tank Farms: WRPS provided an update on the status of actions for verifying the integrity of the double-shell tank transfer lines (see 6/3, 7/1, and 7/29/2022 reports). Ultrasonic testing (UT) of the eight slurry line encasements is complete, and three sections of transfer line encasements were cut and sent for further analysis. Other planned activities include UT of the exposed primary pipe (external), visual inspection and UT of the internal primary pipe, air drying the encasements (see 2/10/2023 report), hydrostatic testing of the primary pipe, and restoration of three encasements and the excavated lines.

242-A Evaporator: A resident inspector observed a Corrective Action Review Board (CARB) meeting to review and approve the apparent cause analysis (ACA) report, including corrective actions, for the issue of removing a section of pipe and components that were under lock and tag in the 242-A Evaporator (see 10/14/2022 report). DOE facility representatives were also in attendance. After review of the analysis and suggested corrective actions, participants discussed other potential causes, additional condition reports that should be included, and additional details that were identified during the causal analysis. DOE participants identified that the provided apparent cause, did not go deep enough to identify the basic underlying cause, that is, what process failed that caused this issue. The chair of the CARB agreed that a more in-depth analysis is required and rejected the ACA report. Once this action is complete, another CARB meeting will be conducted.