

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 8, 2024

**TO:** Timothy J. Dwyer, Technical Director  
**FROM:** B. Caleca, P. Fox, N. Huntington, and P. Meyer, Resident Inspectors  
**SUBJECT:** Hanford Activity Report for the Week Ending March 8, 2024

**242-A Evaporator:** DOE, with WRPS support, met with the Board and provided the status of ongoing work related to resolving the Board's concerns regarding 242-A evaporator hazard controls for fire and seismic events, as detailed in the Board's July 19, 2022, letter.

WRPS is conducting a management self-assessment (MSA) to evaluate their readiness to restart the evaporator, which has been shut down since 2019. The MSA team is performing their review using an approach similar to a readiness assessment but is also providing feedback and coaching to facility personnel. The resident inspectors observed the MSA kickoff, interviews, team meetings, and an operational drill, which required response to a pump vibration alarm. WRPS intends to conduct a contractor readiness assessment near the end of April.

WRPS Nuclear Safety held a control decision meeting to discuss and select the required safety integrity level (SIL) for a seismic detector that they will use as the input for a new safety instrumented system (SIS) that will place the evaporator in a safe condition in the event of a seismic event. The control decision team determined that, based on the hazard parameters, SIL 1 provides an adequate level of performance. The decision also noted that the method will use two detectors and the SIS action will require detection and input by both detectors.

**Building 324:** A resident inspector observed an emergency preparedness drill at Building 324. The drill scenario simulated the detonation of a suspicious package, which ruptured a radioactive waste package. Facility response was prompt, though the resident inspector noted poor contamination control during the doffing of the firefighter's personal protective equipment. The drill controllers also noted the contamination control deficiency and injected a further spread of contamination to multiple individuals wearing personal protective equipment and to the personal clothing of a firefighter.

**Waste Treatment Plant (WTP):** A resident inspector observed a "Path to Green" meeting. The meeting is designed to leverage system health monitoring and reporting, performed by system engineers, to support facility operations. This was the third meeting held under recently established processes. System engineers provided valuable information, and most had a good awareness of the impact their systems have on plant performance. However, better attendance by the maintenance and planning organizations would have made the meeting more useful. The resident inspector also noted that the system engineers would benefit from a better understanding of plant procedures for recording and managing system/equipment deficiencies through resolution. Lastly, the discussion mostly focused on repair or resolution of existing equipment issues. This focus is appropriate for the current plant status. However, to gain maximum benefit from the system engineering approach, facility management should consider eventually transitioning to a more forward-looking methodology that also includes review of operational data, analysis of equipment and system operational performance, and the identification of approaches/changes that are designed to provide overall operational and safety improvement.