

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 25, 2023

TO: Timothy J. Dwyer, Acting Technical Director
FROM: B. Caleca, P. Fox, N. Huntington, and P. Meyer, Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending August 25, 2023

Solids Waste Operations Complex: The contractor determined that the Potential Inadequacy of the Safety Analysis process was inappropriately applied to the situation that led to inoperable safety significant fire protection systems (see 2/3/2023 report). Rather, the conditions should have been formally defined as a programmatic breakdown. Subsequently, the contractor canceled the Unreviewed Safety Question Determination and declared a Technical Safety Requirement (TSR) violation had occurred because the fire protection safety management program, which is a TSR administrative control, failed to ensure operability of the systems.

242-A Evaporator: Contractor and DOE field office personnel held a pre-brief meeting with the DOE-EM Chief of Nuclear Safety and the board's staff to discuss the current proposed approach and timeline for resolving the Board's concerns regarding 242-A evaporator hazard controls for fire and seismic events, as detailed in their letter dated July 19, 2022.

Tank Side Cesium Removal (TSCR): Two spent ion exchange columns (IXCs) were moved to the IXC storage pad. To date, there are six spent IXCs on the pad. A resident inspector observed the IXC movement, which was methodical and well executed. During removal of the IXC column in Bay B, a small amount of liquid was found at the base of the IXC. No contamination was found. Engineering and operations identified some water staining on the upper corner of the door near the weather strip and some additional staining on the floor, potentially indicating rainwater ingress. In addition, resident inspectors observed replacement of a vent hose, which uses a coupler, and the relocation of the pressure safety valve. The replacement is an effort to reduce the potential for future leaks (see 3/24 and 7/7/2023 reports). WRPS expects to complete the modifications in all three bays by the middle of next week.

Hanford Site: HMIS completed actions to restore NFPA code compliance of Hanford Fire Department ladders, aerial devices, and pump apparatuses and lifted the associated stop work (see 8/18/2023 report).

Tank Farms: Since moisture and corrosion were found in transfer line encasements (see 3/31/2023 report), WRPS is proceeding with efforts to evaluate the integrity of the transfer line piping. The resident inspectors met with WRPS engineering staff to obtain an overview of equipment that will be used to perform ultrasonic and video inspection of tank farm transfer line primary piping. The resident inspectors noted that the operations team was engaged learning the equipment's operation and capabilities prior to its use in a contaminated environment. WRPS engineers are using the team's feedback to improve equipment design and functionality.

Hanford Advisory Board (HAB): A resident inspector observed the HAB's meeting covering several activities at the site. DOE and CPCCo presented the latest data and proposed cleanup approach for Building 324 and updates to tank waste retrieval and processing; the HAB also discussed draft advice on transuranic waste management.