

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 1, 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 September 1, 2023

Waste Treatment Plant (WTP): While performing a safe to work check prior to performing maintenance on a mechanical system, workers determined that two valves were shut instead of in the open position required by the mechanical safety instruction. The open position was specified to provide a vent path to prevent re-accumulation of hazardous pressure in the work area that might occur because of isolation valve leakage. While resolving the valve position issue per facility procedures, the field work supervisor consulted with the head of the lockout/tagout (LOTO) organization who further noted that isolation valves for the work were correctly identified and controlled by the LOTO, but the valves that prevented pressure re-accumulation were not. During an event investigation meeting following the event, it became clear that many individuals did not understand the requirements for controlling the configuration of vent paths that protect workers from pressure re-accumulation in a system. Based on the findings, management directed a broad extent of condition check of existing and in-process LOTOs to ensure the condition did not exist in other work areas. Management is also reviewing procedures and training to resolve the knowledge deficiencies that resulted in this event.

A resident inspector observed an operations drill at the Low Activity Waste Facility that simulated a calibration deficiency in instrumentation normally required for safe operation of the melters. The drill team determined that the crew's performance in the areas of procedure use and control, command and control, and control area activity did not meet the objectives, and the crew's performance was below expectations. The resident inspector noted that the drill team's control of the scenario was good, and their evaluation was appropriate, resulting in effective training for the crew.

Resident inspectors met with plant engineering management personnel to discuss the status of implementing the system engineering program, including the training of system engineers. The program is expected to fulfill the requirements identified in DOE O 420.1C, *Facility Safety*, Chapter V, as well as requirements that support chemical safety implementation as defined under 29 CFR 1910.119, *Process Safety Management of Highly Hazardous Chemicals*. The discussion allowed the resident inspectors to gain a better understanding of the program and how information obtained under the program will be used by plant management to support safe and reliable plant operations. Plant engineering system engineers are currently developing the first set of system health reports, which they expect to complete this month.

PUREX: The contractor Hazard Review Board (HRB) met to evaluate the chemical neutralization of legacy chemicals and demolition of the 203A pump house located to the north of PUREX. The field work supervisors and work team were prepared and engaged in discussing the work activity, potential hazards, and controls. Engineering was also in attendance and provided specific information on the water levels with a reference to identifiable equipment heights in the facility. The HRB approved the work package with comments.