

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 14, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: B. Caleca, P. Fox, and P. Meyer, Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending June 14, 2024

Tank Farms: A resident inspector observed portions of a WRPS work activity performed to remove a long-length pump from double shell tank (DST) AP-102. The work team used a new spray ring and shielding deployment device, which were designed by WRPS engineers. The new spray ring is easier to install and more effective in removing tank waste from the pump surface during its removal from the tank. The shielding deployment device zips a flexible shielding sleeve over the pump as it is removed from the tank by crane. In addition, the work team used a high-resolution camera and a robotic arm with a drill fitting to drain hydraulic oil from the pump prior to removal. These features addressed several issues previously encountered while removing long-length pumps from DSTs. The team also performed mockup activities using the new equipment prior to its use in the field; as a result, the job was noticeably faster. These actions substantially reduced worker dose compared to similar past work.

The retrieval of waste from single-shell tank AX-101 was completed this week. The retrieval operation involved 37 batch transfers, with a waste transfer volume of approximately 365,000 gallons. This completes the retrieval operation in the AX farm, which is the second farm to be completed. The focus of retrieval operations will now move to the A-Farm.

105-KW Basin: After encountering unexpected low performance of the original resin beds used during basin dewatering (see 1/26/2024 report), facility personnel completed necessary resin bed and system modifications, and worked with WRPS personnel to adjust the Liquid Effluent Retention Facility (LERF) waste acceptance criteria to allow receipt of the basin water at LERF. This week, a tanker truck delivered the first batch of basin water to LERF. CPCCo intends to start with a one-shift operation delivering two to three truckloads of basin water per day to LERF. After ensuring reliability and repeatability of their process, they will add a second shift and deliver four to six truckloads per day, resulting in completion of the dewatering effort sometime in August. Once the basin is dewatered, CPCCo will fill it with grout to allow eventual removal of the basin and basin structure.

324 Building: The CPCCo Emergency Preparedness (EP) organization conducted a drill to evaluate the proficiency of 324 Building facility emergency response organization (FERO) personnel. The scenario presented to the FERO team simulated an aircraft crash into the building and subsequent fire resulting in a facility evacuation. As presented, the scenario was challenging and allowed a complete and substantive evaluation of the FERO team's capability. The drill team's control of the scenario was professional and, based on the results of the hotwash, their evaluation of FERO performance was accurate. The FERO team effectively coordinated the actions of facility personnel resulting in a timely and effectual response to the event. Overall radiological control performance was well above the average performance observed by the resident inspectors during other recent onsite EP drills. However, the drill did identify a need for focused training for doffing assistants on operation and handling of supplied air equipment.