DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 19, 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 July 19, 2024

Staff Activity: R. Csillag, A. Hutain, E. McCullough, and D. Montierth were onsite to review conduct of operations at the Low-Activity Waste Facility.

Tank Farms: WRPS completed preparations and declared readiness to start waste retrieval from single-shell tank A-101. Retrieved waste will be sent to double-shell tank AP-101. A WRPS retrieval team subsequently began operations by adding 10,000 gallons of water, which is being recirculated to dissolve the saltcake material to support its transfer to AP-101.

Emergency Preparedness: The HMIS began an apparent cause analysis to address a finding from the fiscal year 2024 sitewide emergency exercise (see 5/17/2024 report). The exercise evaluation determined that "information management was less than adequate" with seven examples given, including the facility emergency response organization not knowing the number and status of injured and deceased personnel until late in the exercise, data from the emergency operations center such as plume maps and graphic information systems snapshots not reaching field personnel, and issues with the format and content of the Hanford Emergency Notification Form. Performance assurance and emergency preparedness personnel at the meeting noted the broad scope of the finding but had adequate knowledge of the exercise to discuss each example.

High Level Waste (HLW) Facility: A resident inspector observed an HLW Facility safety design integration team (SDIT) meeting to discuss the proposed changes to the safety design strategy. This includes changes to the laboratory facility safety basis and associated controls for handing HLW samples, the chemical safety management program, and screening criteria for standard industrial hazards, shielding performance criteria, and implementation of guidance from hazard analysis workshops on topics such as system interlocks and hydrogen controls.

Waste Encapsulation and Storage Facility (WESF): A resident inspector observed an on-the-job training (OJT) work evolution involving testing a pool cell leak detector. The testing involved adding deionized water to the sump while monitoring the alarm panel. Once the maximum amount of water was added without obtaining an alarm response, the field work supervisor (FWS) notified the design authority, per the procedure, who joined the work team. The conditions required for the leak detector to function properly were discussed with possible actions to restore functionality. The FWS noted these actions would require a change to the procedure and, therefore, could not be performed. Subsequently, the design authority recommended making an additional water addition. When no alarm response resulted, a work request to troubleshoot the inoperable leak detector was entered. The OJT was completed by performing a successful test on a different pool cell sump. The resident inspector provided feedback to the facility manager and engineering manager regarding best practices for OJT and the effort to troubleshoot the faulty leak detector. His feedback was well-received, with the facility manager acknowledging the importance of rigorous OJT.