

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 1, 2021

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca, P. Fox, and P. Meyer, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending October 1, 2021

Waste Treatment Plant (WTP): WTP personnel are performing a pre-startup safety review (PSSR) of the ammonia reagent system. Substantial quantities of ammonia will be used in the Low Activity Waste Facility off-gas system as part of the treatment process that ensures that the gas is environmentally compliant prior to its release through the stack. 29 CFR 1910.119, process safety management of highly hazardous chemicals, requires the performance of a PSSR prior to introduction of highly hazardous chemicals into a process. The PSSR is designed to ensure that systems, procedures, and personnel are ready to support safe use of the hazardous chemical. As part of their ongoing review, the WTP contractor brought in an independent team to review the performance of the PSSR. Their review was thorough and useful as they identified significant findings that the WTP contractor will need to address prior to confirming their readiness to receive ammonia into the system.

A resident inspector observed the performance of a loss of WTP site power drill. The drill was intended to support on-shift crew training in actions necessary to establish a safe and stable condition if power is lost to the WTP site during melter operation; the drill was also intended to support further training on recovery actions needed to resume normal operations once power is restored. However, the drill was terminated early when anomalies that were not related to the drill occurred at the effluent management facility. Because of the early termination, the intended objectives were not met and the drill will be re-performed. The circumstances revealed a need for improved coordination when simultaneously conducting operational drills and test activities.

Plutonium Finishing Plant (PFP): Contractor personnel completed their down-posting of the large radiological buffer area around the PFP demolition site. The central plateau contractor will continue to collect survey data and will gradually reduce the footprint of the remaining controlled radiological areas as conditions allow. They also completed characterization of the slab areas and began placing the clean soil cap over the building footprint.

Tank Side Cesium Removal System (TSCR): DOE started their assessment of readiness for TSCR startup (see 09/03/2021 report). The team's primary activities this week included an emergency response exercise, a significant number of interviews, and observation of routine, less hazardous activities. The team will observe several higher hazard activities next week.

Radiochemical Processing Laboratory (RPL): The resident inspectors performed a walkdown of the RPL and discussed ongoing activities, expected safety basis changes, and facility condition with the facility and building managers, and the DOE facility representative. The facility is well maintained; the walk down did not identify any issues.

Hanford Site: The resident inspectors visited the site emergency operations center (EOC) to review current facility condition and discuss recent changes in EOC staffing and operations with site emergency management personnel. The EOC staff personnel are knowledgeable, and they provided valuable information during the discussion.