DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 28, 2022

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 January 28, 2022

Tank Side Cesium Removal (TSCR): After professionally resolving some minor operational and documentation issues, the contractor began processing waste using the TSCR system. As of Thursday afternoon, 12,466 gallons of treated waste had been transferred into tank AP-106. The process continues to operate smoothly. In all, the startup has been successful. Contractor personnel expect the first ion exchange column changeout will occur near the end of February.

T-Plant: The central plateau contractor placed the 24th and final Sludge Transport and Storage Container (STSC) from the Sludge Treatment Project into a cell at T-Plant. This STSC contains sand filter media from the 105-KW Annex Facility and marks the end of sludge treatment operations. A resident inspector observed the final preparations of the STSC for the critical lift from the truck bay to its storage space in one of the canyon's process cells. Resident inspectors also observed the critical lift from the control room and met with the operations manager and facility representative in training. During the evolution the work crew performed to the procedure in a professional manner and no issues were observed. This is a significant milestone for the site; operations at the 105-KW basin are now focused on removal of debris and equipment from inside the basin prior to its dewatering and demolition.

105-KW Basin: The contractor intends to dispose of waste generated during the demolition of the 105-KW basin at the Environmental Restoration Disposal Facility (ERDF). However, part of the waste material currently held in the basin may not meet ERDF acceptance criteria. Consequently, the contractor will need to sample and characterize higher dose material to ensure that it is acceptable for disposal at ERDF. To support this effort, the contractor will segregate the higher dose material from other basin materials and place it in vertical pipe casings (VPCs). The material in the VPCs will be grouted, ground with an auger so that the material is blended with the grout, and then sampled to provide a characterization basis. The contractor expects this process to result in conditions that will allow most of the material to be packaged and transported to ERDF for compliant disposal. The VPCs were previously placed in the basin to support this work. This week, the contractor's Hazard Review Board (HRB) met to evaluate readiness to start the transfer of high dose debris material to the VPCs. They determined that the work instructions contained appropriate controls and the work team was prepared to support the work. The resident inspector noted that the members of the HRB conducted a professional evaluation and the Field Work Supervisor demonstrated exceptional knowledge of the work activity and hazard control set.

Waste Treatment Plant (WTP): ORP subject matter experts completed an assessment of the WTP quality assurance programs. The review focused primarily on procurement document control; control of purchased items and services; identification and control of items; handling, storage, and shipping; quality assurance records; and program audits. The team determined that, with minor exceptions, the contractor's programs are compliant with relevant requirements. Overall, the contractor's performance demonstrated substantial improvement compared to previous assessments in the evaluated areas.