

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 6, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending September 6, 2019

105KW: Facility personnel completed end point measurements of the last Engineered Container Removal and Transfer System (ECRTS) container of basin sludge material to confirm no additional retrievals are required. As a result, Sludge Transportation and Storage Container number 20, which is scheduled for early next week, will be the last sludge delivery to T Plant.

Tank Farms: Last week, the Tank Farms Operations Contractor declared their readiness to start waste retrieval from single-shell tank (SST) AX-102 and waste retrieval operations started this week. The existing AX-102 waste, which is mostly solid, is mobilized using robotic sluicing equipment to apply hot water to the waste. The resulting solution is being pumped to and stored in double-shell tank AZ-102. Since the waste in AX-102 is mostly saltcake, retrieval efficiency has been high with nearly 30% of the AX-102 waste mobilized and transferred on the first day. However, retrieval will be more difficult once work begins on the less soluble tank heel. The recently installed retrieval equipment and related support equipment is performing as expected. Based on the confidence gained from these results, Tank Farm Operations Contract management has authorized installation of retrieval equipment into SST AX-104, which is the next tank in the AX tank farm retrieval sequence.

Waste Treatment Plant (WTP): DOE ORP communicated their resolution for Board safety concerns related to an inadequate design basis for erosion and corrosion wear of WTP vessels and piping systems. DOE's resolution includes modified erosion wear allowances and process changes that are designed to ensure safe operation of systems within the High Level Waste and Pretreatment facilities throughout their design life.

Building 324: Contractor management identified weaknesses in communication, formality of operations, and configuration management of the drill rig following the loss of water event to the drill rig during pilot hole drilling (see August 30, 2019 report). Management has added a pre-start checklist to the pilot hole drilling work instructions to ensure that water is available on the drill prior to starting drilling activities. A resident inspector attended the pre-job briefing for restart of drilling, and noted that worker expectations for peer checks and reporting any abnormal conditions were emphasized by the field work supervisor.

Waste and Fuels Management Project (W&FMP): Workers for Mission Support Alliance (MSA) moved a piece of construction equipment without notifying the facility's shift office or having it radiologically surveyed as part of property management procedures. The bucket was located at Trench 34, which has signage at the gate to contact the facility's shift office prior to entry and that only authorized personnel were allowed to enter. During a critique, the MSA workers believed their work order served as authorization and did not look out for non-radiological signage since the gate to the facility was open. W&FMP management reiterated the expectation to read all signage entering a facility and that authorization comes solely from the shift office.