

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 2, 2019

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** B. Caleca and P. Fox, Hanford Resident Inspectors  
**SUBJECT:** Hanford Activity Report for the Week Ending August 2, 2019

**Plutonium Finishing Plant (PFP):** While performing demolition and size reduction work near the location of tunnels beneath the PFP 234-5Z building footprint, an excavator tracked over tunnel areas that were not backfilled. This is not compliant with the demolition work procedure which requires breaching of the tunnels, removal of piping, and insertion of backfill prior to letting excavators within a specified distance of the tunnels. Project management subsequently met with the work crew and reinforced expectations regarding the need to track changes to conditions in the field and to ensure procedural requirements are met during demolition.

**Tank Farms:** WRPS held an event investigation meeting to collect facts related to a valve misalignment that occurred while testing a water supply manifold that was installed in AX farm to support upcoming retrieval activities. A subcontracted work force is performing this test and this was the second valve misalignment to occur while attempting to perform this test. The event occurred despite implementation of compensatory measures after discovery of the previous valve misalignment. The meeting was conducted professionally and attendees were forthright in their discussion of the event; it revealed that the most likely reason for the misaligned valve was a human performance error. Based on the results of the meeting, it appears that closer adherence to the guidance provided in DOE Order 422.1, *Conduct of Operations*, as implemented using standard nuclear industry practices for valve lineups would most likely prevent this type of incident. Poor radio communication connectivity also played a role in the event. The subcontractor manager stated that they would be modifying their valve lineup practices. Additionally, WRPS is providing additional oversight of subcontractor performed valve lineups until the subcontractor corrective actions are complete.

**Reduction Oxidation (REDOX) Facility:** A resident inspector walked down the REDOX facility to understand the state of the facility and near-term plans to identify and reduce hazards in the facility. Currently, contractor personnel have been making entries to the galleries, canyon, and silo areas to better quantify the facility's condition and hazards. During the walk down, contractor personnel noted facility conditions requiring special attention, including corrosion in process lines, undrained tanks, and common sources of water ingress, as well as recent challenges resulting from the discovery of higher than expected values of mercury in portions of the facility (see 4/26/19 and 6/14/19 reports). Contractor personnel intend to continue removing hazards such as combustibles and draining a large chemical tank with liquid holdup.

**Waste Treatment Plant:** BNI submitted a proposed amendment to the Low Activity Waste Facility DSA and TSRs to ORP for review and approval. If approved, the amendment will modify the DSA and TSRs to incorporate analytical limit, setpoint, and probability of failure on demand changes that resulted from progressing the related calculations from a "committed" to a "confirmed" status, and close one of nine planned design and operational safety improvements contained in the DSA as required by a condition of approval contained in DOE's safety evaluation report (see 5/18/2018 report).