DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 4, 2018

TO: S. A. Stokes, Technical Director
FROM: P. Fox, Hanford Resident Inspector
SUBJECT: Hanford Activity Report for the Week Ending May 4, 2018

DNFSB Staff Activity: D. Cleaves was onsite performing resident inspector support activities. D. Brown was onsite for training and site familiarization.

Plutonium Finishing Plant (PFP): A PFP team performed a mockup of the work activities they will use to place soft-sided packages containing the Plutonium Reclamation Facility strongbacks into shipping containers. The evolution was observed by members of the contractor's Hazard Review Board. The resident inspector notes that the mockup was useful for validating the work sequence and rigging practices identified in the work instructions, and for helping ensure that there were no unidentified physical constraints related to the packaging system. However, the evolution did not realistically check radiological control practices and the work was performed with workers in standard non-radiological personal protective equipment (PPE) vice the radiological PPE that they will use during the actual work. Although inclusion of these conditions would have made the mockup more time consuming and difficult, they would also provide an opportunity for the work team to practice the evolution under realistic conditions that might identify timing or work practice issues that could occur during the work. Identifying such issues during a mockup activity could result in a lower likelihood of work interruptions or mishaps during the actual accomplishment of the high-hazard activity.

The contractor intends to start the above packaging effort early next week. Once placed in the shipping containers, the strongbacks will be stored at the Central Waste Complex until they are shipped to the local Perma-Fix facility where they will be size-reduced. After size reduction and packaging into standard containers, the waste will be returned to the Central Waste Complex for storage until it can be shipped to the Waste Isolation Pilot Plant for permanent disposal.

242-A Evaporator: The contractor completed evaporator campaign 08. The campaign was completed in thirteen days with only three short interruptions. One interruption resulted from misunderstandings related to implementation of a new system that automates the material balance discrepancy (MBD) determination process. The MBD, which was previously manually calculated, is used to ensure that waste is being routed as intended during the campaign. Although not procedurally required, operators conservatively stopped waste flow when they noted a large differential in the receiving tank MBD trend information that they did not understand. The MBD value was subsequently determined to be within specification and the campaign was resumed.

222-S Laboratory: The contractor performed a limited exercise that simulated an explosion of unstable chemical waste materials that resulted in a breach of the facility structure. The resident inspector notes that the results of the exercise indicate that the facility emergency response organization needs to place increased urgency on obtaining the information necessary to classify an event to support necessary notifications and timely implementation of appropriate protective actions outside of the facility boundary.