

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 5, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending July 5, 2019

Building 324: Following the recent trend of increased contamination events (see 6/28/19 report), contractor personnel held a commonality review of contamination incidents going back to October 2018. The review's discussion grouped contamination events based, in part, on the activities being performed, such as airlock entries or room 18 activities; contributing factors noted included heat stress, congested working areas, and issues with doffing of personal protective equipment (PPE) which was often compounded by other factors. The review did provide useful insight into past events and participants discussed additional means of addressing contamination issues at the facility. The review identified nine potential action items, which included gathering additional information, re-examination of step-off pad configurations, modifications of PPE, and changes to engineering controls. The resident inspectors note that the majority of the discussion focused on PPE and improved contamination control during doffing and exit, and actions taken for events without a clear source for contamination focused on surveying to confirm non-radiological spaces and modesty clothing are free of contamination following an event. In discussion with contractor management, further evaluation of controls is still under consideration by the project to address recent contamination control issues.

T Plant: The 16th shipment of K-Basins sludge was received at the T Plant Facility last week. Sludge retrieval operations have been operating for one year, and the contractor anticipates the final sludge shipment to be completed by the end of the fiscal year.

Plutonium Finishing Plant: Last week, the Washington State Department of Ecology and the Environmental Protection Agency formally lifted the stop work invoked in the January 9, 2018 letter: Creation of Danger Pursuant to Article XXXII Hanford Federal Facility Agreement and Consent Order (see 1/19/2018 report). High hazard demolition activities are expected to begin by the end of the fiscal year.

242-A Evaporator: Operators performing a technical safety requirement surveillance on the safety-significant steam isolation valve obtained results that did not meet the expected requirements for valve performance. Engineering personnel subsequently performed an operability evaluation and determined that the unexpected results were caused by temperature instrument drift and declared the valve operable. The method used to perform the operability evaluation was technically sound, but the event indicates a need to either clarify the procedure used to perform the surveillance, determine and correct the cause of the drift, or change the method of testing.

Tank Farms: After multiple attempts, a contractor team removed a thermocouple from single-shell tank A-103. The removal of this thermocouple was hindered because of pre-existing damage to the thermocouple and high radiation fields. The workers proactively developed equipment, including shield structures and tools, and supporting practices and procedures that led to the successful removal.