

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 14, 2023

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca, P. Fox, N. Huntington, and P. Meyer, Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending April 14, 2023

Tank Farms: During a review of maintenance records, WRPS personnel discovered a technical safety requirement (TSR) violation when they noted out-of-range readings on datasheets that recorded results of two pressure transmitter calibrations performed last October. These calibrations were intended to fulfill a TSR surveillance requirement on safety-significant equipment used to monitor ventilation flow for double-shell tanks AN-105 and AN-107. An extent of condition review found administrative errors on three additional datasheets for similar equipment on other tanks. Operations personnel subsequently completed the required limiting condition for operation actions and reperformed the calibrations. Management has directed completion of an event investigation and will identify corrective actions. Until those corrective actions are complete, additional management review of TSR related work is required to confirm surveillance requirements are met prior to operations acceptance of the work.

224B Facility: A resident inspector observed an in-progress ALARA review of recent work to perform intrusive characterization of the contaminated process equipment in the 224B cells. Four entries to the cells were performed during which air sampler filters were found to be coated with fixative, rendering the samples unusable for accurate monitoring of airborne radioactivity. The meeting identified that controls were implemented without documentation in the work instructions, and that the pen-and-ink change to allow large-scale fixative application was beyond the original scope of the work instruction. Based on the information shared, contractor performance assurance personnel will perform a more thorough event investigation of the activity and contractor management have suspended the work package.

Solids Waste Operations Complex (SWOC): Facility personnel kicked off a Root Cause Evaluation (RCE) on the impairments to the facility's fire suppression systems. The impairments resulted from the discovery of potentially obstructing material and pipe wall corrosion in sprinkler system piping (see 1/20/2023, 1/27/2023, 2/10/2023, and 2/17/2023 reports). Prior to the RCE, it was identified that periodic internal pipe inspections as required by National Fire Protection Association (NFPA) code had not been performed at SWOC for many years. Additionally, the extent of this failure to perform the inspections encompasses all general service fire suppression systems at the Hanford site.

222-S Laboratory: 222-S personnel were preparing to perform a total suspended solids analysis on 219-S tank 102 samples. The sample requires agitation prior to performing the test. While moving the sample from the cart to the fume hood, the chemical technologist (chem tech) started rocking the sample slightly. Because of a previously unidentified loose and defective lid, some of the liquid spilled onto the chem tech's gloves, the sample cart, and floor. The chem tech placed the sample in the fume hood, changed out their gloves, and requested radiological technicians for spill response. Radioactive contamination was found on the floor near the cart and worker's shoe covers, which were changed out. No contamination was found in the hallway. There was no radioactive contamination found on the skin or personal clothing of the employee.