

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 3, 2025

TO: R. T. Davis, Acting Technical Director
FROM: L. Lin and E. P. Richardson, Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending January 3, 2025

Defense Waste Processing Facility (DWPF): DWPF Main Process Cell camera functionality degraded further from last week (see 12/27/2024 report). Out of ten installed cameras, crane operators have one fully functional camera and two in limited service, one of which is unable to focus when zoomed in.

During a crane maintenance area (CMA) entry for routine maintenance in the electrical equipment corridor, three maintenance mechanics and one radiological protection department (RPD) inspector entered wearing plastic suits with 150ft breathing air hoses. After completing the task, the RPD inspector cut the first mechanic out of their plastic suit, who then exited the CMA without incident. In an attempt to untangle the remaining air hoses, the RPD inspector cut an air hose they thought belonged to the first mechanic but was actually their own, which cut off their air supply. They recognized their error immediately, removed their plastic suit top, and exited to the CMA air lock, where another RPD inspector placed a new plastic suit hood on them. These actions minimized the asphyxiation danger and the possibility of the worker inhaling any radioactive particulates. Surveys confirmed that no personnel contamination occurred during the event and all air sample readings were at background levels. The facility is awaiting direction from internal dosimetry. The two remaining maintenance mechanics exited without incident. Breathing air hose management has been a recurring issue at DWPF (see 07/24/2024 report).

H-Tank Farm: Following a period of normal operations, facility personnel secured, drained, and flushed the 242-25H evaporator to prepare for upcoming crane maintenance and a subsequent pot inspection. Maintenance personnel then performed corrective maintenance on the crane in preparation of using it during the pot inspection, which was scheduled to start after completion of all post maintenance testing (PMT). Initial testing indicated that the repairs were unsuccessful, so facility management deferred the pot inspections to a later date. The schedule item to complete the mode change checklist was linked to the pot inspection and inadvertently deferred as well. H-Tank Farm personnel ensured all conditions to place the 242-25H evaporator in shutdown mode were met but did not complete the mode change checklist that administratively completes the process prior to the shift operations manager (SOM) authorizing additional PMT on the crane. This PMT included moving the crane over the evaporator, which requires the evaporator to be in shutdown mode. H-Tank Farm engineering personnel discovered the error a few days later while reviewing the PMT paperwork and notified management. Failure to include the requirement to be in shutdown mode prior to the crane PMT in the work package and the 242-25H crane checkout procedure, an informal pre-job brief, and inattention to detail by the SOM contributed to the work being completed without proper verification of the evaporator mode. The facility is revising standard work packages and procedures to ensure the requirement for the evaporator to be in shutdown mode prior to moving the crane trolley is explicitly stated.