

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 18, 2018

TO: S. A. Stokes, Technical Director
FROM: P. Fox and P. Foster, Hanford Site Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending May 18, 2018

DNFSB Staff Activity: J. Parham was onsite to support a staff review of Hanford site electrical power systems. A. Hutain was onsite to observe the annual site emergency planning exercise.

222-S Laboratory: A plastic transportation container cracked while being relocated inside a sample cabinet by a technician to make room for the placement of another container. The technician was moved to a nearby vented hood and a Health Physics Technician (HPT) assisted with the removal of the individual's gloves inside the controlled environment. The HPT then surveyed the individual and found significant contamination on the technician's cheek. Subsequent decontamination efforts were successful and final survey results did not exceed the background level. The technician also received a whole body count and is submitting a bioassay sample to confirm that they did not ingest contamination. Contractor management held a fact finding meeting. During the meeting, individuals noted that these transportation containers have previously failed in a similar manner and that there is an informal program to replace the current containers with a more robust container on an "as needed" basis. HPTs surveyed the laboratory and found contamination within existing contamination control areas near the event location. However, contamination found did not exceed control levels. Contractor management has restricted access to some areas of the laboratory pending the development of a recovery plan.

105-KW Basin: When workers were moving the below-water sludge retrieval tool past a booster pump skid, located on the bottom of the 105-KW basin, the associated instrument spool inadvertently contacted the skid and dislodged an equipment rack. Contractor management suspended the work and held a critique. They are evaluating the system and the preliminary conclusion is that the damage appears to be minor. However, they will have to power up and test the system to confirm that it is still operable. A recovery plan is being developed to manage the remaining evaluation and related corrective actions. Additionally, because of this event, and because of other recent human performance errors at the facility, contractor management held a safety pause to refocus workforce attention on safe and compliant operations.

Emergency Planning: The site emergency planning team conducted the annual evaluated field exercise. The scenario simulated a vehicle accident that resulted in a fire in a radioactive material storage area at Building 325. The Hanford Site Emergency Operations Center (EOC) was activated and a simulated injured person was transported to a local hospital to exercise one of the Hanford Site's external medical support options. EOC coordination, communications, dose assessment, and plume tracking capabilities were also evaluated during the exercise.

Waste Treatment Plant: DOE ORP approved the Low Activity Waste Facility DSA and TSRs, and the related implementation plan (see 3/30/2018 report). Their approval is contingent on two conditions of approval related to the contractor's completion of planned design and operational safety improvements and their development of a plan for ensuring a traceable implementation of safety significant and defense-in-depth hazard controls performed by system control software.