

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 8, 2016

**TO:** S. A. Stokes, Technical Director  
**FROM:** P. Fox and D. Gutowski Hanford Site Representatives  
**SUBJECT:** Hanford Activity Report for the Week Ending July 8, 2016

D. Gutowski was off site.

**Sludge Treatment Project.** The contractor continues to work toward completion of the Engineered Container Retrieval and Transfer System Preoperational Acceptance Test. The tests are being performed in a clean environment that closely models the more hazardous K-Basin to ensure that system performance meets expectations before installation. Since the last report (see Activity Report 5/12/2016), the test team has completed interlock functionality, sludge layering, and sand retrieval testing and demonstrations. The final test phase will demonstrate various engineered functions and system components will be moved to K-Basin and the associated annex for installation when those demonstrations are complete. The site rep notes that the test team has identified and corrected a number of deficiencies that would have been more difficult to correct once the system is installed at K-Basin. Additionally, testing has resulted in several design changes that improve operability. This, in turn, will reduce worker time and effort during sludge retrieval evolutions. The site rep observed the test team use the system to perform a sand retrieval evolution. The system transferred over 300 pounds of sand from an underwater sludge container to a sludge transport and storage container in under four minutes and left almost no residual sand in the underwater container. No problems were encountered during the transfer.

**Waste Encapsulation and Storage Facility.** Workers exited the canyon when ventilation flow was lost due to the repositioning of an exhaust damper during execution of an approved work package. No injuries or contamination resulted from the event.

**Tank Farms.** While observing work the site rep noted less-than-adequate performance of radiological control functions at the boundary of a tank farm radiological buffer area. The Facility Representative and contractor manager are working to identify and resolve the causes for the deficient performance.

**Plutonium Finishing Plant.** The contractor held a critique to determine potential causes for a recent surge in the number of anti-contamination clothing breaches experienced by individuals working on the 234-5Z duct level. Over the last several weeks, there have been four portable air purifying respirator hood tears and two other anti-contamination clothing breaches. Workers noted that congested work areas, restricted access routes, and poor lighting are the most likely causes. The contractor is implementing a number of actions to limit the potential for future breaches.

Over the last two weeks, the contractor has discovered higher than expected contamination levels in room 264 of the 234-5Z on two occasions. They believe these cases resulted from disturbance and migration of residual contamination from a previous event (see Activity Report 6/24/2016). Based on these discoveries, the contractor has painted a portion of the room 264 in an effort to fix the contamination. Additionally, the contractor has decided that workers performing jumper installations on the 26-inch vacuum system, which was the likely source of the contamination, will use full containments unless management determines that their use is not feasible.