

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 20, 2016

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending May 20, 2016

DNFSB Activity. Board Member S. Sullivan visited the site. He observed operations with the site reps at the Plutonium Finishing Plant, 618-10 Burial Grounds, AW Tank Farm, and the Cold Test Facility. He also observed construction progress at the Low Activity Waste Vitrification Facility and observed an emergency preparedness field drill at the Tank Farms.

Board staff member B. Rosen visited to observe Tank Integrity Expert Panel deliberations.

Plutonium Finishing Plant. The contractor removed glovebox HC-6 from the facility. The evolution was completed without incident.

Workers have encountered three Level B suit breaches during the last two weeks that appear to be the result of work related wear. In two cases, the wear occurred in the vicinity of the worker's vortex cooler during work that required significant amounts of waist bending activity. The other breach occurred during pipe cutting activities and appears to have been caused by vibrational wear. The contractor will critique the events to identify actions necessary to prevent similar occurrences before resuming work using Level B suits.

Tank Farms. The contractor performed an evaluated field drill outside of AN Farm. The scenario involved a slurry distributor being lifted out of Tank AN-107, breaking, and releasing waste onto the ground and an individual. The scenario was similar to a field drill performed last March (see Activity Report 3/13/2015). Performance of Facility Emergency Response Organization personnel at the Incident Command Post was generally good, however there were a number of weaknesses at the event scene including timeliness of the 911 call and control of potentially contaminated personnel and areas.

The contractor briefed ORP personnel on automation upgrades for the Tank Farms. The overall goal is to improve efficiency prior to the increase in activity expected when feed to the Low Activity Waste Pretreatment System and Waste Treatment Plant (WTP) starts. The contractor is developing and piloting a number of new automation tools including electronic rounds, electronic radiation survey maps and changes to control system and historian software. Many of these tools are consistent with planned WTP systems.

Low Activity Waste Pretreatment System. The contractor started a Process Hazards Analysis to evaluate recent design changes and determine whether additional or different hazard controls are required. The Safety Design Integration Team is evaluating the findings from a Failure Modes and Effects Analysis Review performed last week. Most of the findings involved location and protection requirements for Safety Instrumented Systems.

Effluent Treatment Facility (ETF). ETF started operations this week after an extended shutdown. The contractor is resolving minor equipment issues that were discovered during the startup.