

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 11, 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 11, 2018

DNFSB Staff Activity: P. Foster arrived and commenced his six month temporary duty assignment as a resident inspector for the DNFSB at the Hanford Site.

Tank Farms: The contractor's Plant Review Committee (PRC) met to consider two proposed changes to the Tank Farm DSA and TSRs. The first change results from the installation of an interim surface barrier in the SX Tank Farm. The interim surface barrier, which the contractor will install later this summer, is required by the Tri Party Agreement. The barrier will shield the SX Tank Farm ground surface from precipitation in order to limit the potential migration of contamination from previous tank leaks into the ground water system. Since the interim surface barrier is impervious to water, it is also expected to reduce the rate of flammable gas diffusion from the tank headspaces. The contractor's previous calculations had determined that, even with zero ventilation airflow, diffusion would prevent flammable gas concentrations in the SX Tank Farm tank headspaces from reaching 100 percent of the lower flammability limit. However, a new two dimensional diffusion calculation shows that this condition will no longer exist after the interim surface barrier is installed. The proposed change extends the previously non-applicable single-shell tank steady-state flammable gas control LCO and the flammable gas control SAC to the tanks in the SX Tank Farm. The second change updates the DSA and TSRs to reflect the completion of C-105 retrieval. The change deletes all references to the freeze protection controls and associated system that supported the retrieval. The PRC recommended forwarding the DSA and TSR changes to ORP for their approval.

REDOX Plant: Contractor workers entered the REDOX facility silo over the weekend to perform ultrasonic testing and waste removal activities. Based on hazard controls contained in the work package, the facility confinement ventilation system was required to be operating while they were performing this work. However, on Monday morning during routine rounds, the Stationary Operating Engineer found that the system was not operating. Review of monitoring systems determined that the power supply breaker for the fan had tripped on Friday. Contractor management held a critique. Participants stated that neither the fan nor the monitoring system were checked prior to entering the facility. They noted that they do not consider the monitoring system reliable and missed performing the visual check because of a human performance error. Additionally, some of the participants felt that the control was unnecessary. Lastly, they noted that the work package implements the ventilation control by referencing a separate operating procedure. This also might have contributed to the performance errors, Follow-up surveys determined that no contamination was released due to the loss of facility ventilation.

Plutonium Finishing Plant (PFP): The contractor started the placement of strongbacks and other material that was previously stored in soft-sided containers at the PFP site into shipping containers (see 5/4/2018 report) to support transfer of the waste material to the Central Waste Complex. This activity, along with the removal of other packaged waste from the PFP site, will substantially reduce the material at risk located at PFP.