

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 1, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending March 1, 2019

Building 324: The Resident Inspectors observed a field drill that simulated an aircraft crash into the facility with subsequent partial collapse of the structure and an interior fire. Rather than convert the drill to an incident command post (ICP) limited drill when adverse weather occurred at the site, the drill coordinator opted to move the field portions of the exercise inside the facility to allow an opportunity to evaluate field performance as well as ICP performance. While drill participants made a conscious effort to accommodate the simulation, these conditions did cause some confusion, and space constraints hampered free movement of personnel in the “field.” The drill team noted the difficulties and intends to use lessons learned to improve execution of this approach if it is used for future drills. The resident inspectors noted that the facility team exhibited good teamwork, promptly accomplished immediate actions, and effectively identified resource requirements. However, they also noted that the team was slow to confirm radiological conditions at the scene and slow to accomplish actions necessary to support mitigation activities. Additionally, communication equipment and execution require improvement.

Contamination was detected on the modesty clothing of a worker exiting the facility’s control point. The contamination was not removable using tape. Radiological Control Technicians were unable to find evidence of removable contamination that may have transferred to the individual and, during an In-Progress ALARA review, facility personnel did not identify any other specific cause for transfer of contamination to the clothing. Building 324 personnel performed surveys of the modesty clothing laundry and storage bins and did not find evidence of contamination.

Waste Treatment Plant (WTP): The contractor submitted a change to the Low-Activity Waste facility DSA to ORP. The modification incorporates a design change that adds vacuum relief and pilot actuated control valves to the secondary offgas/vessel vent process (LVP) system. The vacuum relief valves protect a consequence analysis assumption that presumes the existence of an intact exhaust path for offgas through a stack by preventing the collapse of the high efficiency particulate air filter housings if an excessive system vacuum were to occur. The pilot actuated control valves replace a different set of vacuum breakers and ensure stable operation of the LVP system exhausters to mitigate the consequences of several accidents. They perform this function by providing a source of makeup air that prevents the fans from surging when the system is reconfigured due loss of power conditions, or due to high or low header vacuum.

The contractor completed a revised site-specific seismic response analysis that was initiated based on information contained in a probabilistic seismic hazard analysis performed by Pacific Northwest National Laboratory in 2014. The contractor determined that, with two minor exceptions, the existing design response spectra bound the seismic curves developed under the new analysis. Consequently, they do not recommend any change to the existing design criteria.

Hanford Site: Adverse winter weather continued to impact operations on Hanford site. Three dayshift periods were affected by partial shift closures.