

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 11, 2021

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending June 11, 2021

DNFSB Staff Activity: J. Flora was onsite to observe Integrated Safety Management assessment activities at the Waste Treatment Plant (WTP) with a primary focus on radiological protection program development. He also observed the associated emergency preparedness drill, which simulated a chemical release from the WTP site anhydrous ammonia storage facility. Other members of the staff, including D. Bullen, M. Helfrich, P. Natividad, and S. Thangavelu observed assessment activities using virtual meeting connections provided by the contractor.

Waste Treatment Plant: The WTP contractor kicked off its Integrated Safety Management System (ISMS), Phase II review of the Low Activity Waste facility and its operation. The review team is led by a former Chief of Nuclear Safety for DOE and subject matter experts in areas such as nuclear safety, emergency preparedness, radiological control, and Chemical Safety. The ISMS team will complete its onsite portion of the review next week.

Reduction Oxidation Facility (REDOX): The contractor's Plant Review Committee (PRC) met to review their readiness to implement revision 8 of the REDOX facility documented safety analysis (DSA) and the related technical safety requirement changes. The contractor previously delayed the implementation of this revision twice. Revision 8 was originally approved by DOE in August 2019 and they established October 29, 2019 as the original implementation date in the safety evaluation report transmittal letter. The contractor did not meet that date because they discovered that they needed to modify supporting criticality safety documents before they could implement the revised DSA. DOE subsequently established December 31, 2020 as a new deadline, but the contractor missed that date because of resource shortages, delays in the development and completion of training necessary to support implementation, and the transition of responsibility for the facility to a new contractor. Last week, after reviewing the implementation verification checklist, the PRC determined that they have completed all necessary activities and recommended implementation of the revised safety basis. This implementation will allow facility personnel to pursue risk mitigation work that will focus on size reduction and removal of contaminated equipment.

242-A Evaporator: During the movement of a pump room cover block to support upcoming work related to the replacement of the evaporator facility feed and slurry lines, the cover block tilted unexpectedly and dropped below the support rail. While facility personnel attempted to adjust the block back above the rail, the block tilted further and a large working mirror that was stored on top of the block slid down the block and came to rest against the rail. Facility personnel entered the abnormal operating procedure for placing equipment and personnel in a safe condition and paused work until they could develop a recovery plan. Facility personnel successfully executed the recovery later the same day. A subsequent event investigation determined that the repositioning of the cover block without removing the working mirror was not compliant with the special lift plan. The presence of the mirror shifted the center of gravity for the lift, resulting in the abnormal behavior of the cover block. The contractor is performing a causal analysis to identify corrective actions to prevent similar future events.