

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 23, 2021

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending April 23, 2021

DNFSB Staff Activity: Members of the technical staff met with RL and Central Plateau Cleanup Company personnel to discuss results of the ongoing review of the approach DOE uses to control hazards at the Central Waste Complex (see 2/26/2021 report).

Liquid Effluent Retention Facility (LERF): The DOE Senior Review Board (SRB) met to evaluate a revised justification for continued operations (JCO) that would allow performance of LERF Basin 44 cover replacement work (see 4/16/2021 report). The SRB determined that the hazard controls established by the revised JCO were adequate and recommended that the DOE safety basis approval authority (SBAA) approve the change.

Waste Treatment Plant (WTP): Facility personnel found that the operating equipment for a shield door had been damaged while closing the door the previous night. Unlike a previous event (see 4/16/2021 report) which appeared to be a result of operator error and procedure problems, this damage appears to have occurred because a proximity switch was misaligned and failed to deactivate the door operating motor when the door reached the closed position. The proximity switch is mounted in a slotted metal base to allow adjustment during installation. In this case, it appears that the securing nut for the switch came loose and allowed the switch to move out of its correct position preventing its operation. Consequently, the door closure mechanism did not stop when the door was shut. The continued operation placed significant force on the operating motor and its mounting, resulting in the damage. Management held an event investigation meeting to collect facts associated with the event but were unable to determine a reason for the loose nut. Facility personnel will perform an extent of condition check on other doors before they are next operated to ensure a similar condition does not exist.

Reduction Oxidation Facility (REDOX): Workers were successfully able to hot tap and mechanically isolate the first of three chemical lines from the REDOX facility. This is the first high hazard work to be approved by the contractor Hazard Review Board at REDOX since 2019. A Resident Inspector observed the work evolution during the week and noted high worker engagement, thorough pre-job briefings, and excellent communication. While radiological control performance was also strong, no contamination was identified during the evolution. Work will continue through next week to complete the mechanical isolation of the other lines.

Central Plateau Risk Mitigation: The contractor convened its Corrective Action Review Board (CARB) to evaluate an Apparent Cause Evaluation (ACE) that had been performed to review three entries into the 203A facility that were performed without implementing proper radiological hazard controls (see 2/26/21 report). The ACE noted that the pre job meetings for the entries did not cover the changes to the work package documentation, and that there was inadequate responsible manager and workforce involvement in the development of the work package change prior to releasing it for work. The proposed corrective actions focus on improving documentation and communication of work package revisions, revising expectations and qualifications for responsible managers, and revising the guidance on when to perform job hazard analyses. The CARB recommended that management approve the ACE.