

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 24, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending July 24, 2020

Tank Farms: The Tank Farm Central Shift Manager (CSM) entered a limiting condition for operation (LCO) when an alarm occurred on the safety significant (SS) annulus high liquid level alarm for double-shell tank AP-103. The alarm subsequently cleared and there were no other indications of a high liquid level in the annulus. However, the alarm recurred two additional times over the next eight hours. The CSM conservatively chose to remain in the LCO until engineering and maintenance personnel had the opportunity to further investigate the cause of the alarm. Their troubleshooting determined that there is a condition that is causing an intermittent failure of the SS alarm contactors and the alarm was declared inoperable. The CSM exited the original LCO and subsequently entered the appropriate LCOs for an inoperable annulus level alarm. Those LCOs will remain in effect until the alarm system is repaired. This is the second SS annulus alarm malfunction within two months (see 6/05/2020 report).

The contractor's Plant Review Committee (PRC) evaluated an unreviewed safety question (USQ) determination that nuclear safety personnel performed to analyze the legacy design flaw that was discovered in the operating mechanism for some tank farm waste transfer valves (see 6/26/2020 and 7/03/2020 reports). Their evaluation determined that an USQ does exist since the condition could increase the probability of a malfunction of equipment important to safety and also reduces the margin of safety. The PRC further determined that the previously implemented operational restriction that precludes the use of affected valves for technical safety requirement compliance is an adequate compensatory measure. That restriction will remain in place until DOE approves a safety basis change to address the USQ.

Plutonium Finishing Plant (PFP): The site received approval from DOE headquarters to proceed with plans to stabilize three high failure risk underground structures within the PFP work control boundary before retrieving the remaining Plutonium Reclamation Facility (PRF) debris. Contractor personnel will down-post some airborne radioactivity areas (ARA) in the PFP demolition area to support the work (see 7/17/2020 report). The contractor also examined the results of recent mockup testing and determined that the grout and controlled density fill tests were successful. They plan to complete stabilization by the end of the calendar year. PRF debris retrieval will not resume until the ARA control set used during prior debris retrieval is restored.

Building 324: A high radiation area was found unlocked during a routine surveillance check. The problem resulted because of a failure to properly install the lock for the door. This particular area has not been entered in several years and it is unclear when the last radiological surveys of that area have been performed. Facility personnel replaced the lock and scheduled a critique.

Hanford Site: DOE and site contractors remain in the first phase of their COVID-19 pandemic response resumption plans. Site leadership continues to evaluate state and regional data and trends, and consult with regional health and municipal authorities prior to allowing any increase the onsite workforce.