

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 23, 2021

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

Central Waste Complex (CWC): In April, the Central Plateau Contractor (CPC) submitted a recovery plan designed to restore operability of five waste containers to DOE for approval. The containers contain transuranic mixed waste and were retrieved from waste trenches to support transfer of the waste to the Waste Isolation Pilot Plant (WIPP) nearly a decade ago. However, the containers became stranded at CWC when WIPP was closed in 2014 and were placed in an outdoor storage area. Because of the condition of the containers, and per an agreement between the contractor, DOE, and the Washington State Department of Ecology, CWC wrapped the containers to provide an additional barrier against a contamination release. The wrapping material precludes visual inspection of the containers. Consequently, the physical condition of the containers, which have a safety significant (SS) function of limiting radiological releases, cannot be confirmed. This week, DOE conditionally approved the plan. The approval letter noted a disconnect between the documented safety analysis (DSA) and the technical safety requirements (TSRs) with respect to container integrity, specifically that the current TSRs do not confirm that the containers will perform their safety function as defined in the DSA. Among the conditions imposed by DOE, CPC was directed to declare a potential inadequacy of the safety analysis (PISA) with a positive unreviewed safety question determination (USQD). CPC was also directed to identify other SS containers where visible inspection is not possible, immediately declare the containers inoperable, and continue with TSR actions for inoperable containers. The contractor subsequently identified 74 additional containers that have covers that preclude inspection. In addition to the PISA, CPC declared a TSR violation for failure to adequately perform the applicable container integrity inspection. They also entered the appropriate LCO for the 74 containers which were declared inoperable.

Tank Side Cesium Removal (TSCR): The contractor Plant Review Committee (PRC) met to evaluate a proposed change to the Tank Farm DSA. The change resolves a USQD that addresses missing information associated with TSCR structure safety significant welds (see 6/18/2021 and 7/2/2021 reports). The revision also modifies the method for preventing a cesium-137 overload condition in the ion exchange columns and changes several TSRs to improve operational efficiency. The PRC voted to send changes to DOE for review and approval.

Building 324: Facility personnel loaded out 18 drums of soil excavated during Room 18 drilling operations. While each drum's contents was adequately documented, the total content of the Environmental Remediation Disposal Facility (ERDF) container holding the drums was not evaluated against material-at-risk (MAR) limits for outside Waste Storage Areas (WSA), which must contain less than 80% of the Hazard Category 3 limit for MAR. The ERDF container was staged in a WSA, which was later determined to be 91% of the limit. Upon discovery, the waste storage area was secured to prevent any more movements there pending shipment of the container. Attendees noted issues with the way waste MAR was documented, particularly in signoffs of required evaluations and accountability, and in the ability for a Field Work Supervisor to verify the documentation was sufficient to allow movement of material into a WSA. Management is revising waste procedures and instructions for storing, moving, and staging wastes.