

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 25, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: M. Bradisse, B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending December 25, 2020

Solid Waste Operations Complex (SWOC): The DOE RL senior review board (SRB) met to consider a safety basis review team's (SBRT) review of a revised evaluation of the safety of the situation (ESS) that was submitted by the contractor. The revision was necessary because DOE determined that the previous version did not adequately support disposition of all the identified issues in the assessment that triggered the original unreviewed safety question (see 7/31/20 report). The SBRT had determined that the analysis contained in the revised ESS was compliant with DOE STD 5506, *Preparation of Safety Basis Documents for Transuranic (TRU) Waste Facilities*, and is bounding. The revised analysis identifies substantially higher consequences for a number of accidents, some of which challenge the DOE evaluation guideline for the maximally-exposed offsite individual. The SBRT recommended approval of the ESS with three conditions including a requirement to submit revised DOE STD 3009, 2014, *Preparation of Nonreactor Nuclear Facility Documented Safety Analysis*, compliant Documented Safety Analysis (DSA) and Technical Safety Requirements (TSR) documents for the Central Waste Complex, Low Level Burial Grounds, and Waste Receipt and Processing Facility, separate DSA and TSR documents for T-Plant, and implementation of a TSR level control that requires the use of a critical lift plan for waste container lifts using a crane and crane lifts that travel over waste containers that have an inventory that exceeds a specified limit. The SRB voted to accept the SBRT evaluation and recommended approval of the ESS to the safety basis approval authority.

Tank Farms: The Tank Farm Operations Contractor (TOC) identified and corrected the equipment issues that prevented start of the AX-104 slurry pump for retrieval operations (see 12/18/2020 report). Retrieval operators were able to recirculate the contents of AX-104 for approximately six hours before operations were again interrupted because of a failed selector switch. Retrieval operations will resume after TOC personnel complete the required repairs.

Waste Treatment Plant (WTP): DOE ORP approved the WTP contractor's most recent startup notification report (SNR). The SNR indicates a scheduled startup date of November 2022 for the hazard category (HazCat) 3 Low Activity Waste facility, which includes operation of the HazCat 3 Effluent Management facility and the radiological Analytical Laboratory facility. The WTP contractor also notes that the plan of action for the ORR was approved by DOE in November 2020, and that the facility start date may be adjusted in the next semi-annual SNR after contractor personnel complete an ongoing schedule re-baseline effort.

Waste Encapsulation and Storage Facility (WESF): A resident inspector walked down a mockup that the contractor has constructed at the 400 Area Maintenance and Storage Facility. The contractor will use the mockup to test equipment that they will use to transfer the cesium and strontium capsules stored in the WESF basin to dry storage. They will also use the mockup facility to support procedure development and operator training. The resident inspector noted that the scope and detail of the full-scale mockup effort is similar to the mockup used to support the contractor's successful 105-KW sludge retrieval effort.