

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 16, 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 October 16, 2020

Central Plateau Risk Mitigation: Contractor personnel held a Hazard Review Board (HRB) for the work package to stabilize the Z-9 crib, one of the three underground structures at risk of collapse (See 5/8/2020 and 10/9/2020 reports). The HRB team members were engaged and identified weaknesses in the package that will require clarification and revision prior to start of the Z-9 phase of work.

Central Waste Complex (CWC): Contractor personnel held the initial session for a causal analysis to address the circumstances that resulted in higher than allowed material inventory in a waste box, and the subsequent technical safety requirement violation (see 10/2/2020 report). The causal analysis team included appropriate subject matter experts. This meeting focused on developing a timeline and collecting of supporting facts. This information will be used to set up the cause analysis tools that will be used in follow-on sessions.

The resident inspectors met with contractor and DOE personnel to discuss analytical assumptions related to this over-massed waste box (see 10/2/2020 report). Specifically, the resident inspectors asked for further information regarding the distribution of material within the box, and the confidence in the latest non-destructive assay (NDA) results. Site personnel stated that prior to removal from the Plutonium Finishing Plant, the glovebox inside this waste box was cleaned to the extent practicable, leaving only limited material-at-risk adhered to the interior walls of the glovebox in the form of a hard crust. They stated that this material is evenly distributed throughout the interior surfaces of the glovebox in amounts well below applicable criticality safety limits. Site personnel further stated that these assumptions are supported by process and historical knowledge, as well as the design of the glovebox itself, which was designed to limit collocation of material for criticality safety reasons. Finally, they reiterated their general confidence in the accepted data of record for NDA values for other waste containers, noting that the issues with data collection for the over-massed box were likely anomalous and would likely not apply to most other containers.

Tank Farms: The safety basis approval authority approved an amendment to the Tank Farm documented safety analysis that expands the coverage of the existing safety-significant safety instrumented system for freeze protection to twelve new locations within the Tank Farms, as well as other changes (see 9/11/2020 report). There were no conditions of approval. The amendment will be implemented within sixty days.

REDOX Plant: This week, contractor personnel lifted a management stop work on radiological activities at the REDOX canyon facility following issues with contamination control practices and response to abnormal conditions (see 10/25/19 report). Since the stop work was initiated, contractor personnel have established a trailer village to support radiological work including a larger step off pad with Personnel Contamination Monitors, and have begun installation of a new confinement ventilation skid to support removal of excess material-at-risk from the facility.