

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 13, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: B. Caleca, P. Fox, and P. Meyer, Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending September 13, 2024

Hanford Site: The DOE Chief of Nuclear Safety (CNS) was onsite to meet with contractor and field office personnel to discuss ongoing high priority nuclear safety work. A resident inspector observed sessions related to the development of technical safety requirements for the Capsule Storage Area as well as the safety design strategies for both the Contact-Handled Waste Project and the West Area Risk Management Project. The CNS plans to return later this month for continued discussions.

High-Level Waste (HLW) Facility: A resident inspector attended the closeout briefing of a direct feed HLW (DFHLW) Project Peer Review (PPR). The DFHLW project is unique in that design of the HLW building and many associated systems is nearly complete and a preliminary documented safety analysis already exists despite the conceptual design status of modifications required to support DFHLW. The PPR team noted that significant project risks still exist due to the amount of technical work required to mature the DFHLW design, as well as the design of the vault facility and the tank farms infrastructure used to feed compliant waste to the facility. The resident inspectors note that BNI uses key parameters of the DFHLW waste acceptance criteria, and by extension the future tank farms and vault facility capabilities to protect key safety basis assumptions for reducing public and collocated worker consequences for DFHLW accidents, when compared to prior high-level waste hazard analyses. BNI and DOE believe that hazard analyses performed using the reduced consequences will result in fewer and less complex hazard controls that will provide adequate protection from HLW facility hazards.

CPCCo Conduct of Operations: After several events at various deactivation and decommissioning (D&D) projects in the last few weeks, CPCCo declared a management concern and held a “back to basics pause” on D&D work. The events leading to the pause included work being performed at 105KW with an index document instead of the reference procedure available in the field, leading to a missed hazardous energy verification step; workers removing a grating at the 224B facility outside of the scope of work, leading to a void of their radiological work permit; and work to drain a pipe in the 231Z facility being reworked outside of the original procedure, leading to a draining of over a liter of caustic material not expected by the work crew. Work resumed after re-emphasizing with the workforce the need to prioritize procedure compliance and use of a questioning attitude during work.

T Plant: A resident inspector observed a board, led by the DOE deputy manager, conduct the final oral examination of a Facility Representative candidate who will be assigned to oversee T Plant. This examination focuses on knowledge of operations and safety systems, roles and responsibilities, and the application of DOE directives. The board’s examination was comprehensive, in-depth, and rigorous, and the board voted to pass the candidate. The new Facility Representative will broaden his qualification to include other waste facilities as he executes his oversight duties at T Plant.