

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 17, 2025

TO: R. T. Davis, Acting Technical Director
FROM: B. Caleca, P. Fox, and P. Meyer, Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending January 17, 2025

DNFSB Staff Activity: R. Csillag and B. Sharpless were onsite for training and to perform activities related to ongoing staff reviews at the Low-Activity Waste Facility and the Waste Encapsulation and Storage Facility.

Low-Activity Waste (LAW) Facility: WTCC management has posted the LAW facility with the expected permanent radiological postings. Using this approach, management expects workers to gain experience in use of radiological work permits, observing and complying with postings, using appropriate personal protective equipment and radiological controls (RadCon) for work, and the performance of self-surveys. The resident inspectors walked down the proficiency postings and observed a response to elevated readings caused by naturally occurring radon decay daughters during a self-survey. RadCon response to the self-survey anomaly was good. RadCon personnel were present throughout the facility to answer questions and assist individuals with the new conditions.

Waste Encapsulation and Storage Facility (WESF): The Board's staff met with contractor subject matter experts and HFO personnel to discuss requirements associated with the welding of canisters in support of capsule dry storage. The discussion focused on the contractor's use of a code equivalency relating to weld inspection requirements. The equivalency permits the use of visual examination, in conjunction with validation testing, in lieu of dye penetration and leak testing, which are impracticable given the geometries involved and high radiation environment.

A resident inspector observed an emergency preparedness drill conducted at WESF. The purpose of the drill was to evaluate several emergency response organization team members for proficiency. The emergency scenario involved a fire in G-Cell. The resident inspector noted good communication in the Incident Command Post; however, the team struggled to achieve timely accountability of facility personnel, and the event scene response lacked urgency.

High-Level Waste (HLW) Facility: HFO has decided to transition work to bring the direct feed high-level waste capability online to a new project called the Direct Feed High-Level Waste Vitrification Project. Consequently, BNI has developed a second safety design strategy to support the upcoming critical decision process for the new project. The technical content of the second safety design strategy is very similar to the first but risks and opportunities defined in the new strategy will reflect later stages of the design construction, testing, and commissioning sequence. A resident inspector and other members of the Board's technical staff met with BNI and HFO representatives to gain a better understanding of how BNI and DOE will manage and maintain the two separate strategies until the project transition occurs. The discussion identified several potential gaps in the proposed safety design strategy management approach. BNI management is reviewing the results of the discussion to identify whether additional action is necessary to address the gaps.