

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 22, 2022

**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 22, 2022

**DNFSB Staff Activity:** B. Sharpless was onsite performing cognizant engineer duties including walk-downs of Waste Encapsulation and Storage Facility, Building 324, and 105 KW.

**Tank Side Cesium Removal System (TSCR):** A resident inspector met with Tank Operations Contractor (TOC) management and engineering personnel to discuss TOC actions to address damaged TSCR process hose connectors (see 6/24/2022 report). The discussion included a review of the as-found conditions, engineering's evaluation of cause and timing of the damage, and an assessment of the condition. Engineering personnel believe it is unlikely the ChemJoint™ connectors were over-torqued. However, they will be performing an inspection of the connectors during the next system shutdown. The inspection will focus primarily on whether the parts of the connector most likely to be damaged by an over-torque condition are deformed. If no deformation is found, they will conclude connector strength was not compromised. Additionally, they will replace hoses associated with the damaged connectors. The resident inspector noted that they could not be sure whether the components were torqued beyond specifications identified in the procedure but agreed the identified approach would address any concerns related to component integrity. The discussion also addressed conditions resulting in the damage. TOC personnel stated that, since they believe the damage occurred during vendor or sub-contracted testing, they would be modifying their directions to the vendors and would be performing a more thorough receipt inspection of hoses received from the vendor. The resident inspector also noted the inspection was triggered by reports received from the work force and the individuals reporting the condition had indicated they felt uncomfortable reporting the condition to their managers because of the time and production pressure associated with TSCR system completion and startup. In discussing why workers would feel the need to address the issue to the resident inspectors instead of to their management, contractor managers stated that they encourage open communication between workers and management but noted it is impractical to eliminate all pressure associated with a high priority project. The resident inspector agreed that pressure will almost always exist, but it remains incumbent on management to ensure pressure does not result in an environment that curtails communication, especially related to safety.

The TOC completed TSCR batch 2. Total waste processed in batch 2 was 182,863 gallons. Total waste processed during this campaign so far is 379,352 gallons. The system has been shut down to replace ion exchange columns in support of batch 3 processing.

**Liquid Effluent Retention Facility (LERF):** The Plant Review Committee (PRC) met to review additional changes to the LERF documented safety analysis and technical safety requirements (TSRs) which resulted from comments received from DOE headquarters personnel (see 7/8/2022 report). The changes eliminate unnecessary explanatory information from the TSRs, improve management of the interface between TOC and waste generators, and further improve the rigor of the controls protecting the material-at-risk assumption. The PRC voted to approve the changes and forward the document to DOE for approval.