

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 7, 2022

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** B. Caleca, P. Fox, and P. Meyer, Resident Inspectors  
**SUBJECT:** Hanford Activity Report for the Week Ending October 7, 2022

**Tank Side Cesium Removal (TSCR) Process:** Tank operations contractor (TOC) personnel successfully completed blowdowns of the TSCR process piping under the recently approved justification for continued operation (JCO), allowing entry into maintenance mode (see 9/30/22 report). A resident inspector observed the pre-job briefing and initial entries into the TSCR enclosure to perform radiological and industrial hygiene surveys. The pre-job was thorough, but a delay occurred because part of the process enclosure's heat pump system did not cool the ambient air as expected. As a result, additional physiological heat stress controls were required for entry. Personnel inside the enclosure found no contamination and lower than expected radiation levels during initial entry surveys. With surveys completed, TOC personnel could proceed with inspection and repair of valve position indicators, as well as improved camera coverage of valves. This will allow TOC personnel to perform future blowdowns compliant with the safety basis and revised technical evaluation.

**Fuels Facilities:** The Fuels Facilities Plant Review Committee (PRC) met to consider changes to the 200 Area Interim Storage Area (ISA) safety basis. These changes resulted from the Evaluation of the Safety of the Situation (ESS)/Justification for Continued Operation (JCO) related to cask storage at the ISA (see 8/12/22 and 9/23/22 reports). Additionally, DOE's Transmittal of Approval for the ESS/JCO contained one Condition of Approval and seven Operational Restrictions for the ISA. The PRC voting members unanimously concurred that all supporting tasks had been completed and approved implementation of the safety basis changes.

**Waste Treatment Plant:** While performing testing and preparation for heat-up of the first Low-Activity Waste Facility melter, plant personnel encountered higher than expected air in-leakage into the melter. They suspect the in-leakage is allowed by gaps between the refractory bricks and will be reduced as the refractory expands and they adjust the refractory support structures. However, the increased air flow in the off-gas system during heat-up results in higher heat loads in the off-gas systems, which under some conditions could damage off-gas system components. To mitigate the potential for damage, facility engineers have developed a temporary modification, which alters the control system and connects an additional air supply to the system to ensure a steady flow of cooling air. This modification is supported by several changes to alarm response and abnormal operating procedures resulting in a complex implementation problem for facility personnel. Management convened the Plant Management Review Board (PMRB) to evaluate all aspects of the change. At the first meeting, the PMRB decided to allow some of the required installations but withheld overall approval of the change pending finalization and review of the supporting procedure changes. They approved the change at a subsequent meeting. The resident inspector noted the deliberations were comprehensive, with all PMRB members fully engaged. The lack of support material, which the PMRB identified at the first meeting, was not fully resolved in time to support a thorough review by the PMRB. However, the procedures will undergo formal review under other processes prior to use.