

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 6, 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 May 6, 2022

Building 324: Facility personnel kicked off an Apparent Cause Evaluation (ACE) of the impairment to the facility's fire suppression system (see April 29, 2022 report). Facility personnel were engaged, and they documented a number of potential contributing factors leading up to the event. These observations included high staff turnover, the shift office not being manned over the holidays, failure to take protective actions after cold weather notifications were received, conflicting facility and contractor-level procedures for responding to freezing conditions, and infrastructure limitations leading to an undersized heating system. The contractor will continue its review and document its results as part of its ACE process.

Tank Side Cesium Removal (TSCR): The contractor's Plant Review Committee (PRC) met to review proposed Documented Safety Analysis (DSA) changes to address the potential for incorrectly connecting longer length hoses within the TSCR process enclosure (see April 8, 2022 report). The revision adds a clause to allow the processing of batch 2 using the shorter, DSA-compliant hose configuration previously used, and adds a new design feature that will make the outlet hose connections unique to prevent misrouting. The PRC voted to approve the changes.

Liquid Effluent Retention Facility (LERF): The contractor's PRC reviewed the latest draft of the LERF DSA, which includes updates to the unit sum of fractions values for material at risk and additional clarifying language on LERF basin operations. The PRC discussed the process to perform unreviewed safety questions for changes to the Interface Control Document governing transfers from the Waste Treatment Plant to LERF. The PRC voted to approve the DSA.

PUREX: Contractor personnel held an in-progress ALARA review (IPAR) after workers identified issues with performing asbestos abatement in contamination areas using the approved work instruction for the 203A, 205A, and 211A buildings. The instruction's precautions and limitations stated that abatement activities cannot be performed on locations where contamination exists. Work had been paused to review whether the procedure had a means of allowing removal of contaminated obstructions. Personnel determined that a section of pipe that had been abated had known contamination. IPAR participants stated that performing work on contaminated equipment would require a higher level of radiological controls and changes to the radiological work permit (RWP). While the participants did not believe they were exposed to airborne contamination, IPAR participants agreed that the work instruction and RWP needed revision to address work in the more contaminated 203A and 205A buildings.

Waste Treatment Plant. The contractor's Plant Management Review Board (PMRB) met to review a proposed abnormal operating procedure for restoring electrical power to melters during an extended loss of offsite power. Current analyses show that the melters can survive a power loss of at least 15 hours. However, at some point greater than 15 hours, the molten glass in the melters is expected to solidify to an unrecoverable state. The purpose of the procedure is to ensure that melter heater control is initiated within 2.5 hours and in place prior to the 10 hour mark to preclude loss of the melter. The PMRB identified several actions requiring resolution and subsequently postponed a vote to approve the procedure.