

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 9, 2021

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending July 9, 2021

Waste Treatment Plant (WTP): The Safety Basis Approval Authority conditionally approved revision 4 of the Documented Safety Analysis for the Low-Activity Waste (LAW) and Effluent Management Facilities (EMF) and the associated Technical Safety Requirements. The single condition of approval requires the WTP contractor to demonstrate, to the extent practical, that a correlation exists between the LAW Facility safety basis, including its hazard controls, and the as-built LAW Facility configuration. The contractor is required to provide their approach for establishing the correlation to DOE within 60 days and is required to complete this action on a schedule that supports the phased introduction of hazards into the facility.

Liquid Effluent Retention Facility (LERF): Because of last week's personnel contamination events (see 7/2/2021 report) during Basin 44 liner replacement, the project team has again modified the personal protective equipment (PPE) ensemble worn by individuals in an effort to reduce heat stress and the potential for personnel contamination. The revised ensemble includes a more impermeable coverall with extra sets of waterproof shoe covers, a rain bib, arm-sleeves, and muck boots. Additionally, the work start time has been moved earlier to reduce heat stress. Workers are also using new techniques to decontaminate the liner which are designed to reduce physical labor and provide more separation between the workers and the more highly contaminated surfaces. The modified work practices have resulted in more sustained work and lower contamination levels on the PPE of individuals exiting the work area.

Effluent Treatment Facility (ETF): Contamination was found on the modesty clothing of a worker who was exiting the thin film dryer room following a daily check of scaffolding. Unlike the events at LERF, sweat-through was not a factor and the clothing contamination most likely resulted from heavy contact and rubbing between the individual and potentially contaminated piping and other structures during the work. The event might have been prevented by the selection of a different type of anti-contamination coverall for the work, more diligent use of barrier material while leaning on or otherwise coming in contact with potentially contaminated surfaces, or a more thorough decontamination of the area prior to performance of the work. The facility manager suspended the associated work package pending a review of the event.

Tank Farms: The contractor's corrective action review board (CARB) met to evaluate an Apparent Cause Analysis (ACA) that was performed to identify the cause for an insulation interference issue that resulted in a positive unreviewed safety question determination (see 7/2/2021 report). The analysis noted that the insulation, which was installed as an engineering best practice, was not required to protect the system. Based on that consideration, the ACA team determined that cause of the problem was installation of equipment that was not required. The identified corrective actions focused on removal of unnecessary insulation, modification of an existing periodic surveillance to check for obstructions that might result in mispositioned valves, and the development and distribution of a lessons learned. During the meeting, several individuals raised concerns regarding the depth of the analysis and whether the proposed corrective actions would effectively prevent future recurrence of the event. Based on the concerns, the CARB determined that additional review was necessary and rejected the ACA.