

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 22, 2021

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 October 22, 2021

Waste Treatment Plant (WTP): Contractor management held an abnormal event investigation (AEI) meeting to obtain facts related to a lockout/tagout (LOTO) event that resulted in locks and tags being hung on the incorrect components. In this case, the errors did not place personnel at a risk of injury. However, the facts collected during the meeting revealed errors at three different stages in the performance of the LOTO activity. Each error was committed by a different person. Consequently, this case indicates a need for a thorough review of LOTO processes and related training. Facility management performed an extent of condition (EOC) review specific to the two individuals who hung the LOTO and will identify additional corrective actions after completing the AEI. The EOC review did not identify any additional issues.

Central Waste Complex (CWC): The safety basis approval authority approved the evaluation of the safety of the situation and the justification for continuing operation that the central plateau cleanup contractor submitted to address the unreviewed safety question related to the contractor's inability to visually inspect certain waste containers (see 9/10/2021 report). In addition, DOE approved a recovery plan that the contractor submitted to address the inoperable condition of the containers. The recovery plan essentially continues ongoing efforts to remove all mixed-waste containers from the CWC outside storage areas as specified under the Tri-Party Agreement. The Tri-Party Agreement requires all mixed waste containers to be removed from the outdoor storage areas before September 30, 2026.

Building 324: The contractor completed their first micropile by re-drilling a pilot hole to install a new casing, inserting a metal bar, and then grouting the hole. The contractor is currently moving its equipment to the second pilot hole. Once all four of the pilot holes are complete, the contractor will begin work on the remaining micropiles (see 6/15/18 and 11/30/18 reports).

Radiochemical Processing Laboratory (RPL): While performing an experimental activity with molten salt containing beryllium in an argon-purged furnace contained in a fume hood, RPL researchers noted fumes escaping from the vessel near its flange. They observed that the fumes drifted to the back of the fume hood (exhaust) and closed the fume hood sash. Since the fumes stopped after approximately 5-7 minutes and the pressures in the fume hood appeared to be normal, they allowed the melt to continue. After completion of the melt, the researchers shutdown the furnace and left the argon purge on. They intended to perform follow-up surveys for beryllium prior to leaving the laboratory to confirm that no beryllium had spread outside the hood but left prior to completing them because of a planned reduced ventilation outage. The researchers performed the beryllium surveys the next day and found that beryllium had escaped the hood, and subsequently reported the event. During a fact-finding meeting, attendees noted that a radiological physics technician (RPT) had performed radiological surveys in the room between the time the researchers had left and the discovery of beryllium contamination. Surveys of the RPT, their travel path, and their work area did not indicate a beryllium spread beyond the laboratory room. Access to the room is currently restricted until facility personnel develop and execute a re-entry plan to obtain more information