

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 8, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending March 8, 2019

DNFSB Staff Activity: D. Anderson, R. Jackson, D. Brown, J. Abrefah, and B. Caleca held discussions with RL and PRC representatives regarding the stabilization of the Radiochemical Engineering Complex (REC) structure during the retrieval of the contaminated soil from beneath Building 324, and the evaluation of nuclear safety hazard consequences related to the work.

Waste Treatment Plant (WTP): Analysis determined that obsolescence of the robotic based system installed to decontaminate Low-Activity Waste (LAW) Facility glass containers will result in substantial maintainability problems. Consequently, ORP requested that the contractor evaluate alternative methods for surveying and decontaminating the containers. The contractor evaluated options on the basis of cost, schedule, ALARA principles, and technical readiness. As a result, they have proposed a process based on manual decontamination of unacceptable containers using reach tools to minimize dose. Based on that proposal, DOE is removing contract requirements directing the use of the robotic carbon dioxide decontamination process.

Effluent Treatment Facility (ETF): A resident inspector observed the performance of an event investigation meeting that the TOC held to understand the causes that led to an uncontrolled release of potentially contaminated fluid during maintenance work in the ETF. The discussion at the meeting identified potential weaknesses in isolation of systems and the planning and release of work. The resident inspector notes that the time-line developed during the meeting was not complete, and that discussion threads related to the potential issues were not fully developed. Additionally, the attendees did not include individuals who isolated and drained the system. Consequently, the set of facts developed during the meeting relevant to the event is not complete and may not adequately support the development of mitigative or corrective actions to prevent recurrence without the performance of additional work by the event investigator. The DOE Facility Representative, who attended the meeting had similar observations.

Building 324: A resident inspector participated in a walk down of the work area where the contractor is preparing to drill pilot holes. The work is necessary to support radiological characterization of the soil beneath Building 324 in the area where the contractor will install micropiles to stabilize the REC. The resident inspector's intent was to obtain an understanding of the existing radiological conditions in the work area and the controls that the contractor will use to perform the work. The resident inspector noted that the planned use of temporary shielding and methods for controlling drill rig exhaust air appeared appropriate for the work. However, continued attention will be necessary during the work activity to ensure that the controls remain effective. The contractor's lead radiological control technician demonstrated good knowledge of the potential hazards, as well as the potential for changing conditions.

Tank Farms: The contractor is reviewing a preliminary design of the modifications that they will install in AP tank farm tanks to support tank-side cesium removal and delivery of waste feed to the WTP LAW Facility. They expect to complete the review in mid-March.