

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 25, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending January 25, 2019

DNFSB Staff Activity: M. Bradisse was onsite to support resident inspector activities.

Building 324: The contractor Hazard Review Board (HRB) reviewed preparations for pilot hole drilling in the basement of Building 324. This activity has the potential for high radiation exposure to workers although they do not expect significant dose readings on the removed soil. The HRB members noted that certain tasks of the work instructions had notes allowing steps to be taken out of sequence despite some steps in those tasks requiring hold points. Additionally, the subcontractor workers performing this activity have not previously performed nuclear work and the HRB members noted that their familiarity with the facility and response to abnormal events was weak. Because of the lack of experience, the resident inspector noted that the contractor will, in part, be relying on enhanced RCT presence and guidance to ensure proper responses if abnormal events occur. The resident inspector also noted to the work instructions contained steps requiring a response to “elevated dose rates” without defining “elevated,” and in one instance, the instructions allowed work to proceed after workers encounter conditions requiring work to stop without defining expectations for actions necessary to continue work other than a phone call to the radiological engineer. These conditions are similar to those that recently resulted in workers exceeding a radiological work permit limit (see 1/18/2019 report).

Tank Farms: The resident inspectors and a staff member observed work activities to remove a failed pump from AP-102. The performance by the work crew was very good and resulted in safe removal and movement of the pump to a waste box for grouting and disposal. The observers did note some minor radiological control deficiencies.

The contractor Plant Review Committee (PRC) reviewed an amendment to the Tank Farm DSA and TSRs that modifies the controls associated with AY-102. This change, which removed the applicability of controls related to ventilation flow for AY-102, was previously reviewed and approved by the PRC (see 11/16/2018 report). However, after PRC approval, contractor nuclear safety determined that, due to the presence of residual waste in the AY-102 annulus, the change resulted in a control approach that was not consistent with their overall strategy for flammable gas monitoring and control. Consequently, the amendment was revised before it was sent to ORP for final approval to include continued flammable gas monitoring of the AY-102 annulus. The PRC approved the revised amendment pending resolution of a question regarding conservatism of the waste temperature parameter used to determine the hydrogen generation rate.

Waste Receiving and Processing Facility (WRAP): A resident inspector and a staff member observed an Incident Command Post (ICP) limited drill that postulated an airplane crash into a waste storage building located near the WRAP facility. The execution and evaluation of the drill was good, and performance by the ICP staff was satisfactory. The drill did reveal some deficiencies in communication system performance, a need for improved chain of command clarity, and a need for improved tracking of event information on available status boards.