

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 11, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: M. Bradisse, B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending September 11, 2020

Pacific Northwest National Laboratory Radiochemical Processing Laboratory (RPL): An alarm occurred on a Personal Contamination Monitor (PCM) that was used by an individual exiting a Radiological Buffer Area. A Radiation Protection Technologist (RPT) performed a survey of the individual and identified contamination on the individual's left shoe. After removal of the shoe, which was bagged and retained for further analysis, the individual was able to pass through the PCM without causing an alarm. Surveys of other individuals in the area did not detect any contamination on those individuals. During a critique, attendees noted that the RPL staff member had been participating in a radiological material storage area inspection that was being performed as a follow-up to a previous contamination event involving stored legacy material (see 8/17/2020 report). Surveys performed by an RPT on stored items during the inspection did not identify any contamination but, during a survey following the event, RPTs did identify contamination on a large area wipe taken on the floor of the room where the legacy material is stored. However, since other radiological work was occurring in the room, the source of the contamination could not be immediately identified. Consequently, facility personnel are performing further evaluations in an effort to determine the contamination source.

Tank Farms: The DOE-ORP Senior Review Board (SRB) met to evaluate a proposed change to the Tank Farm Documented Safety Analysis (DSA). The primary focus of the amendment was to expand coverage of an existing safety-significant safety instrumented system (which automates collection of data related to safety basis freeze protection requirements) to additional tank locations. The SRB recommended approval of the DSA amendment.

Building 324: A resident inspector observed a contractor management review of a draft revision of high contamination area training for Building 324. The training includes the use of a new mockup-up area that is intended to support practical evaluations of activities workers perform in and around high contamination areas. Although not complete, the training significantly improves the facility staff's ability to learn and demonstrate useful skills, especially related to the use of respiratory protection with double sets of anti-contamination clothing.

Emergency Preparedness: Contractor personnel conducted an evaluated drill at T-Plant, the second such drill conducted by a Plateau Remediation Contractor drill team since the Covid-19 partial stop work order. The Resident Inspector notes that the drill controllers applied lessons learned from the first evaluated drill. In particular, the controllers more clearly communicated expectations for drill conduct and use of props, resulting in a more robust drill activity (see report for week ending 9/4/2020) that demonstrated improved drill conduct and allowed more effective evaluation of emergency response personnel. However, contractor personnel noted during the hotwash that drill execution could be improved further. In particular, they observed that the simulation of some activities reduced the realism of the drill by causing the drill scenario to develop too quickly. The Resident Inspector further notes that some other elements of the scenario could have been designed to more greatly challenge the players.