

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 28, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending June 28, 2019

DNFSB Chairman Visit: B. Hamilton, Chairman of the DNFSB, visited Hanford site. The purpose of his visit was to view and obtain information regarding the status of ongoing nuclear activities. The Chairman met with senior DOE and contractor leaders, and visited facilities that are currently or will be performing high-hazard nuclear operations and work activities.

Building 324: After performing work to decontaminate room 18 following last week's contamination spread (see 6/21/2019 report), an exit survey discovered contamination on the skin of a worker's arms as well as on his modesty clothing. This is the fourth case of personal clothing and the first case of skin contamination since February. Discussion during a critique noted that the work required close proximity to the most highly contaminated areas and equipment within the room. Participants also noted that the environmental conditions inside the room, along with the need for multiple layers of anti-contamination clothing, create the potential for wicking of contamination through the permeable anti-contamination coveralls. Contractor management suspended work inside room 18 and will perform a commonality review of the recent contamination spreads. Along with DOE and contractor management, the resident inspectors note that the frequency and severity of the contamination events during work activities is increasing. Additionally, there have been three recent cases where contamination was found outside of a contamination area and the contractor has not identified a clear source for the spread. Consequently, in addition to ongoing efforts by the contractor, a broader re-examination of the current facility contamination control approach may be warranted. At the time of the event, workers were drilling the second pilot hole; plans include two more pilot holes followed by approximately forty drilling evolutions to install micropiles and permeation grouting tubes.

Tank Farms: The contractor's Plant Review Committee (PRC) met to evaluate a change to the Tank Farm Documented Safety Analysis and Technical Safety Requirements that the contractor developed to implement the use of recently installed safety-significant ventilation flow monitors (see 5/24/2019 report). The new system monitors double-shell tank (DST) ventilation flow and provides alarm indication in the Tank Farm Central Control Room when flow requirements do not meet required conditions. The safety-basis change will modify TSRs to define system operability and the necessary actions in response to an alarm condition. The change will also delete or modify TSR requirements that ensure appropriate ventilation flow conditions for the DSTs. The PRC recommended approval of the amendment.

242-A Evaporator: The contractor ran the evaporator to retain proficiency in its operation. Since the existing evaporator feed and slurry lines are out of service for replacement, the evaporator run did not demonstrate the normal continuous feed in or slurry out processes that normally occur. However, it did support evaluation of system operability, including operation of the recently refurbished recirculation pump, and provided operators an opportunity to retain proficiency using a real operational environment.