

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 30, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending August 30, 2019

Waste Treatment Plant (WTP): WTP contractor personnel are resuming High Level Waste (HLW) facility process hazard analysis activities. The analysis team briefed ORP and WTP contractor managers regarding their readiness to start the work and noted that their analysis process will leverage lessons learned from hazard analyses performed during the development of the Low Activity Waste facility DSA. Their initial efforts will focus on the HLW melter feed system. They also intend to use this initial effort to refine their process and improve the rules and assumptions that support the process.

Building 324: The Building 324 pilot hole drill team continues to encounter radiological challenges during drilling activities. Last week, a continuous air monitor (CAM) alarm occurred shortly after workers in Room 18 had secured the pilot hole drill rig to install another section of drill pipe; they had not yet opened the system. The workers, who were wearing powered air purifying respirators, exited per their response procedure. Samples determined that airborne contamination levels within the room did not challenge the protection factor of their respiratory protection. A likely cause of the CAM alarm was contamination dislodged from overhead areas by an unauthorized movement of a temporary ventilation system duct that provides cooling to the room. The contractor is briefing facility personnel regarding the event and is placing additional controls on the ventilation system. They also decided that, considering the nature and location of their work, the CAM alarm was set too low and have adjusted the setting to a higher level to prevent unnecessary alarms that force egress of the work crew under less than ideal conditions.

This week, during a routine exit from Room 18, a worker alarmed a personal contamination monitor and was found to have contamination on his scalp; he was successfully decontaminated. A review of the worker's exit and personal protective equipment doffing did not identify any issues. However, workers revealed that during the previous entry while drilling, dust was visible escaping the drill rig for some time before work was paused. Facility operations had not been notified of this event. An investigation determined that a valve supplying dust suppression water to the drill was closed the day prior and had not been reopened before starting work. Facility operations is placing additional controls on operation of the dust suppression water system.

105KW Basin: Workers exited the basin due to exceeding a contamination limit on a length of poly rope. This event is similar to previous contamination events with drop light cords that came into contact with contaminated basin water (see July 26, 2019 report). The contractor held a critique to discuss the event, which revealed that the use of the poly rope was approved by operations personnel despite the implementation of a timely order intended prevent this type of contamination event; this timely order should have precluded the use of rope to perform the activity. In addition, radiological control technicians did not use high contamination controls as required when performing surveys of the rope. Based on the critique, facility management intends to use high contamination controls for all manipulation and movement of basin tools to prevent recurrence of these events and will reinforce expectations set forth in the timely order.