

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 1, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending November 1, 2019

Plutonium Finishing Plant (PFP): Contractor personnel completed lower risk demolition at PFP. Management is documenting lessons learned from the lower risk demolition phase while the project prepares for the start of higher risk demolition during the first week of November.

Building 324: A worker, who had been performing drilling activities discovered that his electronic dosimeter (ED) indicated a dose rate alarm when it was read upon exiting Room 18. Management had his ED and his whole body and finger-ring dosimeters (TLD) sent for analysis. Facility management held an in-progress ALARA review after the TLD results indicated a significant whole body and extremity dose from work performed over 16 entries into Room 18. Although the TLD readings did not challenge the site's administrative dose limit for radiation workers, management wanted to understand any radiological conditions or work practices that contributed to the TLD readings. They determined that the TLD readings reflect the fact that this individual performs many of the higher dose tasks that involve manipulating contaminated drill components. Prior to this event, two individuals were being trained in these specific tasks, which participants recognized as a good practice to spread dose among multiple workers in future work evolutions. Participants also discussed shielding, dose rates in the room for different tasks, personal protective equipment, and more frequent TLD readings to track personnel dose in a timely manner. Management also determined that, based on radiological surveys, the nature of work activities, and the approximately one second duration of the high dose rate, the most likely cause of the ED dose rate alarm was an issue with the ED.

Tank Farms: The Tank Farms Operations Contractor completed their investigation related to equipment failures that interrupted AX-102 tank retrieval (see 9/20/2019 report) and have developed a path forward for both the PUREX connector leak on sluicer two and the damaged piston on sluicer three. The plan moves retrieval of tank AX-102 forward using the existing equipment with some operational limitations after repairs are complete, but will also incorporate design improvements to prevent similar events during future retrievals.

Hanford Site Public Meetings: A public meeting was held between DOE and the Nuclear Regulatory Commission (NRC) team that is reviewing DOE's draft Waste Incidental for Reprocessing Evaluation for closure of C tank farm. During the meeting, DOE outlined information that they have provided to the NRC team to address their recent request for additional information. The NRC team is expected to issue their evaluation early next year. Additionally, a National Academies of Sciences (NAS) team that is performing a congressionally mandated review of an analysis produced by a Federally Funded Research and Development Center (FFRDC) related to supplemental treatment approaches for low-activity waste at Hanford held a public meeting. During the meeting, the FFRDC team who developed the report provided feedback to the NAS review team regarding actions taken to address review team comments on the draft report. Additionally, the NAS team received comments from various stakeholders who might be affected by DOE decisions that may result from the report.