

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 16, 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 16, 2019

DNFSB Staff Activity: D. Brown was on site for resident inspector augmentation. M. Dunlevy was on site for site familiarization.

Tank Farms: The Safety Basis Approval Authority approved an amendment to the Tank Farms DSA that supports the use of recently installed safety-significant ventilation flow monitors (see 6/28/2019 report). The Tank Farms Operations Contractor (TOC) intends to implement the amendment before the end of the fiscal year. Implementation of the amendment will close Action 2-4 of DOE's Implementation Plan that addresses Board Recommendation 2012-2, *Hanford Tank Farms Flammable Gas Strategy*.

The TOC transferred approximately 364,000 gallons of waste from double shell tank (DST) AP-106 to DST AP-102. The transfer supports DOE's preparations to use DST AP-106 for staging of supernate after it is processed through the tank side cesium removal system and before it is transferred to the Waste Treatment Plant for vitrification in the Low Activity Waste facility.

Plutonium Finishing Plant (PFP): Contractor emergency planning personnel conducted a field drill to support qualification and proficiency of individuals assigned to the facility emergency response organization. The results of the drill revealed significant weaknesses in radiological control performance and the response team did not have adequate equipment at the scene to effectively support their response. Observers also noted initiation and simulation weaknesses that contributed to the less than adequate field performance noted during the drill. Lastly, evaluators did not critically evaluate the field performance during the post-drill hotwash; many significant deficiencies were noted by observers and players rather than the controller/evaluators.

Waste Treatment Plant (WTP): The WTP contractor has proposed using DOE Standard 1228-2019, *Preparation of Documented Safety Analysis for Hazard Category 3 DOE Nuclear Facilities*, to remove the controls for most chemical hazards from the Low Activity Waste Facility DSA. If this approach is approved by DOE, chemical hazards screened as standard industrial hazards would be controlled under a strengthened Chemical Safety Management Program. The contractor is currently developing the details to support their proposal.

222-S Laboratory: Based on observations made by the DOE Facility Representative and a management review, laboratory management modified the Apparent Cause Analysis associated with a fire in one of the laboratory's thermal desorption units (see 7/12/2019 report). The modifications also address the issues reported in the 8/9/2019 Resident Inspector Weekly Report.

Building 324: Pilot hole drilling in room 18 has resumed with improvements to contamination control following past contamination events in the room (see 6/28/2019 report). These new controls include drill rig modifications, additional cooling to prevent heat stress, impermeable outer personal protective equipment, a new egress route, and revised doffing practices.