

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 12, 2018

TO: S. A. Stokes, Technical Director
FROM: P. Fox, Hanford Resident Inspector
SUBJECT: Hanford Activity Report for the Week Ending January 12, 2018

Plutonium Finishing Plant (PFP). A contractor team continues to work on a causal analysis to identify root causes for the December contamination spread events (see activity report 12/22/2017). Contractor management has tasked the team to finish the report before January 18, 2018. However, DOE RL has made it clear during team meetings that the results of the ongoing effort are more important than achieving the schedule.

DOE RL sent a letter reiterating that the contractor is not authorized to perform any demolition work, rubble/debris load-out or work other than identified stabilization activities until the situation at PFP is fully stabilized and DOE RL is briefed on and concurs with a path forward. DOE RL further directed that the contractor maintain sole focus at PFP on the health and safety of the workforce by addressing worker concerns, ensuring that facility, debris and rubble piles are stable, and mitigating the potential for additional contamination spreads.

Waste Treatment Plant (WTP). The contractor completed a redraft study that allows upgrade of the Low Activity Waste (LAW) Facility carbon dioxide vessel sloped pad safety classification to safety significant. The upgrade was necessary because the recently completed process hazard analysis determined that a fire under the vessel could result in an explosion of the vessel with unacceptable radiological and chemical release consequences. Therefore, a sloped pad is necessary to prevent accumulation of flammable/combustible liquids under the vessel. The contractor concluded that the existing sloped pad, as designed and installed, meets defined functional requirements and key attributes. No additional analyses or inspections are required prior to upgrading its safety classification.

Tank Farms. The contractor has initiated a predictive maintenance pilot project. Their goal is to implement, test, and evaluate predictive maintenance techniques such as vibration analysis, ultrasonic detection, thermography, and motor current signature analysis on tank farm equipment and assess their ability to improve waste transfer equipment availability, decrease tank farm maintenance costs, and improve tank farm ability to supply feed to the waste processing facilities. The project team's initial trial will focus on tank farm primary exhausters.

Hanford Site. RL and ORP announced their acquisition strategy for replacement of the expiring contracts that support site work. Hanford site work other than WTP construction is divided into five new contracts that are similar to existing contracts including one each for Hanford Mission Essential Services, Tank Waste Cleanup, Central Plateau Cleanup, Hanford Occupational Medicine Services, and 222S Laboratory Services. The first three contracts, which will be the largest, will have a five year base performance period, plus two options, with a maximum performance period of ten years. When compared to existing contracts, the most significant scope change is in the Tank Waste Cleanup contract. The scope of this contract will include feed of waste to WTP and integrated operation of the WTP LAW Facility, Analytical Laboratory, Effluent Management Facility, and Balance of Facility in the direct feed LAW configuration.