

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 27, 2019

**TO:** Christopher J. Roscetti, Technical Director

**FROM:** B. Caleca and P. Fox, Hanford Resident Inspectors

**SUBJECT:** Hanford Activity Report for the Week Ending September 27, 2019

**DNFSB Staff Activity:** M. Bradisse was onsite to provide resident inspector augmentation.

**Waste Treatment and Immobilization Plant (WTP):** Over the past three weeks, WTP contractor personnel held a series of process hazard analysis (PrHA) meetings to analyze potential accident scenarios for the High Level Waste facility (see 8/30/2019 report). The processes they used were similar to those they recently demonstrated for PrHAs they might perform for removing chemical hazard controls from the Low Activity Waste facility DSA if DOE approves their use of DOE Standard 1228-2019 (see 8/16/2019 report). In both cases, the contractor established a relatively small core team composed of four to five contractor personnel that were present for the bulk of the meetings. Other subject matter experts (SMEs) were on call, but not usually present (see 9/13/2019 report). DNFSB staff members observed several meetings for both series of PrHAs. They noted that although the SMEs were nominally available, they were seldom called in for assistance when questions arose. The result was extended and inefficient discussions regarding potential accident scenarios. The same lack of SME coverage may also affect the quality and comprehensiveness of the hazard analysis and result in the failure to identify necessary hazard controls. Additionally, there was not a clear agreement among core team members regarding the classification and identification of creditable design features, which could lead to failures in appropriately capturing the controls in the hazard tables. Finally, the staff members noted a general lack of formality in meeting structure and conduct.

**Tank Farms:** The Tank Farm operations contractor implemented the change to the Tank Farm DSA that supports use of the new safety-significant ventilation flow monitoring equipment that was installed in response to Board Recommendation 2012-2 (see 8/16/2019 report).

**Building 324:** Despite ongoing efforts to improve contamination control (see 9/13/19 report), two modesty clothing contamination events occurred this week for workers performing unrelated activities. In-progress ALARA reviews (IPARs) were held, and laboratory analysis indicated two separate types of contamination involved. Contractor management has suspended intrusive work activities pending additional review of radiological control practices at the facility.

**Plutonium Finishing Plant (PFP):** Facility management held an IPAR following a radiological work permit (RWP) violation in the demolition area during an emergency preparedness drill (see 9/20/19 report). The IPAR determined that radio direction that resulted in the RWP violation did not come from the incident command post as initially reported, but from another unidentified source. Though not formally exempted from the drill, demolition crew workers had been briefed at their own pre job meeting that they were not participating in the drill, leading to the initial confusion when directed to egress and proceed to a take cover facility. The resident inspector notes that the IPAR was held almost a week after the event, and the meeting lacked personnel such as drill controllers or players in the mockup that may have provided more context about events leading up to the RWP violation.