

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 19, 2019

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** B. Caleca and P. Fox, Hanford Resident Inspectors  
**SUBJECT:** Hanford Activity Report for the Week Ending April 19, 2019

**Radiochemical Processing Laboratory.** Facility management discovered that the fault current for a number of electrical components in the facility exceeds the short circuit current rating for the equipment or ampere interrupting capacity of the associated circuit breaker, and subsequently determined that this condition results in a potential inadequacy of the documented safety analysis. They have implemented compensatory measures and are performing an unreviewed safety question determination to evaluate the condition. The conditions found are similar to those recently found at a number of other site facilities (see 1/11 and 1/18/2019 reports).

**Plutonium Finishing Plant (PFP):** The project team completed their checklist and declared readiness to start a Management Assessment. The Management Assessment, which is required as part of the demolition resumption plan (see 7/13/2018 report), is being conducted to ensure that they are ready to safely perform remaining high hazard demolition activities including demolition of the 234-5Z process areas, removal of specific drain pipes from the tunnels below 234-5Z, and recovery and disposal of the remaining Plutonium Reclamation Facility debris.

Contractor personnel held an operational drill inside of the high contamination area (HCA) of the PFP demolition site. The scenario simulated a breached waste drum that resulting from a forklift handling accident caused by an ill operator. The scenario also included concurrent demolition work by a second team on the opposite side of the facility, which was also required to respond to the event, and resulted in an Alert level emergency. Initial response by both work teams and the incident command post (ICP) was timely and appropriate. However, communication between work crews in the HCA and communication with the ICP by radio remain a concern (see 4/5/2019 report), and the ICP's one working land line was inoperable. Most notably, because of poor communications, the building emergency director was not aware that the exit route for the ill operator was different than intended. This in turn required repositioning of the emergency responders. In addition, workers did not always respond appropriately to changing wind conditions. These weaknesses were self-identified by participants in the post-drill hot wash.

**Hanford Site:** A phase to ground short occurred on a 13.8 kilovolt field switch. This led to a trip of a breaker that supplies power to a significant part of the 200E and 200W areas. The primary cause was exacerbated by a breaker trip coordination issue between the affected feeder breaker and the main breaker which resulted in the main breaker clearing the fault vice the feeder breaker. This, in turn, resulted in a substantial increase in the area affected by the event. The loss of power lasted approximately an hour and a half and shutdown operations throughout the tank farms, the 222S laboratory, and PFP worksite, as well as other facilities. Recovery from the loss of power affected work at the facilities throughout much of the day.

The Emergency Management Program conducted a protective action drill to fulfill an annual requirement. The drill applied to facilities and work in the 100, 200E, and 200W areas.