

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 8, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending February 8, 2019

DNFSB Staff Activity: P. Foster was onsite to support resident inspector activities.

105-KW Basin: The resident inspectors met with contractor personnel to discuss their response to the previously identified underrated electrical breakers (see 1/11/19 report). While the contractor recently completed extent-of-condition review that identified underrated breakers in other onsite facilities, this discussion focused on the compensatory actions put in place at 105-KW. The contractor has issued a timely order restricting the access to and operation of the underrated breakers located in four motor control centers (MCCs). The resident inspectors walked down the MCCs to observe the postings associated with the minimum approach distance documented in the timely order and the condition of the electrical equipment. Three of the MCCs are isolated from day-to-day activities, but the fourth is located in a room routinely accessed for tool storage. The resident inspectors requested and received documents related to the electrical modeling that identified the underrated breakers and is currently reviewing them.

Tank Farms: The resident inspector observed a work team's initial response for a field drill that simulated a facility fire requiring evacuation of the building. The drill scenario and its execution was more complex than usual since it involved team egress from an actual contamination area vice a simulated contamination area. This increased the realism of the drill, but also increased the importance and difficulty of the drill team's control of the exercise. The resident inspector observed that the drill team was prepared and able to effectively control the exercise. However, initial worker response to the event was below average. For example, the team had to be prompted to call the emergency number and, although the team had the equipment and expertise to initiate response actions, they waited for the facility emergency response organization (FERO) to respond. The FERO response was also slow considering the urgency of the simulated event.

The resident inspector observed the 90% design review meeting for the Test Bed Initiative (TBI) project. Significant design changes include the addition of heat trace for process piping and heating blankets for waste totes. The review team questioned the effects of low ambient temperatures, including changing the physical properties of waste, and freezing of the pressure relief valve (PRV) credited to mitigate or prevent most plugging or pressurized release scenarios.

The contractor performed a Process Hazard Analysis event and a hazard control selection meeting to address TBI design changes following the 90% design review. The most significant proposed change moves the PRV into the tank head space to preclude it from freezing.

222-S Laboratory. Eleven workers were sent to the clinic for evaluation after experiencing odors in a stairwell that resulted in symptoms including metallic taste, headaches, and nausea for some of the workers. The specific cause could not be determined. The facility manager has isolated the area and is developing a re-entry plan to further investigate for potential causes.

Hanford Site. A snow storm shut down non-critical site work for twenty hours.