DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 3, 2017

MEMO TO: Steven Stokes, Technical Director
FROM: Ramsey Arnold and Zachery Beauvais
SUBJECT: Pantex Plant Report for Week Ending March 3, 2017

In-Service-Inspection (ISI) Near Miss: While evaluating tracking and trending information for the safety class electrostatic dissipative floor covering, the system engineer identified a discrepancy in the completion of an ISI. Specifically, the ISI requires electricians to perform resistance measurements at 18 separate locations, to verify the floor covering provides a sufficiently conductive path to ground. Results of one of the required measurements were not noted on the work order (WO), indicating that it may not have been performed. The procedure implementing the ISI requires dual verification of all measurements, and work authorization practices require post-review by the facility owner to verify completion of all ISI steps. The WO included signatures indicating both of these actions were completed, however neither barrier caught the missed measurement. CNS conducted a fact-finding review of the incident and discovered that the work had been performed outside the window authorized for its completion. Electricians performed the missed measurement, completing the ISI before its expiration.

Emergency Response Drill: A resident inspector observed an emergency response training drill conducted by Fire Department (FD) and Radiation Safety Department (RSD) personnel. The scenario involved a simulated radiological waste drum spill, contaminated and critically injured victims, and the spread of contamination in the event vicinity. This was the third execution of the drill in an effort for all FD shifts to train to the drill (see 1/27/17 report). While the first two drills demonstrated response capabilities and allowed each department to identify best practices, including interface improvements with the other department, the third drill was not successful in accomplishing this. Controllers paused and then ended the drill prior to completion due to less than adequate emergency response from the participants. Primarily, the communication between the FD and RSD was not effective and the critically injured, contaminated victims were not removed safely from the incident scene in a timely manner or provided appropriate medical and decontamination attention. The limited number of responders from each department—a possibility in a real emergency—contributed to the poor performance. RSD personnel arrived at the incident scene before the FD, which participants noted was uncommon. This may have caused confusion with regard to the incident scene command structure, leading to the establishment of hot and cold contamination control lines in a manner that did not facilitate emergency response. EMD plans to re-execute the drill with the same personnel.

High Pressure Fire Loop (HPFL): Following inquiries from NPO leadership, CNS briefly paused nuclear explosive operations, in order to assess the adequacy of compensatory measures relied upon to address a recent positive unreviewed safety question (PUSQ) related to HPFL pump operability (see 2/24/17 report). NPO and CNS determined the compensatory measures to be adequate, and the pause was lifted after approximately 2 hours. The HPFL remained operable through the pause. CNS continues to develop a justification for continued operations to address the PUSQ. Additionally, a resident inspector accompanied NPO operations personnel on a walkdown of HPFL pump houses. During the walkdown, they identified the following concerns: calibrated thermometers that were over three weeks past their required calibration date, a fire door between pump house rooms was propped open, unattached or missing component labels, and other instances of poor housekeeping.