DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 21, 2022

TO: Christopher J. Roscetti, Technical Director
FROM: J. Anderson and C. Berg, Acting Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending October 21, 2022

Staff Activity: Due to a contamination event over three decades ago, one facility at Pantex—previously used for nuclear explosive operations—has remained inactive. This facility has since been decontaminated and is currently a non-nuclear facility. CNS is assessing facility modifications in order to again use this facility as a nuclear explosive cell. The acting resident inspectors began discussions with NPO and CNS regarding whether facility upgrades would constitute a major modification per DOE Standard 1189.

Lockout/Tagout (LOTO): Last week, while executing a work order to replace sprinklers in a non-nuclear facility, CNS infrastructure personnel inadvertently cut into an energized one-inch water line at a pressure of approximately 150 psig. No injuries resulted from the incident. At the investigation, participants noted various factors contributing to the event, including deficiencies during both work planning and execution. For example, despite multiple CNS organizations reviewing the work package, it identified an incorrect LOTO point (i.e., the wrong post indicator valve) to isolate the line from the water supply. As a result, despite the valve being locked out per procedure, the water pipe was still pressurized. The work package also failed to include specific instructions for dissipating and verifying absence of energy prior to cutting the pipe. Further, during work execution, CNS infrastructure personnel did not check for absence of energy and dissipate line pressure, by opening the wet pipe system main drain valve, per general impairment procedures. In response to the resulting leak, CNS identified the correct LOTO point and manipulated the valve to isolate the water line. CNS categorized the incident as an unintended personal contact with a hazardous energy source. As a corrective action, CNS plans to conduct retraining for the infrastructure personnel. The acting resident inspectors questioned whether any actions would be considered to address work planning deficiencies. CNS participants noted that such actions would be discussed during an upcoming causal analysis.

Nuclear Explosive Safety (NES): While performing receipt and inspection of a nuclear explosive, prior to commencing disassembly operations, production technicians visually identified that the unit configuration—i.e., the position of an indicator—differed from the expected condition. CNS paused operations and determined the configuration was safe and stable. A few months ago, CNS found a unit on the same program in an identical configuration and plans to apply a similar process to disposition this unit (see 7/29/22 and 8/26/22 reports). Specifically, CNS plans to apply existing processes to ascertain the state of health of the nuclear explosive, via an electrical test, prior to commencing further disassembly operations. The project team requested authorization to perform these operations in a multi-unit environment, as well as conduct this same process on any future units. This week, NNSA convened a NES change evaluation to assess the proposal. The study group documented zero findings and four deliberation topics in its report, noting no NES concerns with the proposed operations—including a NES rule deviation—when limited to the unit assessed during the evaluation. In its transmittal of the report to CNS, NPO identified that application of these operations to any future units in this configuration should be assessed through NES change control.