DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 19, 2021

TO: Christopher J. Roscetti, Technical Director
FROM: A. Gurevitch, M. Bradisse (acting), and C. Berg (acting), Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending November 19, 2021

Staff Activity: The resident inspectors observed a demonstration of a newly-proposed process for a particular unit with a cracked component; this damage had prevented disassembly via the normal process. Pantex personnel had previously developed a nuclear explosive engineering procedure to authorize work on this unit (see 6/4/21 report). Though the plant has properly executed this procedure, due to an unexpected attachment of other undamaged components, the unit in question still has not been successfully disassembled. Earlier this month, CNS modified the procedure to allow technicians to employ gravity in an attempt to separate the stuck components. The new process will be used should this second procedure fail. A nuclear explosive safety change evaluation for the newly-proposed process is scheduled for next month.

CNS and NPO are discussing potential revisions to the criteria associated with declaring violations of the technical safety requirements for both Pantex and Y-12. The resident inspectors discussed these potential changes in an informal meeting with CNS safety analysis engineering personnel this week.

Operations: Last week, two separate events regarding material movements were identified where personnel moved incorrect special nuclear material (SNM). At the first event, the SNM was moved from a staging to an operational facility. Several personnel from multiple departments responsible for transfer and receipt of the item performed the required verification checks but failed to identify that the incorrect item was transferred. In the second event, the SNM was moved between rooms within a different facility months previously. Again, personnel involved with the transfer performed the required verification checks but failed to identify that the incorrect item was transferred. At the investigation for the second event participants noted that the similarity of serial numbers and subsequent incorrect container labeling contributed to the confusion. The resident inspectors further noted that the participants acknowledged the similarity of the events and linked the corrective actions, which included retraining and briefings on the verification check process for all personnel involved.

Last week, CNS released for work all remaining operations that were paused because of the recent electrostatic discharge event (see 9/3/21 report). This release to work was contingent on NPO's approval of a justification for continued operations for using certain radiation-shielding aprons (see 11/12/21 report) and a recent memorandum from the assigned nuclear explosive safety study group (see 10/29/21 report).

Safety Basis: Last week, CNS safety analysis engineering personnel issued an evaluation of the safety of the situation in which they determined that the most recent batch of discrepant special tooling weights—catalogued as part of an ongoing assessment—did not represent an unreviewed safety question (see 10/29/21 report). The hazards impacted by the changes either screened per the existing weapon response or were otherwise adequately controlled by the existing safety analysis.