

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 20, 2022

TO: Christopher J. Roscetti, Technical Director
FROM: A. Gurevitch, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending May 20, 2022

Staff Activity: A. Gurevitch attended training courses on Pantex facility safety systems and nuclear explosive testers. M. Bradisse augmented resident inspector coverage remotely.

Management and Operating (M&O) Contract: This week, NNSA announced that it would cancel the competition for the combined M&O contract for Pantex and Y-12, and extend the current contract held by CNS. NNSA anticipates this extension to be at least two years in duration. NNSA further announced its intent to separate the M&O contracts for Pantex and Y-12, returning to a model where each site is managed by its own contractor and overseen by its own NNSA field office element.

Planned Improvements: Last week, NPO issued a safety evaluation report (SER) approving a safety basis change package requesting the closure of two planned improvements and revising one incorrectly screened hazard associated with a particular weapon program. The first planned improvement pertained to units in workstands, and the weapon response values associated with compression of components following failure of certain tools. Initially, CNS committed to request an updated weapon response from the design agency for scenarios of concern; however, CNS later elected to assume a conservative weapon response—as allowed by the safety basis development process—and credit existing engineered features to prevent excessive compression of components while operating the workstand. The second planned improvement pertained to application of weapon response rules for two impact scenarios involving transportation carts. For one scenario, it was determined no changes were necessary and that the existing rule could be applied. For the other scenario, it was determined that the applied weapon response rule did not match the accident parameters (i.e., the rule assumed an impact force less than that of the accident scenario). CNS therefore elected to apply a different weapon response rule that bounds the second accident scenario. The SER notes that this new rule does not change the consequence or frequency of the accident. Lastly, the safety basis change package corrected an issue with another inappropriately applied weapon response rule; however, the scenario in question is adequately controlled by existing personnel evacuation measures. NPO issued the SER without any conditions of approval. The DNFSB staff is evaluating the closure of these and other legacy planned improvements as part of an ongoing review (see 12/17/21 report).

Operations: Last Wednesday, several nuclear explosive bays lost primary electrical power while craft personnel conducted routine maintenance on a chiller. Following the maintenance, a ground fault occurred and caused a main breaker to trip causing loss of power to several facilities. The safety-related emergency lights activated as designed, allowing technicians to place units in safe and stable configurations, as needed. Additionally, blast door interlocks switched to backup power, and personnel subsequently evacuated as intended. CNS restored primary electrical power the next day. At the critique, participants discussed the age of this equipment, which is original to the facility and approximately 35 years old.