

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 9, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: Miranda McCoy, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending October 9, 2020

Safety Basis: Late last week, CNS safety analysis engineering (SAE) personnel declared a potential inadequacy of the safety analysis (PISA) for water exposure hazards on one weapon program. SAE personnel received new information from the applicable design agency that identified a previously unpostulated hazard for water exposure to one component. The specific hazard is currently not controlled in the safety basis. This week, SAE personnel determined that the PISA presented a positive unreviewed safety question due to the potential for a new accident scenario without a control set. CNS implemented an operational restriction to require a minimum of thirty minutes between certain operations on units from the affected program.

Nuclear Explosive Safety (NES): NNSA conducted two NES change evaluations (NCE) this week. One NCE evaluated proposed changes to radiographic image processing for verification of safety features. The proposed new system replaces the current system for overlaying guides on the radiographic image to allow for ease of verification. The NES group evaluated the use of the new system for one weapon program. The NCE concluded with no findings and three deliberation topics that the NES group was able to conclude posed no issue to safety.

The second NCE evaluated a proposal for an alternate configuration for units from one weapon program to be radiographed and staged in nuclear explosive bays. The proposal is aimed at increasing site productivity; it would allow units to be built to the specified configuration and radiographed without waiting for receipt of delayed components. Both the NES study group and the resident inspector note that the proposal allows for essentially indefinite staging times of the units in the specified (non-ultimate user) configuration; staging time would depend on Pantex's receipt of delayed components. The units would be staged in an enhanced transportation cart I (ETC-I), potentially beyond the grace periods for the ETCs' in-service inspections (ISI). NPO has previously approved staging of units in ETCs beyond the ISI grace periods in unique circumstances, such as COVID-19 related difficulties or single units that require lengthy work to disposition (see 5/29/20). CNS may also need to perform additional movement and handling of the units to meet facility ISI requirements. The NES study group also discussed concerns regarding implementation of a NES requirement for two-person concept. The two-person concept requires either zone coverage—provided requirements are met, such as configuration or use of protective design features—or stringent person-to-person coverage. The NES study group concluded with five deliberation topics: two discussing the form and scope of information provided by the project team, and three involving concerns and questions with the process itself.

35-Account Material: This week, CNS continued their extent of condition review of 35-account electrostatic dissipative gloves (see 9/25/20 and 10/2/20 reports). The current method of controlling 35-account materials does not allow for simple verification of which 35-account materials are in which facility; CNS implemented a spreadsheet in order to better track and disposition the 35-account gloves. The extent of condition review identified additional 35-account gloves that require CNS action.