

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 2, 2018

MEMO TO: Steven Stokes, Technical Director
FROM: Ramsey Arnold and Zachery Beauvais, Pantex Plant Resident Inspectors
SUBJECT: Pantex Plant Report for Week Ending March 2, 2018

DNFSB Activity: Board Member Joyce Connery and staff members R. Tontodonato and C. Berg were on-site to observe nuclear explosive operations, walk through falling production technician (PT) prevention strategies, walkdown nuclear facilities, and discuss the status of initiatives to address previously identified safety deficiencies. The plans that were discussed are preliminary, and in many cases, subject to NPO approval. The discussions centered on the following items:

- Hazard scenarios with unscreened weapon response that lack credited safety controls (see 11/17/17 and 12/29/17 reports). CNS presented their plans to prepare a document, similar to a justification for continued operations (JCO), to note that production technician trip scenarios are covered by the implemented, but uncredited falling man protocols.
- The documented safety analysis (DSA) improvement plan. CNS presented preliminary plans to separate actions necessary to achieve compliance with DOE directives from other improvement efforts currently captured in the plan.
- Planned design and operational safety improvements identified in the sitewide and bays and cells safety analysis reports (see 6/9/17 report). CNS suggested closing the majority of improvements, but stated their intentions to accelerate replacement of wood framed false ceilings in two cells, once funding is secured.
- Probabilistic seismic hazard analysis updates. CNS introduced tentative plans to plan and conduct exploration and field work to support this update.
- The weapons complex falling man committee recommendations (see 12/11/15 and 10/6/17 report). The NNSA office of stockpile management has suggested a second phase to the study to include additional tool testing and parameter refinement.
- Updates to dispersion analyses (see 4/10/15 report) used in nuclear facility safety bases.

Electrostatic Discharge (ESD) Hazards: A plastic cable tie, used to secure the air hoses supplying the hoists, fell during pre-operational inspections and was categorized as a non-compliance with the documented safety analysis. Production personnel contacted the facility engineer and contractor facility representative who walked down the area and determined operations could resume. Safety analysis engineering further reviewed the issue and determined that the falling plastic presented a potential ESD hazard to two weapon programs. Operations on the two impacted programs were paused. Facility engineering will perform an evaluation of why the event occurred, and maintenance personnel will secure the air hoses in a new configuration that will reduce stresses on cable ties, to prevent their failure and reduce the hazard.

Cut and Cap: During an implementation verification review (IVR) of a JCO, the IVR team raised questions on the specific administrative control applied to remove charge from dielectric materials used in the cut and cap process. The control requires all dielectric materials used in the process to be dipped in distilled water to remove excess charge; however, the implementing procedures do not specify steps to do this for dielectric tape used to isolate stuck components. CNS restricted cut and cap operations on the affected programs. CNS and the design agency are determining a path forward. Last week, PTs encountered a unit that will require this operation.