

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 30, 2018

TO: Steven A. Stokes, Technical Director
FROM: Ramsey P. Arnold and Zachery S. Beauvais, Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending March 30, 2018

DNFSB Staff Activity: D. Andersen and J. Anderson attended the onsite training for the upcoming Bays and Cells Nuclear Explosive Safety Master Study.

High Pressure Fire Loop (HPFL): CNS completed the implementation verification review (IVR) for the HPFL justification for continued operations (JCO) that was approved by NPO in February (see 2/9/18 report). The JCO is now in effect. The IVR identified two deficiencies and an observation. One deficiency noted that a maintenance procedure that implemented part of the JCO had not been issued or executed prior to the start of the IVR. The other deficiency noted that the engineering standing order that implements the JCO compensatory actions was issued in February, but was not implemented at that time. The CNS enterprise conduct of operations procedure states that personnel shall “understand the contents of the [standing order] and follow its instructions.” Both deficiencies have been addressed. The JCO was required to address a positive unreviewed safety question that called into question the ability of the HPFL to provide adequate water supply to all facilities given the control strategy at the time. The JCO requires all three fire pump/tank configurations to be operable and that three of five defined HPFL interconnects remain open. Additionally, a separate standing order issued in 2016 remains in effect requiring fire protection engineering to evaluate the HPFL to ensure that maintenance activities that involve opening and closing HPFL valves will not unintentionally cut off a facility’s HPFL water supply (see 6/10/16 and 10/27/17 report).

Potential Inadequacies of the Safety Analysis (PISA): Safety analysis engineering declared a PISA when they discovered that a new, safety class protective cover may be required to prevent mechanical hazards and a related specific administrative control (SAC) may be required to ensure that the cover is properly installed on a component upon removal. The PISA impacts a single weapon program. While the related procedures currently require the installation of the cover, it is not designated as a SAC, and the cover is not credited in the safety basis. As operational restrictions for the PISA, CNS verified that applicable procedures required installation of the cover and restricted the use of the items that could be dropped onto the component, causing the mechanical impact.

Last week, SAE identified a separate PISA related to unanalyzed hazards from the ink used in part stamping. Inks that were specified for use in the operating procedure and for certain components were not evaluated or stipulated in the weapon response. CNS has specified the specific, allowable inks as an operational restriction.

Special Tooling: While attempting to install a vacuum fixture during nuclear explosive cell operations, production technicians paused operations after the tool did not pass a required vacuum leak check. The special tooling program specifies that the nuclear explosive operating procedures implement a leak check for all special tooling that use vacuum to lift weapons components. Process engineering is revising a previously issued temporary procedure to remove the impacted tool, install a new copy, and allow operations to resume.