DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 25, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: Zachery S. Beauvais, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending January 25, 2019

DNFSB Staff Activity: M. McCoy augmented the resident inspector coverage by inspecting ramp structures and participating in fact finding activities.

Maintenance Procedures: While observing blast valve maintenance activities last week, the CNS system engineer determined that sheet metal workers were executing an outdated revision of their maintenance procedure. The blast valves are safety class design features, normally installed in nuclear explosive cells. The system engineer had initiated a change to the procedure to allow the craft workers to apply discretion on whether to perform extensive component disassembly that could cause unnecessary equipment damage. Maintenance work planners commonly print preventive work orders 45 days prior to planned execution. The procedure change was initiated approximately six months prior to execution of the procedure but did not publish until last month, after maintenance planners finalized and printed the work order. The plant process for informing maintenance planners that a procedure has been changed relies on an informal email exchange between the department clerk and the planners. This process failed to provide advanced notification to the planner. During the fact finding held on this event, the resident inspector questioned whether pre-job briefings for preventive maintenance activities include a verification that all procedures are current. CNS maintenance personnel acknowledged that they do not typically address that during pre-job briefings and that maintenance supervisors rely on the planning process to ensure that they have the correct revision. Maintenance management intends to train all supervisors on how to verify procedure revisions.

High Pressure Fire Loop (HPFL): A subcontractor performing work on the HPFL identified a leak at the connection point between newly-installed high density polyethylene (HDPE) lead-in piping and the adjacent fire hydrant. CNS and the subcontractor identified that the assembly had not been built to design, and that the incorrect build was responsible for the leak. The design called for the use of a specifically designated adapter. This part was absent from the installed configuration; components not included in the original design were installed instead. The procedure for a completed hydrostatic test required verification from both CNS and the subcontractor that the assembly had been built correctly to design. This verification step was not performed accurately. The error was identified when a nearby valve unexpectedly pressurized the portion of the HPFL containing the assembly. CNS had not yet placed the impacted sections of the system into service. NPO and CNS have identified previous quality issues regarding HPFL lead-ins (see 5/26/17 report).

Justification for Continued Operations (JCO): Last week, CNS completed implementation of a JCO temporarily modifying the limiting conditions for operations (LCO) and functional requirements of the HPFL system. This JCO, which allows the plant to operate with a minimum of two fire pumps and tanks operable, replaces a previous JCO requiring three pumps and tanks. The original JCO has been in place since February 2018 (see 2/9/18 report). Development of the new LCOs required confirmatory system testing to validate hydraulic models used to support the new minimum operating arrangements (see 10/4/18 report).