

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 13, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: Miranda McCoy, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending March 13, 2020

DNFSB Staff Activity: C. Berg was on-site to observe and evaluate an operational safety review. He additionally provided resident inspector augmentation by observing an emergency drill and a meeting regarding the path forward for a nuclear explosive safety study finding.

Emergency Management: CNS Emergency Management conducted a drill this week to test its virtual emergency response organization (ERO) capabilities. The drill scenario involved a simulated explosion in a nuclear explosive cell and subsequent radiological release resulting in offsite consequences. Due to the simulated release extending over the John C. Drummond Center (JCDC), the drill's scope involved setting up ERO personnel with necessary resources and communication capabilities at the JCDC in addition to the established emergency operations center (EOC). The resident inspector and augmenting resident inspector noted the drill as value-added in developing efficient remote EOC capability, and noted some technological difficulties including default settings in the emergency planning zone mapping tool and communication between the established EOC, remote EOC, and field personnel. CNS Emergency Management intends to conduct additional drills to further develop remote EOC capabilities.

Preventive Maintenance (PM): While performing an annual in-service inspection of a blast valve installed in a nuclear explosive cell, CNS maintenance personnel identified that the blast valve required a greater closure force than allowed by the technical safety requirements. The resident inspector reviewed the tracking and trending data gathered by CNS system engineering following a previous blast valve closure force PM failure (see 11/15/19 report), and noted significant variability in closure forces. Systems engineering stated that the in-field closure force test requires precise application of load to gather reliable closure force data, and difficult in-field positioning and different personnel performing the test can result in high variance.

High Pressure Fire Loop (HPFL): Craft workers replaced a required commercial grade dedication (CGD) valve in a pump house servicing the HPFL with a non-CGD valve. During the fact finding for the event, supervisors noted that components being discussed in an email with fire protection engineering had been misinterpreted during replacement of non-CGD gauges. Additionally, the PM procedure governing the replacement of gauges included a special work instruction allowing replacement of components without specifying CGD or additional engineering requirements.

Blast Door Interlock: Last week, during pre-operational checks, production technicians (PTs) identified that a blast valve door for a nuclear explosive bay was not operating correctly. The failure allowed both sets of personnel doors to be open simultaneously. Failure of the blast door interlocks is an abnormal but not unexpected condition. PTs paused and made notifications, and the facility representative entered the correct limiting condition for operation. In contrast to a previous blast door interlock failure in a non-nuclear, explosives machining facility (see 1/17/20 report), PTs paused immediately and initiated appropriate actions.