

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 5, 2022

TO: Christopher J. Roscetti, Technical Director
FROM: C. Berg, Acting Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending August 5, 2022

Staff Activity: D. Brown was on-site to observe and evaluate an operational safety review.

Electrical Outage: Last month, CNS successfully completed a planned, extended power outage for a significant portion of the site, including various nuclear explosive and explosive-only facilities (see 7/15/22 and 7/22/22 reports). CNS continues to transition facilities that were without power during the electrical outage back to an operational mode. In three such facilities—including a metrology and nuclear material operations facility—personnel discovered steam or condensate leaks, resulting in high humidity levels, pooling water, and significant mold growth. During the event critique, participants noted that no nuclear material was exposed to these conditions. However, in the metrology facility, which is used to qualify and calibrate electrical equipment, CNS indicated that a number of Category 1 electrical testers had been subjected to these elements. Category 1 electrical equipment is intended for direct connection to the electrical circuitry of a nuclear explosive. At the event critique, the resident inspector questioned what actions CNS took with regard to this electrical equipment. Of note, CNS has identified all the impacted electrical equipment and has appropriately tagged it out of service, prohibiting its use during nuclear explosive operations. CNS plans to requalify and calibrate this equipment for production use via existing processes. Additionally, CNS chartered an issue response and recovery team that is developing corrective actions for this event.

Fire Alarm Receiving System (FARS): Last week, the emergency services dispatch center (ESDC) reported a loss of connectivity with the FARS. CNS categorized the incident as a performance degradation of a safety class structure, system, or component when required to be operable. When notified, CNS Facility Operations Management entered the appropriate limiting conditions for operations (LCO) for both the high pressure fire loop and deluge Eagle Quantum Premier fire suppression system. The ESDC subsequently regained connectivity with the FARS, and CNS exited the LCOs.

In June 2022, the ESDC reported a similar incident (see 7/1/22 report). Pantex identified the cause of the previous event as resulting from an unexpected reboot of the FARS servers when preparing for installation of a software patch. To prevent recurrence of that previous event, CNS identified a corrective action to codify software patch expectations within an operating manual; specifically, fire protection engineering will now both download and install software patches only on inactive servers. However, in this recent instance, downloading software updates only onto the inactive FARS server led to an error message and the connectivity disruption.

Compressed Air Supply System: CNS discovered water in compressed air supply lines, including those servicing defense nuclear facilities. The compressed air system is a safety class control and is used, among other things, within these facilities to operate certain special tooling. At this time, CNS has not identified any safety issue from this incident and, after ensuring the lines were free of water, released the facilities to continue operations.