

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 15, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: Miranda McCoy, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending May 15, 2020

COVID-19: CNS executed a standing order, effective this Monday, implementing several measures for reducing the risk of spreading disease. The standing order outlines a number of hygienic practices that must be observed by all onsite personnel, as well as management responsibilities for facilitating worker safety. Of note, the standing order implements a requirement to wear a face mask while onsite. Face masks and hand sanitizer constitute transient combustibles or flammable materials and will be controlled accordingly. Pantex CNS continues to develop, and pursue NNSA approval of, their COVID-19 recovery plan.

Safety Basis: Last week, CNS safety analysis engineers declared a potential inadequacy of the safety analysis (PISA) related to code management system operations for one weapon program (see 5/8/20 report). This week, safety analysis engineers performed an unreviewed safety question (USQ) determination, and upgraded the PISA to a positive USQ. The USQ determination considered that the new information presented in the PISA had the potential to increase consequences relative to the approved safety basis, and could require additional controls. Operational restrictions remain in place to prohibit the specified operations from being performed within a standoff distance of weapons components and non-ultimate user configuration units.

Readiness Activities: NPO approved commencement of startup activities for assembly/disassembly operations involving two different first production capability unit (FPCU) options for a weapon program. One option will proceed with a contractor readiness assessment (CRA); NPO directed a federal readiness assessment for the other option in addition to a CRA.

NPO additionally approved a change package concerning a safety basis supplement for FPCU operations, and prepared an associated safety evaluation report (SER). The SER evaluates proposed operations for one of the FPCU options. The evaluated operations are considered hazard category 2 operations due to the amount of nuclear material involved, but are not considered nuclear explosive operations. Multi-unit operations and movement of the evaluated FPCUs are not authorized. The SER documented no conditions of approval.

Fire Detection and Suppression Control System: Pantex has been undertaking a broad deluge system upgrade project, including replacing ultraviolet flame detectors with infrared (IR) detectors. The site has experienced over a dozen fault signals from IR detectors in nuclear explosive facilities since October of last year (see 3/20/20 report). Last week, NPO requested CNS provide a briefing on the recent faults, troubleshooting efforts, and path forward. CNS briefed NPO this week. As of this week, CNS has managed to pull data from all of the IR detectors experiencing faults. The manufacturer of the system has been unable to replicate the faults observed at Pantex, but is actively developing troubleshooting tools in an effort to determine the causes. The manufacturer believes that the fire detection system remained operable during the majority of the noted faults.