

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 1, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: Miranda McCoy, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending May 1, 2020

DNFSB Staff Activity: Members of the technical staff held a meeting, via teleconference, with NPO and CNS personnel to discuss the process for completing 10-year periodic assessments of natural phenomena seismic hazards.

Safety Basis: NPO approved relief from requirements for a number of safety basis deliverables due to COVID-19 pandemic related delays. CNS requested, and NPO approved, relief from:

- Upcoming safety analysis report, hazard analysis report, and safety basis supplement annual updates originally scheduled for completion between April and November.
- A number of justifications for continued operations (JCO); the approved extensions postpone the expiration of eleven JCOs by up to three months.
- A number of unreviewed safety question (USQ) processing time requirements, as prescribed in Pantex's NPO-approved USQ procedure.

In subsequent correspondence, CNS requested an extension specific to a safety basis addendum for seismic accidents with high mitigated consequences. The safety basis addendum acknowledges that seismic events during various onsite transportation activities do not have a viable control strategy to prevent or mitigate offsite dose consequences to below the evaluation guideline (see 2/1/19 report). CNS requested an extension to the safety basis addendum, originally set to expire this summer, that would push expiration to next spring. This extension requires elevated approval by NNSA headquarters.

Lightning Detection System: Last week, the safety class lightning location and protection system (LLPS) failed to detect lightning in the vicinity of Pantex and was declared inoperable. The plant remained in the applicable limiting condition for operation (LCO), which requires declaration of lightning warnings. This week, NPO approved a safety basis supplement that outlines two compensatory measures, and allowed Pantex to exit the LCO. One of the two compensatory measures requires Pantex request a four-hour clear weather window from the Amarillo National Weather Service (NWS) every three hours. If the NWS does not provide a clear weather window, Pantex will declare lightning warnings. The second compensatory measure requires the plant shift superintendent check the NEXRAD lightning detection system for errors or issues on a shiftly basis. This language mirrors—and the compensatory measure overrides—an existing LCO surveillance requirement that requires shiftly verification of operability of both the LLPS and NEXRAD system.

NNSA convened a nuclear explosive safety change evaluation (NCE) to evaluate the proposed changes to the lightning detection strategy. The NCE convened with no findings and two deliberation topics. One deliberation topic documents the LLPS's reliance on software, and the second discusses the limitations of current surveillance requirements to detect issues with the LLPS. NPO is not taking action on either deliberation topic.