

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 18, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: Miranda McCoy, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending December 18, 2020

Nuclear Explosive Safety (NES): A NES study group (NESSG) provided an outbrief to NPO regarding the recent NES change evaluation for proposed changes to the lightning detection and warning system. The proposed changes follow a loss of functionality of the lightning location and protection system earlier this year; since April, CNS has been operating under a safety basis supplement that requires CNS to contact the Amarillo National Weather Service for clear weather windows (see 5/1/20 and 4/24/20 reports). The NESSG documented one finding and nine deliberation topics in their memorandum. The finding outlines configuration management concerns for the proposed system. Deliberation topics of note include expectations for plant shift superintendent minimum staffing and documentation and control of professional meteorologist qualifications. The NESSG also noted issues with the state of the input documents provided to the NESSG and the overall preparedness of the CNS project team. The project team resubmitted input documents several times to the NESSG, eventually resulting in the NESSG downgrading a second finding to a deliberation topic. The NESSG also recommended a validation be performed following implementation of the proposed changes.

Facility Power: Last week, a set of nuclear explosive bays lost power following a water leak into a boiler's control panel. Maintenance personnel were performing repairs on a boiler; upon its restart, the pressure relief valve malfunctioned, leaking water onto the control panel. The CNS facility representative entered the appropriate limiting condition for operation for the bays.

Contractor Readiness Assessment (CRA): CNS conducted an emergency drill this week and continued assembly demonstrations for the ongoing CRA (see 11/20/20 report). The production technicians participating in the drill exited the facility expediently as a result of the simulated event, well below the maximum timeframe designated in the Pantex personnel evacuation specific administrative control. During the drill hotwash, controllers and evaluators noted that while participants appropriately went to their muster station—the nearby breakroom—and waited for radiation safety personnel, no postings or announcements notified non-participants to avoid the muster station. In a real scenario, this could result in unnecessary spread of contamination. The resident inspector noted that emergency announcements in the ramps were particularly difficult to hear due to system limitations.

During assembly demonstrations, the resident inspector observed several issues with the nuclear explosive operating procedures. Of note, multiple procedure steps could not be implemented as written, including a missing step to install a feature to protect a weapon component and a missing critical step to implement human electrostatic dissipative bonding. In the opinion of the resident inspector, the severity and frequency of procedure issues is inappropriate for the CRA stage of readiness, and places high reliance on the readiness assessment team and production technicians to produce acceptable procedures. The resident inspector has previously shared her observations regarding procedure readiness with CNS and NPO management. Overall, the production technicians exhibited proficient adherence to conduct of operations principles.