

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 8, 2023

TO: Timothy J. Dwyer, Acting Technical Director
FROM: A. Holloway, C. Stott, and C. Berg (acting), Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending September 8, 2023

Staff Activity: Last week, members of the Board's staff discussed the updated Pantex Probabilistic Seismic Hazard Analysis with NPO, CNS, and their subcontractor.

Major Modification Determination: Last month, CNS transmitted a major modification determination to NPO, proposing changes that would allow a non-nuclear facility to be used for nuclear explosive operations. CNS stated that "resumption of nuclear explosive operations in [this facility] should not be considered a 'major modification' based on the criteria and guidance of DOE-STD-1189-2016...." While the resident inspectors have not seen evidence that any nuclear operations have occurred in this facility, it was designed and constructed for nuclear explosive operations at the same time as similar surrounding nuclear explosive bays. CNS intends to, at a minimum, bring this facility up to the standards of the surrounding bays.

Referencing DOE-STD-1189, CNS concluded that two of the six Major Modification Assessment Criteria were met. In response to the assessment criterion of changing the footprint of an existing nuclear facility, CNS stated that the proposed changes would modify the facility footprint but "modifications will not adversely impact existing safety class or safety significant safety functions or associated [structures, systems, or components]." In response to another criterion regarding safety basis changes requiring DOE approval, CNS stated that only minor changes to the hazard and accident analysis would be required. However, the necessary changes to bring the facility up to the standards of the surrounding facilities would still require DOE review and approval. Given that two assessment criteria were affirmed, NPO concurrence for the major modification determination is required per DOE-STD-1189. NPO has received CNS's determination, and the resident inspectors will evaluate any resulting decisions and/or outcomes.

Notably, during discussions with NPO and CNS management, the resident inspectors emphasized that transitions of a non-nuclear facility to a nuclear facility shall be treated as a new facility per DOE-STD-1189. While CNS acknowledges this requirement within its document, the determination argues that contradictory content within DOE-STD-1189—i.e., an example and a footnote—permits the method of analysis used by CNS.

Recommendation 2019-1: Late last month, NPO approved a safety basis change package related to modernizing the safety controls for one weapon program. Safety basis improvements included establishing performance criteria for all specific administrative controls (SAC) and design features, such as special tooling. Additionally, within the change package, CNS deleted several SACs and recategorized their safety function as a design feature. As noted by NPO, this new approach will place additional importance on the CNS Unreviewed Safety Question program to ensure such safety functions are not compromised during procedure revisions. Furthermore, NPO approved CNS's schedule to incorporate this modernization strategy into the remaining safety bases. These approvals fulfill completion criteria for one of the remaining deliverables of NNSA's Implementation Plan for Recommendation 2019-1.