## **DEFENSE NUCLEAR FACILITIES SAFETY BOARD**

TO:Technical DirectorFROM:Pantex Plant Resident InspectorsSUBJECT:Pantex Plant Activity Report for Week Ending February 28, 2025

**Nuclear Explosive Safety Master Study (NESMS):** This week, the resident inspectors observed and evaluated portions of the special purpose facilities NESMS being conducted at Pantex, including attending presentations on, as well as walkdowns of, facilities and associated structures, systems, and components. The scope of this study includes various facility types, such as rampways, corridors, loading docks, magazines, and special purpose nuclear explosive bays (e.g., those used for linear accelerator, mass properties, and vacuum chamber operations).

**PXD Readiness Activities:** Recently, PXD transmitted a quarterly startup notification report to PFO for approval. The report contained six startup requests for operations that they deemed would require formal readiness reviews per DOE Order 425.1, as well as three requests that would not require such reviews. This week, PFO approved the planned readiness activities in the report with one condition of approval. PFO determined that one of the planned PXD startup activities, without a formal readiness review, would need additional evaluation by NNSA. While the Pantex contractor previously constructed a certain facility to be a Hazard Category 2 nuclear facility similar to its neighboring bays, Pantex has never conducted such operations in this bay nor analyzed such operations in the safety basis (see 9/8/2023 report). Consequently, PFO concluded that startup of proposed operations within this bay corresponds to a "conversion of an existing facility to a new nuclear mission with a new [safety basis]" with the Secretary of Energy as the startup authorization authority. Since this authority has been delegated to the NNSA Cognizant Secretarial Officer (CSO), PFO is relaying its recommendations for level of readiness review and authorization authority for the proposed activity to the NNSA CSO for concurrence.

Commercial Grade Dedication: Last week, during an audit of material recorded within a "quality hold" list, a PXD supplier quality specialist discovered that pipe couplers for the fire protection system of a nuclear explosive cell had been installed prior to receiving full approval from the PXD supplier quality organization. While the couplers did pass the required initial receipt inspection and commercial grade dedication testing, PXD personnel did not return the couplers to the supplier quality group for final acceptance. Of note, PXD personnel had not returned the relevant nuclear explosive cell to operating status prior to identifying this issue, and they documented the coupler nonconformance upon discovery. During the event investigation, PXD personnel noted that the couplers were not returned to PXD supplier quality for final processing and removal from the quality hold list prior to installation. These personnel also discussed that the work order to complete the commercial grade dedication process did not include a step to return the part to the supplier quality group. Additionally, infrastructure group personnel did not adequately validate the completion of the required supplier quality activities prior to installation of the couplers. PXD personnel plan to include a step within their work order template and to brief the infrastructure group on proper verifications required prior to component installation. Although this occurrence is similar to previous issues concerning implementation of the commercial grade dedication testing process (see 10/11/2024 report), PXD determined that it transpired prior to execution of the corrective actions from the previous event.