DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 3, 2026

Pantex Plant Resident Inspectors Activity Report for Week Ending April 3, 2026

Safety Basis: During recent years, Pantex safety analysis engineers have converted long-standing directive action format specific administrative controls (SAC) to limiting condition for operations (LCO)-format SACs. PXD uses SACs in the Technical Safety Requirements (TSR) to ensure that hazards identified in the safety basis are properly controlled to prevent or mitigate events that could adversely impact workers, the public, and the environment. PXD uses these recently converted LCO-format SACs to control certain hazards by limiting the amount of combustible material inside facilities within material access areas and the proximity of freestanding items within fall-down distance of nuclear explosives. PXD includes operability statements in each of these LCO-format SACs to ensure operations remain within defined limits and do not exceed initial conditions established by safety analyses.

The resident inspectors are questioning the feasibility of these controls since PXD did not establish margins between the operability statement and safety analysis limits. For example, while PXD must enter the LCO-format SAC if freestanding equipment is found within fall-down distance of a nuclear explosive, an uncontrolled hazard exists to the unit until the equipment is removed. Pantex seems to be using a time-at-risk argument, meaning risk is limited since situations requiring LCO entry should be readily apparent and quickly rectified prior to an initiating event that could topple the equipment. Additionally, it is not clear per site procedures whether PXD would only need to perform the LCO-required actions within the completion time or also enter the issues management process, including declaring a safety basis noncompliance or a potential inadequacy of the safety analysis. Of note, the resident inspectors are not aware of any LCO-format SAC entries to date.

Finally, to determine operability, PXD requires establishment of a *time of discovery*, or, in other words, the time at which a prudent and properly trained individual should realize when a condition exists that challenges operability and requires LCO entry. Every person who can take control of these facilities that contain material of concern should be trained on these LCO-format SACs. Therefore, the resident inspectors question whether an LCO-format SAC entry would result in a TSR violation, as the individual introducing the hazard should be knowledgeable of the requirement and would need to immediately rectify the situation.

Subcontractor Activities: This week, a resident inspector attended fact-finding meetings pertaining to a PXD subcontractor that removed and cut apart abandoned vacuum system piping—previously used during operations potentially involving loose particles of high explosive material—without first obtaining approval from PXD explosives safety. The subcontractor used another company to perform swipes to verify the absence of high explosive material in the piping before commencing work within the special nuclear material facility, but did not relay these results to PXD. Later, PXD independently confirmed the absence of high explosive material. Additionally, the subcontractor cut the piping using power tools that were not allowed for this activity. As a result of these performance gaps, PXD conducted a safety stand down to brief the subcontractor on the activity hazards analysis and intends to review their corrective action plan.