DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 10, 2026

Pantex Plant Resident Inspectors Activity Report for Week Ending July 10, 2026

Fire Protection System: This week, PXD convened fact-finding meetings concerning a duct smoke detector that experienced a fault, causing heating, ventilation, and air conditioning (HVAC) equipment in the building to shut down. The duct detectors and associated alarms requiring fire department response are similar to those implemented in defense nuclear facilities. Previously, PXD emergency response dispatchers had received intermittent trouble signals from the duct detector over several months despite passing routine inspections. Most notably, PXD noted a sizeable increase in the number of trouble signals in May; as a result, PXD dispatchers suppressed all signals from this detector, preventing trouble and alarm signals from being received in the dispatch center. Additionally, PXD personnel submitted a work request to repair the detector but prioritized the work at a lower level due to not understanding the significance of delaying the repair activities. After about six weeks, PXD dispatchers received indications that there was an issue with the HVAC system in the building. After investigation, PXD discovered the duct detector failed, securing the HVAC system as if it had sensed smoke. PXD confirmed there was no fire but noted other equipment issues due to rising temperatures after loss of the HVAC system. During the fact-finding meetings, PXD personnel noted they did not fully understand the consequences of allowing this degraded detector to remain in service with suppressed signals. When asked about the process of suppressing fire protection device signals, PXD personnel stated there is no documented process. PXD dispatchers report trouble signals to fire protection engineers upon initial receipt but are then allowed to suppress the signals as needed, limiting repetitious signals received from a degraded detector. PXD noted only one action in response to this event—to restore the fire alarm control panel and HVAC system in this facility—which was completed shortly after discovery. PXD is planning to convene a causal analysis for this event.

Potential Inadequacy of the Safety Analysis: This week, PXD declared discrepancies between actual loading dock roll-up door design and information contained in engineering calculations represented an unreviewed safety question (see 6/26/2026 report). Specifically, PXD credits safety-stop pins to prevent eight roll-up doors in a material access area from free-falling, potentially impacting a nuclear explosive or nuclear material during onsite transportation activities. PXD facility engineering personnel assert that the original calculation is overly conservative for five of the eight doors and found the pins can perform their safety function when analyzed against a realistic door drop height. Therefore, PXD safety analysis engineering noted the unreviewed safety question only pertains to the other three doors, increasing the probability and consequence of an accident already evaluated in the safety basis. PXD did not apply operational restrictions, insisting the transported material of concern is qualitatively protected by its packaging, which is not currently credited to preclude the hazard scenario.

Additionally, last week, after certain design agencies released updated weapon response information for a certain weapon program, PXD safety analysis engineering declared previously unanalyzed electrostatic discharge hazard scenarios as an unreviewed safety question (see 7/3/2026 report). For these scenarios, PXD did not establish operational restrictions because existing controls in the safety basis preclude the hazard scenarios.