DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 20, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: Zachery S. Beauvais and Miranda McCoy, Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending December 20, 2019

Emergency Management: The resident inspectors attended the quarterly emergency management agreement-in-principle (AIP) meeting. AIP meetings allow NPO and CNS personnel to meet with local government officials and relevant state agencies to discuss emergency exercises, community outreach, and emergency response planning. CNS presented updates to their emergency planning documentation, including target receptor tables, emergency action levels, hazard assessments, and hazard surveys. Additionally, AIP participants received a briefing on a new traffic control plan. The new plan includes a simpler, ranked model for traffic control that specifies the most critical road blockade locations, such that these may be established first. The model is designed to interface with the newly established emergency planning zones (see 9/27/19 report). CNS and Texas Department of State Health Services personnel presented preliminary research in the use of unmanned ground vehicles with air sampling and live gamma spectroscopy capabilities.

Charge Generation Controls: NPO; NNSA Office of Safety, Infrastructure, and Operations (NA-50); and NNSA Office of Stockpile Management (NA-12) Senior Leadership determined a path forward for resolving charge generation hazards posed for one weapons program (see 1/18/19 and 10/25/19 reports). The NNSA Office of Stockpile Sustainment (NA-122) communicated expectations for the issue resolution group last week. The path forward includes implementation of all identified charge generation controls prior to resuming work, as opposed to partial or phased implementation of controls or additional technical justification. As of this time, the identified controls are expected to provide qualitative risk reduction. This week, NPO approved a revision to a previous justification for continued operations (JCO) for the program. The JCO outlines the compensatory measures, including both administrative controls and additional design features. Operations on this program remain paused.

Safety Basis: CNS safety analysis engineering (SAE) submitted, and NPO approved, a JCO for continued use of the task exhaust for one weapon program. CNS SAE previously identified a potential inadequacy of the safety analysis due to an unidentified impact hazard posed by the task exhaust (see 8/30/19 report). Operations involving use of the task exhaust were subsequently paused. The JCO identifies several special tooling design features—specifically, application of existing special tooling factors of safety—to function as compensatory measures. The NPO safety evaluation report approving the JCO notes that commercial components may not meet these compensatory measures (see 10/25/19 report).

Loss of Power: Last week, a number of non-nuclear facilities experienced an unexpected power outage. Power was restored within approximately one hour. The Pantex fire department responded to the event due to reports of smoke emanating from the electrical vault manhole. In investigating the event, CNS electricians concluded that a tripped phase resulted in the power loss. Additional investigation is underway to determine the cause.