

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 12, 2021

TO: Christopher J. Roscetti, Technical Director
FROM: A. Gurevitch, M. Bradisse (acting), and C. Berg (acting), Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending November 12, 2021

Staff Activity: The resident inspectors observed nuclear explosive safety study group deliberations regarding modifications to a cable used to perform a specific electrical test on a certain weapon program.

Federal Readiness Assessment (FRA): Last week, the NPO FRA team briefed contractor and federal management regarding the results of their readiness review for a different weapon program (see 10/22/21 report). The FRA team's briefing identified 5 pre-start findings, 2 post-start findings, and 7 observations. Of note, one of the pre-start findings dealt with inadequate response to an off-normal event (i.e., a breached component); the resident inspectors noted similar deficiencies while observing the contractor readiness assessment (CRA), during the project team's response to different off-normal conditions (see 7/30/21 report). Another pre-start finding captured degradation of credited cables used to electrically bond certain components and prevent unintentional electrical charging. The readiness team noted that several cables had delaminated, calling into question their pedigree and ability to perform their credited safety function. A third pre-start finding captured a specific non-compliance with footwear used to mitigate electrostatic discharge (ESD) hazards. The readiness team members and the resident inspectors observed multiple such instances of this non-compliance.

One of the post-start findings captured deficiencies related to radiological control practices. Specific comments pertained to the cursory nature of radiological surveys for outbound equipment, as well as inadequate control of the walking path to the location where production technicians were surveyed. Such practices should be improved to prevent inadvertent spread of radioactive contaminants. The resident inspectors and NPO facility representatives previously noted these same issues during the CRA (see 7/30/21 report).

The resident inspectors note that the FRA team was professional and thorough in conducting this assessment, and elected to augment the team with radiation safety subject matter experts from NNSA headquarters based on the observations from the CRA.

Conduct of Operations: This week, production technicians (PT) installed a part with an incorrect quality marking onto a unit. Though the procedure included a step to verify this stamp, PTs did not identify the discrepant marking. At the event investigation, participants identified that the part had been incorrectly marked when uninstalled from a previous unit.

Safety Basis: Last week, NPO approved a justification for continued operations (JCO) to resume nuclear operations on two different weapon programs affected by the recent ESD event (see 9/3/21 and 10/29/21 reports). The JCO captures the new requirement that for these two programs, radiation-shielding aprons must be non-conductive at the maximum postulated electrostatic dissipative environment voltage, to ensure that the aprons do not present an ESD hazard during operations.