

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy Dwyer, Technical Director
FROM: Matthew Duncan and Rory Rauch, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending December 24, 2010

Specific Administrative Control (SAC) Violation: A waste operations material handler inadvertently violated a portion of the SAC dealing with transportation of flammable and combustible materials. This SAC prohibits the transportation or staging of greater than 12 gallons of flammable or combustible liquid in any one location in the material access area (MAA) ramps, corridors, and loading docks while transportation of sensitive items such as nuclear explosives, nuclear material, or high explosives is also occurring. Due to a change of plans during routine pickups of waste across the plant, the material handler followed an atypical route and moved two 30-gallon containers filled with an ethyl acetate and water mixture across the MAA while at least two other sensitive items were also being transported nearby. Upon arriving at the loading dock, another material handler informed him about the control violation. They loaded their truck, drove it out of the MAA, and notified their supervisor of the issue. Approximately 4 hours after the material handler entered the MAA with the potentially combustible liquid, and approximately 3 hours after they notified their supervisor, B&W entered and exited the “generic limiting condition of operation” which covers this particular SAC. As such, this SAC violation was not declared a technical safety requirement (TSR) violation.

Similar to the recent toxic inhalation hazard transportation event that was a TSR violation (see 11/12/10 report), the operations center was never notified of the shipment as required so that an official “window” could be opened where movement of other items would be prohibited. Further, the waste handler was not aware that he was moving containers containing potentially combustible liquid. Although this waste was labeled as combustible on the paperwork for the day’s waste pickups, the containers themselves were not labeled as such. Currently, labels are only required for flammable, not combustible, liquid containers. The ethyl acetate and water mixture has been sent for testing to determine whether it meets the official definition of a combustible liquid. Regardless, B&W held a critique and plans to analyze the causes of this event and develop corrective actions.

B53 Operations: The B53 nuclear explosive safety (NES) study group (NESSG) determined that additional NES oversight was warranted during dismantlement of the first few units. The B53 NESSG chair and B&W member observed the first B53 SS-21 dismantlement unit and concluded, with some exceptions, that the observed operations aligned with the operations demonstrated during the NES study. Based on these observations, the NESSG chair determined that a formal NES validation of the B53 process is not required.

Unreviewed Safety Question (USQ) Process: B&W evaluated the possibility of developing an expert-based USQ determination (USQD) process. The evaluation recommended that an expert-based USQD process not be pursued at this time because the authorization basis department already has a stringent screening process in place that is nearly as efficient as and less subjective than the proposed expert-based process. Further, implementation of an expert-based USQD process would require individuals with credentials that a large number of qualified USQ screeners at Pantex do not have currently.

W78 Operations: Technicians observed damage to a detonator cable assembly during the later stages of a W78 disassembly and inspection operation. They immediately stopped work, achieved a safe configuration, and contacted their supervisor. Operations will remain on hold until the design agency can observe the damage and provide input on how to proceed safely.