DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy Dwyer, Technical Director
FROM: Matthew Duncan, Timothy Hunt, and Rory Rauch, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending August 21, 2009

DNFSB Staff Activity: M. Duncan reported to Pantex to begin his site rep duties.

Operational Suspensions: A nuclear explosive operation was suspended last week when technicians were unable to remove a detonator assembly from a high explosive (HE) charge using the technique specified in the procedure. Upon examination, it was determined the adhesive holding the detonator assembly to the HE had been applied, per the procedure at the time, in a more liberal and less controlled manner than is now specified in the assembly procedure. A similar problem had been encountered several times on a separate program and process engineering plans to apply that recovery technique—allowing the use of additional non-metal prying tools—to the current configuration. B&W Pantex is awaiting weapon response and a nuclear explosive safety review of the proposed recovery action.

On a separate program, an operation was suspended when an assembly cart locked up as technicians were attempting to raise the unit to the height required by the process. The threads on the raising mechanism had worn, causing a spring-loaded plunger to release and lock the mechanism as designed. After the execution of a recovery procedure that allowed the technicians to manually override a rotational interlock, the operational step was completed. Tooling design has been planning to modify this cart to remove the spring-loaded plunger in favor of an annual in-service inspection of the threads on the raising mechanism.

Hoist Upgrade Project: B&W Pantex completed installation and testing of the twelfth and final ASME NUM-1 hoist planned for the upgrade project this fiscal year (FY). Due to limited funding, B&W Pantex has determined that only 6 of the 14 ASME NUM-1 hoists currently stored in an on-site warehouse can be installed in FY10. Two of the hoists are projected to be hung in nondestructive evaluation bays where many of the nuclear explosive lifts are performed.

Nuclear Material Storage: One of the Zone 12 storage facilities used to house radioisotopic thermoelectric generators (RTGs) and pits had become cluttered to the point that it posed a safety concern. The bay is used for long-term storage of RTGs and in-process staging of pits. The containers with nuclear material cover most of the floor area making it difficult to find, access, and retrieve the in-process items that are not formally assigned specific storage locations. Material handlers must lift and move numerous heavy containers in the radiation area when looking for an item. B&W Pantex personnel began to temporarily relocate the RTGs to Zone 4 this week while pursuing approval to eventually store them in a dedicated bay in Zone 12. After the RTGs are removed from the current bay, the in-process pits can be reconfigured to facilitate easier identification and handling. Nuclear materials management continues to pursue a long-term disposition path for the RTGs.

Special Nuclear Material Component Requalification Facility (SNMCRF): During a recent heavy downpour, the roof of SNMCRF experienced significant leaks. In one particular bay, rainwater drained onto radiation monitoring equipment and the electrical panel of a processing station. Technicians immediately shut off power to the area and evacuated the bay after discovering equipment and electrical lines in contact with water. The inleakage is at room locations where ducting penetrates through the roof to connect with rooftop ventilation equipment.