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 June 17, 2011

Limiting Conditions for Operation (LCO) Entry: This week, a nuclear explosive facility lost power after its main breaker tripped. The LCO for the deluge fire suppression system in the facility requires an operable primary power supply; therefore, the responsible facility manager initiated the required LCO actions (place material in a safe and stable configuration and contact the designated fire protection engineer to determine whether a fire watch is necessary). However, the facility manager did not realize that an adjacent facility's deluge fire suppression system was fed by the same primary power source and failed to initiate the required LCO actions for this system. When the following shift's personnel arrived several hours later, they recognized the omission and immediately entered the LCO. Soon thereafter, they realized that, by coincidence, all action statements for this LCO had already been completed to support the transition of this facility to maintenance mode with nuclear material present. B&W plans to evaluate this event for ways to ensure that facility management reliably enters all safety system LCOs when necessary.

Abnormal Stronglink Position: Last week, during a nuclear explosive disassembly operation, an electrical test showed that a stronglink was not in its reset position, as required by an initial condition in the applicable hazard analysis report. Program personnel believe technicians may have moved the stronglink during a sequence of steps that require physical manipulation of parts that interface with the stronglink. This has occurred in the past, but in all instances the stronglink was far from a position that would compromise its safety function. It should also be noted that the technicians radiographed and electrically tested the stronglink earlier in the process and the stronglink was found to be in the reset position following these tests. This unit was only scheduled for partial disassembly, but the responsible design agency has now directed B&W to fully disassemble the unit. Program personnel plan to treat the stronglink as fully compromised and credit pre-existing controls, as necessary, for the remainder of the process.

W87 Operations: PXSO approved an authorization basis change package that incorporates new controls to resolve the W87 workstand adapter stability issues discovered during the W87 operational safety review (see 4/22/11 report). The new stand adapter has extension arms that are designed to prevent the primary from toppling following a direct tripping man impact to the component proper. B&W plans to resume W87 in situ mechanical safe and arm detonator operations following an implementation verification review of the change package.

Radioisotopic Thermoelectric Generator (RTG) Operations: As reported on January 7, Pantex is preparing to perform new RTG operations, including electrical heat sink testing and packaging operations using a new container. The contractor and NNSA have finished their readiness assessments (RAs) and PXSO is expected to authorize operations soon. The contractor's RA had one pre-start finding, which was that a human reliability assessment had not been performed for a portion of the Emergency Preparedness Program specific administrative control. This control requires that "nuclear operations shall be notified to enter 'Safe and Stable' upon detection or notification of an onsite or offsite release of a TIH [toxic inhalation hazard] chemical with the potential to impact these operations." To address the finding, B&W performed the human reliability assessment. The NNSA RA team developed one related post-start finding which was that the corrective action plan for the contractor RA's pre-start finding did not address all of the apparent causes, and determined that a change to plant procedures and additional training was also required.