

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 January 14, 2011

Technical Safety Requirement (TSR) Violation: An operability requirement for the high pressure fire loop (HPFL) specifies an unobstructed and intact water delivery system from the tanks through the facility post indicator valves. One of the surveillance requirements associated with this operability requirement specifies an inspection of the water supply control valves to ensure they are open and locked. The required frequency is quarterly, which is less than the monthly requirement specified by National Fire Protection Association 25 (Mason and Hanger received an exemption to this requirement).

Utilities technicians performed the surveillance this week. As a result of questioning by a PXSO fire protection engineer, B&W discovered that the last time the surveillance had been performed was in July. B&W categorized this event as a TSR violation, consisting solely of a surveillance test performed after the prescribed surveillance period, and in which the equipment was found to be capable of performing its specified safety function. The critique will occur next week.

Special Tooling: Technicians were raising a W78 unit in a work cart when they heard a popping noise and experienced an increased resistance on the hand crank for the trunnions. The technicians immediately placed the operation on hold and informed their first line supervisor of the issue. Upon inspection of the work cart, the technicians found that one of the anti-rotation pins on the work cart had not disengaged as designed (these pins are part of an interlock that prevents the unit from rotating when the trunnions are below a certain height). Process engineering plans to develop a recovery procedure to allow the technicians to transfer the unit to a new copy of the work cart and resume operations. Tooling engineers will fully evaluate the nonfunctional cart at that time. Technicians have had several problems with this cart, and in particular its anti-rotation interlock, in the past (see 4/9/10, 4/22/08, and 8/24/07 reports). It should be noted that none of the past problems involved an anti-rotation pin failing to disengage.

Flooding Event: On August 27, 2010, PXSO approved the justification for continued operations (JCO) for the flooding event that occurred last July (see 9/10/10 report). It will expire on January 17, 2011. Flooding may compromise the effectiveness of the isolation pads relied upon for lightning protection of nuclear explosives connected to the manifold in the vacuum chamber bay. The JCO requires the technicians to disconnect from the manifold if a flash flood watch or warning is in effect for the county and lightning warnings are in effect. The engineered solution to this problem is to install a new isolation stand (with the isolation feature on the columns rather than the base of the stand), which is currently undergoing the fabrication, acceptance, and testing process. B&W projects that the safety basis change package that incorporates the new isolation stand, as well as all other flood-related changes, will be submitted, approved, and implemented by the end of June. To accommodate these efforts, B&W has requested that PXSO extend the JCO's expiration date to June 30, 2011.

Radioisotopic Thermoelectric Generator (RTG) Operations: As reported last week, B&W is preparing to restart electrical heat sink testing of RTGs and several associated packaging and unpacking operations involving newly approved containers. This week, PXSO approved B&W's proposal for the PXSO manager to be the startup authorization authority and to have both contractor and NNSA readiness assessments (RAs). The NNSA RA is scheduled for April.