

## 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 3, 2011

**Technical Safety Requirement (TSR) Violation:** This week, B&W declared a TSR violation after discovering a quantity of triethylamine (6.5 L), a potential toxic inhalation hazard (TIH), in a non-nuclear facility that exceeded the documented safety analysis (DSA) limit established for that chemical in that storage location (2.5 L). These limits are established through the Chemical Control Program, a specific administrative control that requires the establishment and control of ceiling limits for storage locations of any chemical that poses a TIH. The purpose of these limits is to ensure that a release of these chemicals cannot impact the safety of nuclear explosive operations. After an extent of condition review, B&W also discovered that they had exceeded the triethylamine ceiling limits at the Pantex central shipping and receiving facility, the only other facility authorized to store this chemical onsite. Since there was no authorized storage location for the excess quantity of triethylamine, personnel in the nuclear safety group quickly performed a dispersion analysis and were able to demonstrate that the quantity of the material in the facility, if released, would not present a hazard to nuclear explosive operations. As a result of this analysis, B&W management decided to leave the chemical where it was being stored.

Based on an initial fact finding exercise, it appears that the B&W administrative procedures governing the procurement, receipt, and onsite transportation of chemicals that pose a TIH are not sufficiently detailed to reliably implement the Chemical Control Program. B&W will perform a formal causal analysis of the event next week. This is the second TSR violation associated with the Chemical Control Program in the last six months (see 12/3/10 report).

**Surveillance Requirement (SR) and In-service Inspection (ISI) Management:** B&W recently completed a detailed seven-month long analysis of the SR and ISI tracking process (see 9/17/11 report). The analysis team determined that the previous SR/ISI tracking process relied heavily on the knowledge of facility managers to integrate data from the maintenance scheduling software with the facility status board. This created an environment in which a single administrative error could lead to a missed SR or ISI. The corrective actions described by the analysis team should lead to a single, formal process for SR/ISI tracking that minimizes the reliance on administrative actions by facility management. For example, B&W plans to create automated facility status boards that will extract relevant preventive maintenance data from the maintenance scheduling software. The analysis team also identified the need to eliminate the culture that made it a routine practice to perform SR/ISI work in the grace period.

**Occurrence Reporting:** Last week, B&W violated the two-person concept when maintenance technicians failed to fully engage a bolt on a facility door. Argus security system logs showed that no personnel had entered the facility subsequent to the violation. DOE Manual 231.1-2, *Occurrence Reporting and Processing of Operations Information*, requires that a violation of the two-person concept be reported under Group 7, Criterion (8). However, PXSO management has directed B&W to report all recent violations of the two-person concept (starting with the events described in the 12/17/10 report) through the reporting system for events of security concern, not in the occurrence reporting and processing system (ORPS). The ORPS manual states that the reporting of safeguards and security events is addressed by DOE Notice 471.3, *Reporting of Events of Security Concern* and that safeguards and security events are not reported in ORPS unless they involve other consequences that meet ORPS reporting criteria. Based on the preceding clause, the site reps believe that a violation of the two-person concept must be reported in ORPS because it presents a nuclear explosive safety consequence, not solely a security consequence.