

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy J. Dwyer, Technical Director
FROM: Matthew Duncan and Rory Rauch, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending February 12, 2010

Facility Management: B&W recently responded to PXSO's letter (see 12/25/09 report) which expressed concern over an observed negative trend with respect to the conduct of facility management in recent years. One of B&W's key corrective actions is to develop "check sheets" for every safety system that has limiting conditions for operation (LCO). These check sheets will contain sufficient information to help facility managers and system engineers determine whether or not safety systems are operable. Additional corrective actions are focused on enhancing the facility manager requalification process, improving and formalizing communication protocols, and evaluating whether certain LCO operability statements could be clarified. Finally, B&W management has directed facility managers to conservatively enter LCOs immediately once a problem with a system has been identified. In the past, facility managers would typically wait to discuss the problem with the system engineer or other subject matter experts before taking the actions directed by the LCO.

PT3669 Nuclear Explosive Safety (NES) Change Evaluation (NCE): In January, NNSA convened an NCE to evaluate changes to the PT3669 in-situ mechanical safe and arm detonator tester. B&W, in consultation with Lawrence Livermore National Laboratory (LLNL), made these changes to enhance the quality and reliability of the tester, but B&W, as required by NES directives, requested the NCE since the changes affected two safety-related components. The NCE group did not find any issues with the proposed changes; however, they did identify several process issues associated with outdated tester requirements and concluded that NNSA and the design agencies need to revisit and redefine the requirements and review processes for Category 1 electrical equipment (defined as equipment intended for connection to an electrical circuit of a nuclear explosive).

PXSO approved the PT3669 NCE approximately three weeks after the NCE group completed deliberations. The NCE chair delayed issuing the final report until LLNL approved several hardware changes, drawing suffix changes, part number typographical errors, and drawing updates, which were ongoing during the NCE. During LLNL's review, an NCE group member identified an error in the calculation of the center of gravity of the tester. The ensuing discussion between LLNL and B&W regarding how to resolve this concern—the tester would slide in a performance category-3 seismic event—further delayed LLNL's approval of the changes. Ultimately, the authorization basis department determined this scenario would not present a hazard to the weapon.

B53 Dismantlement: Los Alamos National Laboratory has discovered an issue that will change the weapon response for the proposed B53 dismantlement process. In response to this discovery, the B53 project team plans to modify seven tools to increase their electric charge dissipation rate (when modified, the tools will be able to bleed charge from the unmitigated voltage environment to 100V, instead of 5 kV, in one second). The project team does not believe this issue will impact the scheduled authorization date of September 2010 for B53 dismantlement operations.