

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Steven Stokes, Technical Director  
FROM: William Linzau and Rory Rauch, Site Representatives  
SUBJECT: Oak Ridge Activity Report for Week Ending November 1, 2013

**Welding Program:** In early October, the B&W Welding Program Manager initiated a review of weld package documentation after quality assurance personnel communicated concerns that the weld package database was showing an unexpectedly large number of open packages. Initially, quality assurance personnel identified more than 300 packages listed as open in the database, approximately half of which had been open for more than one year. The review team first evaluated the packages that had been open for more than one year, with a focus on identifying systems that had been returned to service without a formal release from quality assurance personnel. At this time, 10 such packages have been identified with one involving work within the configuration management boundary of a safety-significant system. The team performed a field inspection of this work and found inspection records and sufficient physical evidence (inspector field markings) to conclude that the welds met code requirements. The review team believes these incidents were the result of legacy process weaknesses, but will not draw any final conclusions until all open packages have been reviewed. The welding program manager is developing corrective actions to address other weaknesses identified during the review. These include a lack of rigor in the process for tracking the closure of weld packages (particularly those that have been cancelled, delayed, or suspended), and inadequacies in the documentation provided to quality assurance to support the closure of weld packages.

**Aging Infrastructure Management:** In 2012, B&W began to implement a system health reporting program as an enhancement to existing Y-12 aging infrastructure management tools, which include the Continued Safe Operability Oversight Team and facility-specific Operations Plans. The purpose of the system health reporting program is to improve the information used to reflect the overall health of key production and safety-related systems by not only tracking system availability, but also defining a common set of metrics to better characterize system sustainability. Examples of these metrics include critical spare part availability, support system availability, and the status of preventive maintenance activities. To date, B&W has developed system health reports for 22 systems and plans to continue to expand the program until reports have been developed for all key systems.

Attendant with the implementation of the system health reporting program, B&W created facility-level and plant-level health committees to provide a structured approach to the oversight of system issues. The committees perform two key functions: (1) identifying recommendations to address system issues and (2) translating raw system health reporting data (and other sources of system information) into capability confidence ratings—a qualitative representation of the risk that the site could lose certain core production capabilities (e.g., component assembly, enriched uranium purification) within the next several years. The plant health committee provides these ratings to the B&W General Manager and NNSA stakeholders in order to ensure that senior management is informed of the systems that present the greatest risks to the sustainment of core Y-12 capabilities. The plant health committee also informs senior management where funding shortfalls could limit the site's ability to take action to mitigate these risks. During the last several months, B&W conducted the first round of plant health committee meetings and established a baseline capability confidence rating for each core Y-12 capability. This week, B&W's Vice President for Production gathered all facility health committee chairs to review fiscal year 2013 system health program accomplishments and discuss the actions needed to facilitate the continued maturation of the program in fiscal year 2014.