

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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

D. Campbell was at Y-12 this week to observe a conduct of operations and work planning and control assessment led by B&W's Nuclear Safety Operations organization.

Configuration Management: Last year, B&W prepared three work packages to modify the cooling tower water system in Building 9212. The work is being accomplished under the Nuclear Facility Risk Reduction project (see 9/3/10 report). The tower water system is connected to multiple systems in the facility, but the change packages did not correctly identify some of the boundaries between the tower water system and the connected process systems. Because of these errors, configuration management processes were not applied to the extent required and the Unreviewed Safety Question Determinations did not include evaluations of all affected process systems, such as the Molten Aluminum Nitrate (MAN) and Intermediate Evaporator systems. Much of the work has been completed correctly, but changes to the MAN system were completed and the system was returned to service without proper change control documentation. The Operations Manager placed a hold on the affected systems while the engineering personnel ensure system configurations are maintained and appropriate safety evaluations are conducted.

Microwave Casting: This week, B&W successfully melted uranium metal in the production microwave caster for the third time. Similar to the second run (see 12/14/12 report), the pour rate and yield (amount of material transferred from the crucible to the mold) were unsatisfactory. The B&W microwave casting subject matter expert is evaluating the cause of these mis-pours, but does not believe this will be a lingering problem. B&W chose to increase the power ascension rate during this run, which drastically reduced its cycle time (the time from when the caster pulls vacuum to the time the stack is dropped into the cooling chamber). B&W is still awaiting the final results of the chemical analysis of the product from all three runs.

Work Planning and Control: B&W piloted the new work control requirement to hold a roundtable meeting (see 1/18/13 report) on a work package to fix leaks from an overhead plenum in M-wing of Building 9215. The purpose of the roundtable meetings was to foster a more team-based approach and provide an integrated review of the near finished packages. During the pilot roundtable meeting, there was some confusion regarding the format of the meeting. Certain participants treated the meeting like a Senior Review Board (see 6/8/12 report), asking a series of pointed questions about the scope, hazards, and controls as if the work package had been finalized. Many of these questions could not be answered and it soon became clear that the meeting organizer had intended to utilize this meeting to integrate the input from different safety disciplines. B&W will apply the lessons from this pilot session to future roundtable meetings.

Utilities: Last week, Y-12 experienced reduced steam header pressure due to inadvertent actuation of the emergency stop button for two steam boilers. A similar event occurred in September 2010 when the emergency stop button was mistakenly actuated (see 9/3/10 report). If the steam plant fails to maintain the necessary header pressure for an extended period of time, B&W's *Steam Curtailment Plan* would require personnel to shut down systems in Hazard Category 2 nuclear facilities. In both cases, utilities personnel returned the steam pressure to normal levels before such actions were required.