

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 24, 2008

TO: Timothy Dwyer, Technical Director
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending October 24, 2008

Conduct of Operations: In response to numerous operational errors in August, B&W managers and supervisors have completed a review of active production procedures (see the 9/12/08 site rep. report) to identify potential procedural enhancements (e.g., identification of critical steps, additional verification requirements, or requiring reader-worker procedure use). This review resulted in limited changes in procedural use expectations including sign-off of critical steps for some operations. As previously reported, B&W plans a more detailed review of all operational procedures during this fiscal year. The criteria for this year-long review are to be developed by November. The review is intended to strengthen the usability of procedures and reduce opportunities for undesired outcomes. An assessment of training programs is also planned to identify additional opportunities for reducing operational errors.

B&W's actions to date have not broadly addressed procedure use expectations in response to recent staff and site rep. observations of weapon component dismantlement, quality evaluation and assembly operations (see the 8/8/08 site rep. report.). B&W management indicated to the site reps. that broader improvement actions on procedure use expectations may result from the year-long procedure review effort.

Criticality Safety/Conduct of Operations: This week, material movement operations in the Assembly/Disassembly Building were suspended after a Material Management supervisor discovered a violation of facility-specific criticality safety requirements. Specifically, Material Management personnel violated a requirement that bird cages with certain design cans (containing metal items) are not permitted to be stored in certain areas of the facility. Facility management has directed that additional oversight of material moves by Facility Operations personnel will be in place until there is assurance that Material Management personnel are properly adhering to facility criticality safety requirements.

Furnace Reduction By-product Disposition: In March, B&W operators discovered that the lid of a can containing furnace reduction by-product material (slag and liner) had become dislodged and a small amount of material was released (see the 3/21/08 site rep. report). Numerous other slag and liner can lids had been found to be dislodged. B&W has determined that oxidation of un-reacted material, principally calcium, causes a volumetric increase of the material in the cans. B&W has developed guidance for limiting volume in furnace reduction by-product cans to provide adequate head-space and reduced by-product volume in existing cans.

B&W is planning a project to use two existing electrical furnaces (never used and now disabled) to oxidize any un-reacted material in the slag and liner inventory in the Enriched Uranium Operations Building. This thermal treatment is necessary to prepare the slag and liner material for further processing to recover enriched uranium. The project is in early design stages with a new furnace controller planned. B&W has noted that safety basis changes are expected to be minor and has proposed to YSO that this project is not a Major Modification. Startup is planned for 2011. B&W has proposed a contractor Readiness Assessment to confirm operational readiness in their most recent Startup Notification Report.