

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 30, 2008

TO: J. Kent Fortenberry, Technical Director  
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives  
SUBJECT: Activity Report for Week Ending May 30, 2008

Mr. Owen was out of the office this week.

**Work Authorization/Conduct of Operations:** B&W completed a follow-up investigation of last month's X-ray machine incident (see the 4/25/08 site rep. report). During startup activities (prior to receiving authorization to perform work with fissile material), technicians were testing radiography equipment when a component containing fissile material fell a few feet to the floor. The investigation report concludes that there were two primary causes that led operators to incorrectly assume that they were authorized to perform work with hazardous materials: (1) administrative controls were not in place to prevent the use of hazardous materials when using the equipment for practice and functionality checks and (2) Product Certification personnel did not fully understand that hazardous materials could not be introduced to the process until authorized by facility management. B&W has conducted a work pause for all nuclear operations personnel to discuss two events in which components were dropped. These discussions briefly addressed proper use of surrogate materials and the need to assure the start-up process and documentation are complete prior to conducting operations. Also, B&W is planning to conduct additional training for Product Certification personnel regarding the control of new and/or modified equipment and processes prior to startup authorization. It appears that these corrective actions are relatively limited in scope (revising the training for Production Certification personnel rather than a larger audience) and may not be long-term fixes (conducting briefings and issuing lessons learned rather than requiring additional administrative controls during readiness efforts).

**Personnel Protective Equipment (PPE):** Last week, a pipefitter in the Building 9212 Complex was welding a waterline when slag from the process ignited the masking tape on his Anti-Contamination outerwear (between a glove and the sleeve of his coveralls). Nearby workers helped the pipefitter remove his gloves and the fire was extinguished. The gloves and coveralls worn by the pipefitter were flame retardant. The employee suffered minor second degree burns on his forearm. The radiological worker permit (RWP) did not require that tape be used, but neither the RWP nor the job hazards analysis (JHA) specifically precluded the employee from using the flammable masking tape. B&W is reevaluating the PPE requirements in the JHA and the RWP to ensure that worker safety is sufficiently addressed.

**Pressurized Drums:** B&W recently responded to YSO's request to provide a full review of a recent pressurized drum event (see the 4/11/08 site rep. report). During this event, operators were attempting to open a bulging drum in a processing hood when the lid was forcefully ejected due to pressure within the drum. B&W's response indicated that the hazard analysis for opening of the bulging drum was based on subject matter expert assessment, was incorrect, and led to inadequate controls. The B&W response, however, did not explicitly address the lack of use of the formal Job Hazard Analysis process for this drum. B&W is developing a procedure for handling bulging drums and is evaluating use of drum vents for storing contaminated combustibles. B&W also conducted an extent-of-condition evaluation and identified an additional suspect bulging waste drum. YSO also requested that B&W perform an assessment of the effectiveness of Integrated Safety Management (ISM) implementation in the Production Division. B&W has responded that, despite the inadequate hazards analysis in this instance, ISM is effectively implemented within the Production Division.