

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Timothy Dwyer, Technical Director
FROM: Rory Rauch, Site Representative
SUBJECT: Oak Ridge Activity Report for Week Ending August 3, 2012

D. Kupferer completed his assignment as site representative last week.

Operational Suspension: This week, the B&W General Manager instituted a security stand down that resulted in an immediate but orderly suspension of all fissile material operations at Y-12. The B&W General Manager has developed criteria for exiting the stand down. There is no estimate for when operations will resume at this time.

Safety Analysis: In November 2011, B&W declared a potential inadequacy in the safety analysis (PISA) after the discovery that analysts had used a non-conservative airborne release fraction (ARF) for uranyl nitrate hexahydrate crystals in the calculations supporting the Building 9212 Safety Analysis Report (see 11/25/11 report). During the extent-of-condition review, B&W declared two additional PISAs after analysts discovered that non-conservative ARF values had been applied to contaminated combustible packed waste, uranium tetrafluoride, and certain aqueous/organic solutions. Following each PISA, Building 9212 operations management issued standing orders establishing administrative limits that lowered the material-at-risk in Building 9212 to levels that ensure the mitigated consequences for the associated accident analyses remain bounding. B&W safety analysts determined that all of the above PISAs resulted in positive unreviewed safety questions (the determination for the two most recent PISAs was completed last week). B&W is preparing a justification for continued operations that will reflect the new ARF values in the safety analysis.

Training: Last month, NPO directed B&W to review the opportunities for improvement identified in the Board's June 5, 2012, letter on B&W's training and qualification program and identify any proposed corrective actions by the end of July (see 7/13/12 report). B&W issued its response to NPO this week. The response states that a number of training and qualification improvement opportunities identified by the Board are already being addressed by plant-wide initiatives (e.g., conduct of operations and lockout/tagout). Additionally, B&W is developing a continuing training pilot within the production organization. However, other opportunities for improvement identified in the staff report, such as opportunities to improve the systematic approach to training, require additional time to evaluate before corrective actions can be identified. The response commits to completing the development of the continuing training pilot and providing final corrective actions by November 1, 2012.

Fire Protection: National Fire Protection Association (NFPA) standards require sprinkler heads that have been in service for more than 50 years to be replaced or submitted for field service testing in order to ensure continued functionality (see 3/16/12 report). B&W fire protection engineers estimate that the sprinkler heads for one of the credited wet pipe fire suppression systems in Building 9212 are nearing this 50 year service life threshold. B&W is in the process of replacing the sprinkler heads for this system, the first credited system to have its sprinkler heads replaced to achieve compliance with the 50 year NFPA service life requirement. During the sprinkler head replacement activities, B&W and NPO fire protection engineers observed a black liquid substance that had built up in several of the sprinkler heads. Both parties agreed that this substance, which was similar in consistency to water, would not interfere with the credited function of the system. Nonetheless, B&W is planning to test the substance to provide some insight regarding its origin and to verify that the substance cannot degrade in a manner that would interfere with the function of the system.