

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 March 15, 2013

Building 9212: B&W last performed operations in the Oxide Conversion Facility (OCF) in Building 9212 on March 20, 2012. Operators placed the system in warm standby, which negated the need for B&W to perform most surveillances and preventive maintenance activities for OCF. Nonetheless, production management had planned to keep current with these activities to ease resumption of operations. However, changes in programmatic priorities and available funding late in fiscal year 2012 compelled B&W to forego this approach, making efforts to restart operations more challenging. B&W successfully completed a substantial number of these activities in recent weeks and prepared to transition to operations mode for OCF this week. Given the duration of the operational downtime in OCF, production management took some additional measures prior to granting work start approval. For example, the responsible line manager reviewed a work start checklist and production management instituted comprehensive Senior Supervisory Watch coverage of OCF. In addition, the Vice President for Production assumed work start authority for OCF operations and received extensive briefings on the status of the efforts to resume operations before granting work start approval on Friday.

Separately, B&W declared a potential inadequacy in the safety analysis associated with the Holden Gas Furnace due to the degraded condition of the brick heating surfaces. The furnace uses a natural gas/air mixture, which diffuses through porous bricks before being ignited to heat the interior of the furnace. Extensive cracks in the bricks raised questions about the potential for the flame on the interior of the furnace to propagate through the cracks to other areas of the furnace. This specific accident scenario had not been evaluated in the documented safety analysis. As a compensatory measure, B&W issued a standing order that prohibits supplying natural gas to the furnace chamber.

Transuranic Waste Processing Center (TWPC): Late last week, an operator inadvertently secured the breathing air supply to workers using supplied air suits in the box breakdown area of TWPC's main processing building. The operator was attempting to start the supplied air cooling system, but failed to follow the procedure and open the cooler outlet isolation valve. This resulted in securing breathing air (normal and emergency back-up) to the three workers performing waste processing operations. The workers expedited egress on indication of loss of air, but one of the workers became disoriented and nearly collapsed while removing the suit. On Monday, the Oak Ridge Office of Environmental Management (OREM) sent a letter to Wastren Advantage, Inc. (WAI), expressing its concern and requesting that WAI prohibit manipulations of breathing air systems while in use, conduct a formal causal analysis, and conduct a common cause analysis of this event and a similar event in December 2012 (see 12/14/12 report).

Conduct of Operations/Work Planning and Control: The B&W Nuclear Safety Operations organization recently completed an independent review of the effectiveness of the actions taken to date as part of the Conduct of Operations and Work Planning and Control (WP&C) Performance Improvement Plans (PIPs). The review team concluded that the Conduct of Operations PIP has yielded the desired results in most target areas of performance, though additional refinement of management's expectations for work execution is needed in some areas. Regarding WP&C performance, the team concluded that significantly less progress has been made. In particular, weaknesses in the planning phase have negatively impacted the quality of work packages. The team noted that work execution has improved, particularly with respect to worker decision-making and willingness to suspend work when work package issues arise. The team concluded that new key initiatives undertaken by management to address issues in the planning phase appear to better target the root causes than previous corrective actions.