

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 11, 2008

TO: J. Kent Fortenberry, Technical Director  
FROM: R. Todd Davis/David Kupferer/Donald Owen, Oak Ridge Site Representatives  
SUBJECT: Activity Report for Week Ending April 11, 2008

Staff member David Andersen and outside expert Dr. James Jirsa were at Y-12 to walk-down the Highly Enriched Uranium Materials Facility and review recent construction issues. Staff member D. Winters and outside expert D. Boyd were at the Transuranic Waste Processing Center to observe a readiness review.

**Enriched Uranium Material – Unexpected Thermal Reaction - Update:** As noted on March 28<sup>th</sup>, B&W identified that a chip briquette can had experienced a thermal reaction. B&W continues to investigate this event including development of a plan to disposition similar chip cans (approximately 60 cans have lids raised above the normal position). To gain additional information, B&W plans to transfer one of these cans to an inert glovebox to examine the contents and collect samples for analysis. In addition, B&W plans to expose a small amount of the briquette material to air (inside a process hood) to evaluate for pyrophoric reactions. The plans and procedure along with the Job Hazard Analysis and other supporting documents were presented to the Management Review Board (MRB) this week. After learning that chip drying and briquetting activities were continuing in the Enriched Uranium Operations Building, the MRB requested that compensatory measures be identified to prevent additional can issues. Briquette activities were subsequently suspended. The MRB also requested additional details on the sampling plan and provided comments on the procedures and supporting documents. The MRB plans to reconvene next week to further evaluate the path forward.

**Pressurized Drum Event - Update:** YSO issued a formal request to the B&W Production organization to provide a full review of the event noted in last week's report involving the opening of a waste drum and the lid being forcefully ejected due to internal pressurization. YSO noted concerns with the following: the accuracy of the initial characterization of the event, the effectiveness of B&W's Integrated Safety Management (ISM) hazard identification and control processes, and the lack of feedback and improvement from another recent pressurized drum. YSO requested that B&W provide this review by early May, including corrective actions and an assessment of the effectiveness of the Production organization's ISM implementation. Another bulging waste drum was found this week in the former Quality Evaluation Building for which the path forward is being developed.

**DOE Headquarters Assessment:** This week, the DOE Office of Health, Safety and Security completed its field work and provided an initial out-brief to YSO and B&W management on their inspection of environment, safety and health programs at Y-12. The team identified concerns in several areas including the following: conduct of operations (including adherence to procedures and Job Hazard Analysis (JHA) controls), JHA development and implementation, and conduct of engineering (including one issue that resulted in a Potential Inadequacy in the Safety Analysis in the Assembly/Disassembly Building). The team will return to Y-12 in late-April to complete a factual accuracy check on their report.

**Transuranic Waste Processing Center:** DOE began its Operational Readiness Review (ORR) for startup of remote-handled transuranic waste processing on Wednesday. Demonstration of a cask movement into the hot-cell was suspended when the main lift mechanism failed (following a maintenance task). Other demonstrations are in progress and the ORR will continue into next week.