

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Timothy Dwyer, Technical Director  
FROM: Wayne Andrews and David Kupferer, Site Representatives  
SUBJECT: Oak Ridge Activity Report for Week Ending November 11, 2011

**ORNL Building 3019/Uranium-233 Disposition.** This week, Isotek initiated its Readiness Assessment for retrieving, inspecting, overpacking, and shipping Zero Power Reactor (ZPR) plates to the Nevada Nuclear Security Site (see the 11/4/11 report).

In a 10/11/07 letter to the Board, DOE-ORO concurred with Isotek's recommendation to remove Stack 3020 to prevent the stack from falling onto Building 3019 during a high-wind or seismic event (see the 3/2/07, 6/8/07, and 9/14/07 reports). Last month, Pro2Serve completed a calculation for Isotek that quantified the impact the stack would have during this type of event and evaluated whether the storage vaults within Building 3019 would be capable of withstanding the impact. The calculation did not evaluate the probabilities associated with this event. Several conservative assumptions were made in the calculation including the following: the stack will remain intact as it falls, no energy will be dissipated as the stack crashes through the roof and penthouse, the bridge crane is assumed to be located above the storage vaults (the crane is required to be parked away from the storage vaults when not in use), and the concrete storage vaults are assumed to be plain concrete rather than reinforced concrete. The calculation concludes that the storage vaults would remain intact during this event.

**Conduct of Operations.** B&W is in the process of conducting its eleventh tri-annual Operational Performance Improvement (OPI) training session for all production personnel (see the 3/11/11 report). The site representatives observed the OPI session that was attended by Building 9204-2E production personnel, which included the following topics:

- OPI personnel highlighted the requirements and expectations associated with crew briefings, pre-job briefings, and suspend/stop work expectations.
- The Deputy Manager of the Production Division discussed his expectations that operators and supervisors (a) have a working knowledge of their production processes and equipment, (b) review applicable job hazards analyses and permits (e.g., radiological work permits) to ensure that hazards and controls are clearly understood, and (c) review their procedures to verify that the procedure includes an appropriate level of detail.
- In response to recent conduct of operations weaknesses identified by Senior Supervisor Watch personnel and the YSO Facility Representative, the Production Manager of Building 9204-2E reinforced expectations with regards to proper procedure use and place keeping.

**Excess Facility Deactivation/Safety Analysis.** In June, to ensure proper transition of facilities from nuclear to non-nuclear status (see the 3/27/09 and 4/30/10 reports), B&W revised its procedures to require both (a) the development of deactivation plans and (b) the performance of deactivation validation reviews. B&W has recently been executing its deactivation plans to deactivate Buildings 9720-12 and 9720-18. During the past several years, these storage facilities have been primarily used to store depleted uranium (see the 12/17/10 report). This year, B&W relocated most of the depleted uranium from Buildings 9720-12 and 9720-18 to Building 9720-5, which B&W determined is better suited for storage of these materials (see the 11/26/10). Last week, YSO and B&W performed a walkdown of Buildings 9720-12 and 9720-18 and confirmed that B&W had removed all hazardous materials from these facilities. B&W has issued a standing order that states shipments to Buildings 9720-12 and 9720-18 are no longer authorized. B&W plans to request YSO approval to cancel the safety basis documents for Buildings 9720-12 and 9720-18 subsequent to performing its deactivation validation reviews.