

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 14, 2006

**TO:** J. Kent Fortenberry, Technical Director  
**FROM:** R. Todd Davis/Donald Owen, Oak Ridge Site Representatives  
**SUBJECT:** Activity Report for the Week Ending April 14, 2006

Mr. Owen was out of the office on Friday. Staff member Joel Blackman and outside experts Jirsa and Stevenson visited Y-12 this week to review construction quality issues for the Highly Enriched Uranium Materials Facility (HEUMF).

A. Oxide Conversion Facility. As reported last week, BWXT began initial conversion testing in accordance with the startup test plan. This week, the site rep. observed operations to transfer the product material from the hydrofluorination fluid bed to the product glovebox and product canning. Initial visual inspection indicated that uranium tetrafluoride was produced. Product sampling and examination is in progress. BWXT plans to perform additional testing with a larger batch size next week.

B. Highly Enriched Uranium Materials Facility. As reported last week, weather conditions forced delay of a limited resumption of concrete placements for Performance Category-3 structures. This week, placements for two wall sections were made with no noted discrepancies.

The staff, outside experts and site reps. reviewed actions taken to address the construction quality issues reported since January including disposition of non-conformances, extent of condition reviews, and measures instituted to support resumption of placements. The staff noted observations regarding quality assurance procedures and practices used by the construction contractor and subcontractors. During the review, the staff and site rep. inquired on performance of the quality inspection step and the prior practice of use of construction contractor/subcontractor fabrication drawings instead of the BWXT design drawings for inspection/acceptance (see February 17<sup>th</sup> site rep. report). In responding to this inquiry, BWXT personnel noted that the HEUMF construction contract between BWXT and the construction contractor requires use of both design drawings and fabrication drawings for inspection/acceptance of the reinforcing steel prior to concrete placement. BWXT personnel also noted that their causal analysis of applicable non-conformances did not identify this issue.

C. ORNL Tank W-1A Soil Sampling. Bechtel Jacobs started their Readiness Assessment (RA) this week. The site rep. observed a demonstration of the operation, except for actual drilling, at the ORNL Tank W-1A site on Tuesday. Numerous issues are being pursued by the RA team in areas such as training, implementation of controls, and disposition of issues from prior reviews. As a result, the demonstration of the drilling operation was delayed until next week.

D. Conduct of Operations. This week, BWXT identified an occurrence for failure to provide adequate isolation for a steam condensate system consistent with the Building 9212 safety basis. While shutting down tray dissolving operations, the operator failed to complete the procedure that would have appropriately isolated the system. This issue was identified the following morning and the system was placed in the appropriate configuration. Subsequent BWXT investigation identified several conduct of operations issues and poor communications between production personnel and facility operations personnel. This issue was discussed with YSO and BWXT management.