

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 30, 2004

**TO:** J. Kent Fortenberry, Technical Director  
**FROM:** Donald Owen, Oak Ridge Site Representative  
**SUBJ:** Activity Report for Week Ending January 30, 2004

A. Melton Valley Waste Processing Facility (WPF). Processing of supernate was started this week. Supernate (after transfer from the Melton Valley storage tanks) was processed through evaporation and drying steps and the first load-out of waste was completed Monday and a second load-out was completed on Thursday. (III)

B. Y-12 Building 9204-4: Storage of Machine Chips - Update. As reported last week, BWXT had completed planning for an effort to vent several unvented drums containing depleted uranium chips, including use of argon purge steps to prevent or extinguish a fire. This week, two unvented drums were vented with no indication of any flame or smoke, however, one of the drums contained various items (mostly trash) and the other drum had chips that were in bags. Drum venting is to continue following procedural enhancements to deal with such unexpected drum contents. (I)

C. Building 9204-2E - Excess Generation of Machine Chips. As reported on December 5th, incorporation of several design changes had been made to a machine to address generation of uranium machining chips in excess of a criticality safety mass limit on multiple occasions. Chip masses generated during certain machining cuts in recent weeks, while not exceeding the criticality limit, had unexpectedly approached the limit. As a result, this operation was suspended and engineered controls are being developed to allow a much larger criticality safety mass limit. (II)

D. Y-12 Activity-Level Work Planning. As reported on December 12<sup>th</sup>, a compensatory action was taken to address a faulty screening process for determining whether a formal Job Hazard Analysis (JHA) is required for a given activity. This action effectively eliminated JHA screening until a revised process could be put in place. BWXT is developing new screening requirements intended to establish an appropriate threshold for when a JHA is required. The new requirements are in final review.

As reported on October 24<sup>th</sup>, the site rep. noted that a JHA developed for the depleted uranium chip disposition activities was problematic; controls were specified such as "contact fire protection engineering" for fire hazards or "initiate a RWP [radiological work permit] Request" for radiological hazards. Y-12 management had indicated that they would review that JHA and also address any broader implications to activity work planning at Y-12. This week, BWXT management noted to YSO management and the site rep. that similar problems have been found since October with JHAs for certain other activities. As a result, BWXT has initiated a broader assessment of implementation of the JHA process at Y-12 with an emphasis on proper definition of safety controls. This assessment is expected to be completed by late February.

As reported last week, the final planning (following site rep. and staff inquiry) for the drum venting operation noted above adequately addressed credible fire contingencies and involved the proper YSO and BWXT subject matter experts. As a result of this experience, YSO and BWXT have initiated a review of existing work planning and authorization processes (including readiness reviews) for addressing infrequent and potentially hazardous evolutions. The objective is to determine any needed changes to augment hazard analysis and work approval protocols and ensure proper YSO and BWXT subject matter expert involvement for such evolutions. This effort is expected to take several weeks. (I)