

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 13, 2001

**TO:** J. Kent Fortenberry, Technical Director  
**FROM:** Paul F. Gubanc and David T. Moyle, Oak Ridge Site Representatives  
**SUBJ:** Activity Report for Week Ending April 13, 2001

A. Y-12 Enriched Uranium Operations (EUO) - Reduction: This week, BWXT had hoped to close the remaining pre-start findings and obtain YAO approval for startup of reduction; this did not occur. YAO, in checking on efforts to certify the reaction vessel thermocouple, discovered that the worker who signed for performing the certification was unfamiliar with the certification procedure, was not qualified to perform the procedure, and did not actually perform the work. BWXT must still demonstrate proper certification of the thermocouple and now deal with the more systemic issue of calibration lab performance; an issue highlighted in the March ISM review. (1-C, 2-A)

B. Y-12 Hydrogen Fluoride Supply System (HFSS): During original system design, it was not recognized that the National Electric Code required 600V wiring. As a result, 300V wiring was incorrectly specified and installed on the HFSS. The 300V wiring was apparently chosen because it was available with a chemically resistant jacket. The extent of the wiring problem is extensive, and will require replacement of essentially all field wires on the system (approximately 28,000 ft). A vendor will be able to supply the new 600V wire with a chemically resistant jacket, but an additional concern is the fact that the new wire will be a larger diameter. The system conduit is already near capacity, and the larger diameter wiring may require new conduit. (2-A)

C. Y-12 Disassembly: BWXT's management self-assessment (MSA) for an upcoming disassembly campaign finished this week. Our observations below were discussed with the MSA team.

1. During the evaluated evolutions, a support group worker did not fully participate (i.e., did not dress and perform his duties as he would during the actual evolution). This lack of fidelity was identified by YAO, but the MSA did not demand otherwise. This is a repeat observation.
2. Several material deficiencies were noted with the cutting machines utilized by the operators; some presented direct industrial safety hazards. These problems, some of obvious long standing, were not recognized by facility management until noted by the outside observers.
3. Facility management does not comply with, and could not demonstrate its understanding of, the relevant site procedures for establishing preventive maintenance for equipment. (2-A)

D. Y-12 Emergency Exercise: On Wednesday, Y-12 conducted another emergency exercise in preparation for the May 9 full participation exercise. Mr. Gubanc observed incident command while Mr. Moyle observed the emergency operations center (EOC). Incident command performed well, but relies heavily on first hand knowledge of individuals and their roles. The use of labeled vests that clearly indicate each player's role could enhance performance especially if unfamiliar people are thrust into a key role in a real emergency. Command and control in the EOC continues to be an issue. For example, due to less than definitive direction from the EOC, both the EOC and technical support center (TSC) managers believed they were in control of the event for at least 20 minutes. Only after prompting by a drill controller, was this confusion resolved.

Y-12 emergency management has improved significantly under BWXT. Key to this improvement is BWXT's adoption of recommendations from the emergency management subcontractor experts used by BWXT to develop the drill scenarios and assess drill performance. (1-C)

cc: Board Members