

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 22, 2005

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending April 22, 2005

A. Board Member Visit to Y-12. Board member R. Bruce Matthews and staff member Matt Duncan visited Y-12 to review implementation of Integrated Safety Management. YSO and BWXT briefed Dr. Matthews on actions to improve activity-level work planning. Dr. Matthews observed work crew prejob briefings, observed a disassembly activity and interviewed several BWXT operations personnel as well as YSO and BWXT senior management.

B. Activity-Level Work Planning. As reported last week, investigation of a failure to conduct an operational safety board (OSB) review on a maintenance activity to replace a conveyor belt in a casting line was in progress. BWXT management briefed Dr. Matthews and staff on the investigation results including issues with lack of understanding and use of the OSB review protocols for such infrequent, potentially hazardous work activities. Such reviews have recently been incorporated in the new Integrated Work Control Manual (IWCN) and reemphasized to work planning personnel.

As reported last week, the IWCN definition for a “hazardous system boundary,” used when considering need for a higher level of work planning, essentially restricted systems containing nuclear material to only those that “... present an unintentional criticality potential.” In response to a site rep. observation that such restriction could improperly exclude a breach of contaminated glovebox, BWXT revised the definition to remove the restriction this week.

C. Disposition of Chemical Traps. BWXT is planning to process 153 chemical traps used in uranium enrichment processes (at the former Gaseous Diffusion Plant) that have been stored for more than 15 years in a Y-12 facility currently undergoing deactivation. The traps (tall cylinders about seven feet long) are filled with small alumina pellets used to trap process gas and adsorb uranyl fluoride. The plan is to incline the traps, open the main flange and empty the pellets into storage cans (BWXT estimates about 3-4 cans per trap). Local ventilation and respiratory protection equipment is planned to address the airborne contamination hazard. The traps vary widely in enrichment levels and total uranium. BWXT is preparing a mockup to demonstrate the canning operation. Activity hazard analysis and procedures are scheduled to be finalized following the mockup demonstration in the next few weeks.

The site reps. inquired with YSO management on the planned level of readiness review for this campaign. The site reps. noted that the BWXT Startup Notification Report submitted to YSO late last week stated that disposition of these chemical traps will be a “Standard Operations startup” (i.e., no independent readiness review is planned). YSO management indicated to the site reps. that YSO is reviewing the Startup Notification Report and evaluating the need for a readiness review for this campaign.

D. Oxide Conversion Facility. This week, it appears that BWXT has resolved the foaming problems that were causing high differential pressures in the Oxide Conversion Facility (OCF) B-1 Wing scrubber system (see 4/8/05 site rep. report). BWXT is using a different packing type and has installed a low energy spray nozzle. Tests results to date are positive over the range of process parameters. BWXT expects to complete scrubber testing and resume OCF startup operations next week.