

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 23, 2006

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJECT: Activity Report for the Week Ending June 23, 2006

A. Vacuum Pump Filter - Criticality Safety. BWXT management commissioned an investigation team to evaluate the issues associated with the vacuum pump filter (see 5/12/06 site rep. report). On Monday, this team briefed YSO on the results of their investigation that included several judgments of need and recommendations for the criticality safety and uranium holdup survey programs. This team also concurred on the BWXT technical justification for resuming casting operations using the East side vacuum pumps. BWXT has identified additional controls to prevent uranium and moderator accumulation in these filter housings. YSO continues to evaluate the Justification for Continued Operation and associated technical rationale for resuming casting activities using the East side vacuum pumps.

B. Oak Ridge Radioactive Waste Management. Staff member Winters and the site rep. walked-down the Melton Valley Waste Processing Facility contact-handled waste processing areas and the ORNL Tank W-1A soil sampling operation. Preparations for startup of remote-handled transuranic waste processing are on hold pending DOE-ORO contract negotiations with Foster-Wheeler. Foster-Wheeler personnel noted that startup is now targeted for summer 2007. On Tank W-1A soil sampling, Bechtel-Jacobs Company (BJC) has removed and processed about 30 of the approximately 200 planned sample cores. BJC anticipates completion in about six weeks.

As noted on January 6th, Operational Readiness Reviews (ORRs) were to be conducted for a campaign by BJC to install filtered vents and sample ports in more than 2000 drums in storage at ORNL. The BJC ORR was recently completed and DOE ORR was started last week. This week, the DOE ORR team suspended their review noting lack of a satisfactory demonstration of the operation by BJC. Among several issues, the DOE ORR team noted inadequate implementation of safety basis inventory limits for drum staging, acceptance of improperly installed vents by operators, and lack of test documentation for the vent/sample port installation equipment. Resumption of the DOE ORR to observe another demonstration is anticipated in mid-July.

C. Activity-Level Work Planning. This week, BWXT issued substantial revisions to the Y-12 Integrated Work Control Manual and the manual for Job Hazards Analysis (JHA). Among notable changes are a revised work screening protocol and the use of "model work packages" for repetitive work. The prior screening protocol provided criteria for two levels: "minor work," performed as skill-of-the-craft with no specific JHA or detailed work instructions required, and "complex work" that requires a specific JHA and detailed work instructions. The new, three-level protocol includes criteria defining "dispatched work," performed as skill-of-the-craft with no additional planning or work instructions. Work not meeting dispatched work criteria would be planned as either "minor" or "complex" requiring varying levels of JHA and work instructions. Regarding model work packages, BWXT personnel noted that the intended use is for narrowly defined work scopes.

The site rep. noted two observations to BWXT and YSO personnel based on initial review: (1) the criteria for dispatched work does not include a general prohibition on breaching a hazardous system (a term defined in detail in the manual); and (2) there may be need for additional checks or assessments on use of model work packages to avoid use on out-of-scope work or avoid work packages developed with too broad of a work scope to properly control hazards.