

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 23, 2004

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJ: Activity Report for Week Ending December 24, 2004

Mr. Davis was out of the office on Wednesday and Thursday.

A. Enriched Uranium Manufacturing Facility. Last Friday, YSO received approval of Mission Need (i.e., Critical Decision-0) from the Deputy Secretary for the Enriched Uranium Manufacturing Facility (EUMF). This approval allows BWXT to move forward with conceptual design. Y-12 plans to consolidate enriched uranium activities (e.g., metal production, casting, machining, assembly, disassembly, and quality evaluation) to this new facility, currently planned to be operational by 2013. The facility will be a designed denial facility similar to the Highly Enriched Uranium Materials Facility. The facility will also be co-located with HEUMF so that the security footprint and associated costs will be greatly reduced. BWXT plans to complete conceptual design by December 2005.

Last week, Y-12 hosted a technology development interface meeting with NNSA and design laboratory personnel to discuss new technology insertion planning for EUMF. Design laboratory agreement and involvement with the development and implementation plans for new technology (e.g., microwave casting, saltless direct oxide reduction) will be important for the success of the EUMF project. A Technology Review Board will be chartered to help drive development and facilitate communications.

B. Microwave Casting. As reported on November 10th, YSO and BWXT Readiness Assessments (RAs) were being planned to confirm readiness for a prototype campaign (15 runs) of microwave casting of enriched uranium in the Enriched Uranium Operations building. YSO is reviewing the BWXT RA Plan-of-Action (POA), submitted for YSO approval in early December, and completing the YSO RA POA. Final line management preparations are in progress and BWXT projects start of the BWXT RA by mid-January.

C. Y-12 Inactive Nuclear Materials. The Board's letter of May 20, 2002, addressed management and disposition issues with inactive nuclear materials at sites managed by NNSA. As reported on August 15, 2003, planning was in progress by YSO and BWXT for inactive material disposition activities. The BWXT plans indicated the need for revised economic discard limits (EDLs), as well as termination of safeguards, for certain materials. BWXT noted that without revised EDLs, Y-12 could spend about 50 percent of processing time recovering less than 1 percent of uranium in the backlog inventory. Since 2003, revised EDLs have been approved for the Carbon/Graphite, Reduction Sand, and, in early December, for Ceramics/Glass and Borax Pellets material categories; safeguards termination approval is pending on the latter two categories. BWXT personnel noted to the site reps. that these revised EDLs (increased by factors up to 150) will allow direct disposal of essentially all of the inventory in these categories. BWXT personnel also noted that the path forward for submission of revised EDLs for several other major categories of inactive materials is under development and should be defined by late-January.