

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 18, 2005

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending March 18, 2005

Board member Joseph Bader and staff member William Linzau visited Y-12 to review the plans for the Uranium Processing Facility and the relocation of the Quality Evaluation function.

A. Uranium Processing Facility. YSO and BWXT Y-12 briefed Mr. Bader on the current status of the conceptual design for this new facility that will provide enriched uranium processing at Y-12. The Uranium Processing Facility (UPF) is expected to significantly reduce the cost of meeting new security requirements and improve facility and process safety (e.g., Building 9212 seismic issues). BWXT discussed efforts on development of a Quality Assurance (QA) plan. Mr. Bader noted that it may be worthwhile to review lessons learned from other large projects at Y-12 and the rest of the complex to ensure lessons learned are captured and addressed in the UPF QA plan. YSO and BWXT continue to evaluate options for the acquisition strategy for this facility but noted that the project will likely require fast-tracking to achieve startup by 2013.

B. Quality Evaluation Relocation. YSO and BWXT Y-12 provided Mr. Bader an overview of the plan to relocate the Quality Evaluation (QE) capability to the assembly/disassembly building. This relocation is needed to consolidate nuclear material activities to meet new security requirements. YSO and BWXT noted that this move will increase overall safety at Y-12 (e.g., QE will be moved to a facility with greater seismic resistance). As recently requested by YSO (site rep. weekly 3/4/05), BWXT is developing a Project Execution Plan and Preliminary Documented Safety Analysis for this project. Once these documents are reviewed and approved by YSO (expected to occur in April), BWXT will begin preparing the first glovebox for relocation. The current schedule shows about two years to successively prepare, move, install and startup the two QE gloveboxes.

C. Criticality Safety/Conduct of Operations. As reported since February 18th, on-site transfers to the Warehouse have been suspended due to receipt and storage of at least 25 containers with material exceeding criticality mass limits (double contingency was maintained). As reported last week, the site reps. and staff reviewed the event and the site's progress in investigating and determining corrective actions. This week, the site reps and staff discussed observations from the review with YSO and BWXT management including:

- Deficiencies with container labeling at Y-12 that does not ensure inclusion of all parameters subject to criticality control (site rep. weekly 3/4/05)
- Cumbersome, large and complex set of criticality limits in certain facilities
- Slow progress in achieving a standardized set of containers
- Conduct of Operations issues associated with the event (site rep. weekly 3/11/05) and the need to examine the role of the Y-12 Conduct of Operations improvement initiative (begun in late 2003) in not preventing the event
- The need to examine similar events dating from 1999 to identify ineffective or incomplete corrective actions

YSO management noted that YSO is about to issue a formal request for a full examination of the issues, development of interim compensatory measures, and development of long-term, fundamental changes and improvements to systems for packaging, labeling, and storage of containers.