

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 9, 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 February 9, 2001

Staff members Andrews, Duncan, Helfrich and O.E. West reviewed EUO restart and disassembly.

A. Y-12 Training and Qualification: In late-October 2000, an NNSA Y-12 Area Office (YAO) Facility Representative (Fac Rep) identified two problem areas in the Y-12 qualification and certification process. Our review this week revealed the following:

1. Some EUO operators were allowed to perform task operations unsupervised if the classroom training and the performance demonstration evaluation for that task had been completed satisfactorily. This is contrary to DOE Order 5480.20A which requires completion of the full qualification or certification for a position prior to performing tasks unsupervised. On January 25, YAO formally asked BWXT to correct this practice. On February 2, BWXT formally committed to ending this practice. We are following up to confirm BWXT implementation of this change and correction of a related S/RID deficiency (i.e., key order requirements were deleted from the Y-12 S/RID *with DOE approval* back in 1996).
2. DOE 5480.20A and the Y-12 S/RID require fissionable material handlers (FMHs) to be certified. (Certification, which follows the completion of qualification, requires additional examination of an individual and endorsement of the satisfactory achievement of a qualification by contractor management.) In April 1996, DOE-HQ provided interpretive guidance for determining if personnel require certification (e.g., workers handling less than 700 grams U-235 or material in approved shipping containers require only qualification). In late 1996, Y-12 implemented a subjective process for making this determination (i.e., can the worker credibly create a criticality). DOE's role in endorsing this method is as yet indeterminate.

In October 2000, the YAO Fac Rep identified that EUO General Area Operators, who handle cans of fissile material, are only qualified and not certified. (It should be noted that two of three operators in EUO, who last week were involved in an improper movement of a can containing fissile material, were not certified. One of these non-certified operators signed for meeting criticality safety requirements at the destination of the transfer without seeing this location or reading the posting. The can contents violated the posting.) This week, we identified this same issue applies to material clerks across Y-12, some of whom handle HEU metal and parts. We believe that Y-12 has overstepped the implied limits of the guidance. The importance of resolving this matter within the next few days was stressed with the YAO Manager. (1-C)

B. Y-12 Quality Assurance (QA): In general, the staff was favorably impressed with the startup preparations for both the EUO reduction process and the new dismantlement campaign. For both activities, though, questions were raised about QA for safety-related tooling and software. These tools and software require inspections to verify that they meet design requirements before use. Specific to reduction, a "go/no-go" ring gauge must be passed over the vessel prior to each run to check for plastic deformation. A gauge was fabricated, placed into service, and successfully demonstrated for the staff. However, an inspection report could not be produced which verified that the gauge was actually built to the precise tolerances required. BWXT is attempting to understand how this safety-related tool was placed into service without the proper verification. The staff will follow up on each of the above QA issues. (1-C, 2-A)

cc: Board Members