

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 31, 2002

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
J. J. McConnell, Deputy Technical Director  
**FROM:** R. T. Davis/ T. D. Burns  
**SUBJECT:** SRS Report for Week Ending May 31, 2002

**Excess, Surplus and Inactive Facilities:** Staff member J. Troan and outside expert J. Stevenson were on site this week to review surveillance and maintenance activities for excess, surplus, and inactive facilities.

**HEU Blend Down:** Staff members T. Hunt, J. Roarty, J. Malen, and M. Feldman were on site this week to review the status and safety basis for the Highly Enriched Uranium (HEU) Blend Down Project. Construction and project activities continue at H-Canyon to support Low Enriched Uranium (LEU) blending early next year and LEU shipments in March 2003. As identified last week (site rep weekly 5/24/02), the ability for the TVA vendor to receive LEU remains a potential issue and options to ensure H-Canyon stabilization activities are not interrupted are being evaluated.

Because the project can be divided into separate phases and to help alleviate HEU space issues, WSRC plans to have several Readiness Assessments (RA) and facility startups. The current plan is to perform a contractor RA prior to beginning blend grade HEU production in the canyon in November 2002 and another contractor RA prior to LEU blend operations in HA-Line in January 2003. The first DOE RA is planned for February 2003 prior to loading station operations. Several important safety controls are associated with proper blending of the LEU material. The staff noted that the DOE RA should appropriately cover blending operations to ensure these controls are adequately reviewed and to identify any interface issues. DOE-SR and WSRC appear receptive to this approach.

**H-Canyon Activities:** WSRC completed dissolution of the unirradiated Mark 53 targets (neptunium oxide) this week. The neptunium solution will be processed through the second product evaporator and stored.

Last week, DOE-SR requested WSRC to evaluate accelerating the neptunium oxide processing campaign in HB-Line Phase II to as early as October 2003. The Recommendation 1994-1/2000-1 implementation plan commitment is to begin converting this material to an oxide by April 2005. The baseline plan for HB-Line Phase II facility is to convert plutonium solutions to oxide through 2005. However, DOE now plans to discard some of the plutonium solution to the HLW system (site rep weekly 2/15/02), which will allow acceleration of the neptunium campaign. In addition, early processing of the neptunium solution provides additional canyon tank space that will allow additional flexibility for processing plutonium material that currently does not meet the MOX feed specification consistent with the cleanup reform proposal. DOE-SR and WSRC are working on a Memorandum of Agreement with Oak Ridge for receipt of the neptunium oxide. In addition, DOE-SR requested WSRC to determine whether neptunium solutions will need to be processed through 2<sup>nd</sup> product cycle prior to transfer to HB-Line.