

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 3, 2003

TO: J. Kent Fortenberry, Technical Director
FROM: Donald Owen, Oak Ridge Site Representative
SUBJ: Activity Report for Week Ending October 3, 2003

A. Y-12 Building 9212 B-1 Wing Fire Protection. The NNSA Headquarters letter to the Board of September 23, 2003 addressed fire protection for B-1 Wing (a wet chemistry area). The letter identified an option involving use of a shroud around active chemical extraction columns to funnel combustible liquids to the first floor and douse with sprinklers. The NNSA letter indicated that this option will be evaluated by Y-12 and will include a prototype demonstration on inactive columns. Consistent with this letter, the YSO Manager has approved a local funding request to provide engineering, analysis and materials to demonstrate this option. This effort has started with basic design objectives being drafted. YSO management informed the site rep. that YSO and BWXT personnel are to meet during the week of October 6th to discuss development of basic data to be obtained during the demonstration and criteria to be used in assessing whether to move forward with this option (in lieu of a larger sprinkler system). (1-C)

B. Recommendation 97-1. The uranium inspection and repackaging program in Building 3019 at ORNL, developed in response to Recommendation 97-1, *Safe Storage of Uranium-233*, is nearing completion. The final uranium-233 package inspections were completed and the packages placed in storage last week. DOE Oak Ridge Operations Office personnel noted to the site rep. that a summary report of the inspection program is being prepared and efforts to support a proposal to close Recommendation 97-1 are in progress. (3-A)

C. Y-12 Building 9212 Main E-Wing Exhaust System - Repair and Maintenance. The main process exhaust system for E-wing, supporting casting and related process systems, utilizes several fire-resistant bag filters upstream of HEPA filters to entrain material and allow for collection of much of that material in traps. The bag filters have been in use about six years since startup of E-wing operations. The pneumatic agitation system used to dislodge material from the bag filters into traps had a mechanical failure that was being evaluated this week. Building 9212 management has decided to replace all the bag filters as part of recovering from the pneumatic agitation system failure. This effort will be the first replacement of the bag filters, will require careful work planning, and is expected to take about two weeks to complete. (2-A)

D. Potential Storage of Mixed Oxide (MOX) Fuel at Y-12. The NNSA Office of Fissile Materials Disposition has requested YSO to evaluate storage of MOX fuel pellets and pellet scrap material at Y-12. This MOX material is estimated to contain up to 33 kg of plutonium oxide. The planned storage period would be from 2005 to 2009 and the storage configuration would be the pellets and scrap in welded fuel rods contained in two Type B shipping containers. The planned disposition of the material is as feed material for the planned Mixed Oxide Fuel Fabrication Facility at the Savannah River Site. Late last week, YSO requested that BWXT provide an evaluation of Y-12 storage of this material by November 26th. (1-C)

E. Y-12 Building 9212 Wet Chemistry Startup. Last week, operation of the Primary Intermediate Evaporator (PIE) was successfully completed and "first-use" controls were lifted by Building 9212 management. To date, startup has also been completed on the Oxide Dissolver and Westfalia Centrifuge processes. (2-A)

cc
Board Members