

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 29, 2005

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending April 29, 2005

Staff member Winters visited Oak Ridge National Laboratory and Melton Valley this week to review transuranic waste management activities. In addition, staff member Gwal was at Y-12 reviewing electrical follow-up items for the Highly Enriched Uranium Materials Facility, high-voltage cable splice installations, and inspection activities for Y-12 electrical panels.

A. Y-12 Electrical Panels. Based on a small electrical fire that occurred in Building 9212 in November 2003 (site rep. reports 11/21/03 and 12/19/03), BWXT initiated a corrective action plan that included thermal imaging and evaluation of all Y-12 electrical panels. The initial thermal evaluation has been completed. Based on this initial evaluation and additional criteria (e.g., location, visual inspection), BWXT identified 133 panels in major nuclear facilities that required further intrusive inspections and planned to complete these inspections by September 2005 (site rep. report 12/3/04). BWXT has not completed any of these intrusive inspections nor had any specific planning to perform these inspections been accomplished until the last few weeks. As part of their recovery plan, BWXT noted to the staff and site reps. that 28 panels will be inspected over the next 3 months. In addition, a schedule for performing the subsequent panels will be established. This schedule is not expected to meet the previous plan to complete the inspections by September 2005.

B. High-Voltage Cable Splices. In the late-1990s, Y-12 experienced four significant 13.8 kV cable faults in the Area-5 distribution system at cable splice locations. The last failure occurred in May 1998. Investigation revealed that the particular splice used was susceptible to moisture entry because of design issues and improper installation. All of these splices were replaced with another type of splice and no failures have occurred since. During a staff walkdown of these splices, the staff noted that a number of the 13.8 kV lines were immersed in rainwater in the storm drain system (there have been several rains over the last week). The staff questioned whether this condition is appropriate for these distribution lines. BWXT is investigating the situation.

C. Y-12 Authorization Basis Implementation - Independent Validation. As reported on January 28th during a Board visit to Y-12, YSO and BWXT presented their processes for conducting independent Implementation Validation Reviews (IVRs) for authorization basis (AB) controls developed under 10 CFR 830. Potential future use of such reviews on a periodic basis to ensure controls continue to be properly implemented was discussed. Following recent site rep. inquiry, YSO and BWXT management discussed their plans on this issue this week. BWXT intends to require comprehensive independent validation of implementation of AB controls in each nuclear facility over a three year span. Such validation will be accomplished by IVRs planned to verify implementation of changes from annual AB updates (with increased scope) and/or independent Facility Evaluation reviews performed in each nuclear facility every three years. BWXT noted that IVRs performed for annual update changes will be authorized to review implementation of any AB control as determined necessary, but BWXT does not intend to mandate any sampling. BWXT will be revising governing procedures to implement these new requirements. YSO, while not planning any specific reviews on an ongoing basis, intends to jointly participate on some of the BWXT reviews.