

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 29, 2007

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending June 29, 2007

A. Enriched Uranium Operations. Two liquid releases have occurred in the Enriched Uranium Operations Building in the last two weeks. The first occurred last Thursday when three mis-positioned valves allowed nitric acid to accumulate in the oxide dissolver. The nitric acid solution eventually overflowed the oxide dissolver system and resulted in a spill of contaminated nitric acid solution. BWXT is currently investigating how these valves were mis-positioned. The second liquid release occurred on Thursday of this week when a degraded process water pipe failed. The water was contained by a dike (by design). Cleanup of these spills has been significantly inhibited by the lack of available solution storage capacity in the Enriched Uranium Operations Building. As previously noted (see the 6/1/07 site rep. report), wet chemistry equipment and safety basis issues have resulted in a significant backlog of solutions stored in tanks and safe bottles.

B. Conduct of Engineering. In December, BWXT had defined corrective actions for an engineering deficiency identified in 2005 where a vessel installed for blending enriched uranium materials required a design change to ensure double contingency against criticality (see the 12/22/06 site rep. report). Based on the lack of a design review for this new installation, the site rep. had inquired on whether adequate design reviews were required for installations of new process equipment/systems for nuclear operations. In response, BWXT management had stated that performance of such design reviews is left to a decision by the project engineer and are not required for smaller-scale projects or modification efforts. BWXT management had indicated that further evaluation of their engineering design procedures would be performed.

This week, BWXT management informed the site rep. that revision to engineering design procedures is warranted. BWXT management intends to require project engineers to call for an independent design review depending on the hazards and application of the project. The revised procedures are planned to be in place by August. The site rep. suggested to YSO and BWXT management that explicit criteria governing this decision may be warranted in the revised procedures that would provide heavy weighting on whether the installation or modification is for a nuclear process or safety system.

C. Quality Evaluation Operations. As reported on June 15th, the site reps. had inquired on lack of Startup Notification Report (SNR) coverage for a planned quality evaluation activity that has not been performed in several years. This week, the Operational Safety Board for the Quality Evaluation Building met to discuss the proposed readiness review level for that activity. The activity involves limited machining activities during a short campaign. BWXT is proposing a contractor readiness assessment. This activity and associated readiness review proposal will be included in a pending SNR submittal to YSO for approval.

D. Building 9212 Documented Safety Analysis Implementation. While some results were presented for the BWXT Implementation Validation Review (IVR), other findings are still under review and being categorized for both the BWXT and YSO IVRs.