

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 14, 2007

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending September 14, 2007

A. Board Member Visit. Board member Larry Brown and staff member Matthew Duncan visited Oak Ridge and met with Y-12 personnel concerning wet chemistry operations in the Enriched Uranium Operations Building. System walkdowns and discussions of recent operational issues were conducted for the secondary extraction, high capacity evaporator and oxide dissolver processes. In addition, the Board member and staff visited ORNL to review the Uranium-233 Downblending and Disposition Project including the upcoming campaign to receive additional traps containing uranium-233 hexafluoride at Building 3019A. Some noteworthy items discussed during the visit include:

- BWXT noted that a follow-up action from the uranium solution spills from secondary extraction product tanks in February 2007 is nearing completion. This action involves evaluation of the operational configuration management of the product tanks prior to the spills, which was not addressed by BWXT's initial investigation (see the 5/4/07 site rep. report). BWXT indicated that lessons-learned and corrective actions are anticipated.
- System status information for general facility and safety systems is kept by facility operations management; however, system status information (e.g., tank levels, certain valve alignments and shutdown configurations) for process systems is not tracked to the same degree by production management and such tracking may be warranted.
- At ORNL, Isotek noted that a proposed path forward addressing potential failure for ventilation stack 3020 in a seismic or wind event would be submitted to DOE-ORO by the end of this month.

B. Building 3019A. On Thursday, Isotek declared a Potential Inadequacy in the Safety Analysis based on the presence of potentially shock sensitive perchlorates identified in two laboratory hoods and associated duct work. These hoods have been placed out of service while this issue is analyzed and addressed. The sampling activities that identified the presence of perchlorates were being performed to support equipment removal in preparation for the Uranium-233 Downblending and Disposition Project. Previously, perchlorates were identified in Building 3019B, which is adjacent to Building 3019A, and addressed in the Building 3019B safety analysis; however, the potential for this shock sensitive material was not identified in the Building 3019A safety analysis.

C. Specific Administrative Control Implementation. In response to a site rep. observation, YSO had indicated the intention to revise their Safety Evaluation Report (SER) regarding a Specific Administrative Control (SAC) on maintaining low oxygen level in a glovebox (see the 8/10/07 site rep. report). The SER revision was to clearly call for upgrading monitoring and alarm equipment to safety-significant in support of the SAC. Last week, YSO issued a revised SER including a Condition of Approval (COA) that now clearly calls for upgrade of the equipment to safety-significant. The COA directs the near-term determination of any compensatory measures and the conduct of design adequacy evaluations of the upgraded equipment.