

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 1, 2008

TO: Timothy Dwyer, Technical Director
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending August 1, 2008

Staff members F. Bamdad, E. Elliott, and C. March were at Y-12 to discuss safety analysis documents associated with the Highly Enriched Uranium Materials Facility, in particular the preliminary documented safety analysis, active confinement ventilation system evaluation, and criticality safety evaluations. Mr. Owen was out of the office this week.

Recommendation 2004-2: B&W recently re-submitted (based on comments received from YSO) the evaluations of the confinement ventilations systems for the 9215 Complex and the 9204-2E Facility to YSO in accordance with Recommendation 2004-2, *Active Confinement Systems*. Both the 9215 Complex and 9204-2E are Hazard Category 2 nuclear facilities. Neither of the facilities' currently operating ventilation systems were designed to act as an active confinement system, nor are they credited as safety-significant or safety-class in the applicable Documented Safety Analyses. The evaluations for both facilities identified the following gaps (as compared to the criteria for safety-significant active confinement systems): (1) lack of confinement pressurization zones, (2) lack of fire protection measures to maintain system operability during a fire event, (3) lack of an exhaust treatment system capable of removing toxic gaseous effluents, and (4) lack of back-up power to assure continuous operability of specific ventilation systems. B&W recommends that the cost associated with upgrading these ventilation systems is not justified based on the existing safety basis controls and the assumed lifetime of the facilities missions (the current target for Uranium Processing Facility startup is 2018).

Work Control: Last week, the Plant Shift Superintendent (PSS) notified the shift manager of the Assembly/Disassembly Building that a digital message recorder was in an alarm condition. The digital message recorder must be functioning properly for the Criticality Accident Alarm System (CAAS) annunciation function to operate. The shift manager initiated actions from the appropriate Limiting Condition of Operation (LCO) including suspending fissile material handling activities. B&W replaced the digital message recorder with a like-for-like component. The alarm cleared with the PSS, but post-maintenance testing did not physically test CAAS annunciation capability (alternate post-maintenance testing was performed). The shift manager exited the LCO and directed normal operations to resume. Subsequently, B&W recognized the deficient post-maintenance testing and declared a Technical Safety Requirement violation. In February, demonstrations for the Oxide Conversion Facility were suspended due to improper equipment return-to-service testing. The site reps. believe that an extent-of-condition review of return-to-service criteria for safety-related equipment may be warranted to avoid similar issues in the future.

Building 9212 Facility Risk Review (FRR): NNSA headquarters plans to propose a nuclear facility risk reduction project to address Building 9212 upgrades identified in the FRR (see last week's report). In addition, NNSA Headquarters directed YSO to develop a long-range resourced plan that will address the highest priority FRR maintenance backlog and facility upgrades for Building 9212 within the constraints of the President's budget request for FY09 and planned Future Years Nuclear Security Program budgets for FY10-14. NNSA has requested the plan be submitted by September 15th.