

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 19, 2008

TO: Timothy Dwyer, Technical Director
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending September 19, 2008

Building 9212 Facility Risk Review (FRR): Two months ago, NNSA headquarters directed YSO to develop a long-term resourced plan that will address the highest priority FRR maintenance backlog activities and facility upgrades for Building 9212 within the constraints of the President's budget request for fiscal year (FY) 2009 and Future Years Nuclear Security Program (FYNSP) budgets (see the 8/1/08 site rep. report). This week, YSO submitted its plan to NNSA headquarters. The submitted plan only shows FYNSP funding for FRR maintenance and upgrades in FY 2009 and FY 2010. YSO states that the current FYNSP budgets will not allow for completion of even high priority FRR scope beyond FY 2010. Beginning in FY 2010, the submitted plan assumes that the Nuclear Facility Risk Reduction (NFRR) Project will be funded to complete FRR activities (see the 8/29/08 site rep. report); however, it is anticipated that some of the activities proposed for NFRR may be excluded from the project.

System Configuration Control: This week, a YSO Facility Representative in the Enriched Uranium Operations Building discovered that process solution had unexpectedly accumulated in a phase separator for the secondary extraction system. Operations management determined that a few valves involved in a maintenance activity had been placed in the open position—as specified by the Lockout/Tagout (LO/TO) permit—during the release of three LO/TO devices. The normal position of these valves is closed per the system alignment checklist. Operations management plans to revise applicable LO/TO procedures to ensure that the system alignment checklist and the shift manager are consulted prior to releasing LO/TO devices. The site reps. note that several instances of misaligned systems and improper LO/TO execution have been identified by B&W and YSO during the past year (see the 10/12/07, 11/9/07, 12/14/07, 3/7/08, 3/21/08, 4/18/08, 5/23/08, 6/27/08 site rep. reports).

ORNL Building 3019/Uranium-233 Disposition: As part of implementation of DOE Standard 1189-2008, *Integration of Safety into the Design Process*, a Safety Design Strategy document has been submitted by Isotek and is under review by DOE-ORO and a Preliminary Safety Design Report is in development with submittal now expected by December (see the 6/13/08 site rep. report). Design work has been started on the recent change to use a new processing area outside of the current walls of Building 3019 (see the 8/22/08 site rep. report). This new area will be for storage of down-blended solution, denitration and oxide processing.

Highly Enriched Uranium Materials Facility (HEUMF)/Criticality Safety: NNSA recently issued a review report regarding the Criticality Accident Alarm System (CAAS) in HEUMF. In particular, the review addressed compliance with applicable ANSI/ANS Standards. B&W has developed an alternate *minimum accident of detection* in lieu of using the ANSI/ANS-8.3 specified minimum accident of concern. The NNSA report identified instances of incorrect citations, unsupported assumptions, and improper conclusions in the B&W CAAS documentation. The review concluded, however, that a sufficient basis likely exists for the installed HEUMF CAAS to detect the ANSI/ANS-8.3 minimum accident of concern and that further development and use of the alternate minimum accident of detection should be abandoned.