

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Timothy Dwyer, Technical Director
FROM: Wayne Andrews and David Kupferer, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending January 20, 2012

ORNL Tank W-1A. On January 6th, the site representatives observed UCOR successfully remove Tank W-1A from the excavation site (see the 11/25/11 report). Upon removing the tank from the ground, UCOR performed a gross decontamination by spraying the tank with water. UCOR then shipped the tank to a local contractor for size reduction and packaging. A final nondestructive assay will be performed prior to the tank being shipped for final disposition. To date, almost two thirds of the soil has been excavated and boxed for shipment. UCOR estimates that both the tank and soil will be dispositioned by March.

Conduct of Operations. During the past two weeks, B&W performed an assessment of actions it has taken in executing its Conduct of Operations Performance Improvement Plan (see the 10/28/11 report). The stated purpose of this assessment was to provide an independent evaluation of the effectiveness of these improvement actions and to provide recommendations for adjustments to the Performance Improvement Plan. YSO shadowed B&W's assessment. The assessment team plans to issue its report during the next few weeks. During the next couple months, B&W plans to perform a similar assessment of actions it has taken in executing its Work Planning and Control Performance Improvement Plan (see the 11/18/11 report).

Uranium Processing Facility (UPF). This week, YSO completed its review of the Preliminary Safety Design Report (PSDR) for UPF (see the 11/4/11 and 10/21/11 reports). YSO directed B&W to revise the PSDR and resolve the following weaknesses to support YSO approval of the document: (1) reevaluate the analysis of post-seismic fires based on a deterministic approach, (2) analyze small fires and identify controls as necessary (YSO urged consideration of engineered controls such as fast reacting sprinklers as opposed to self-protective actions), (3) reevaluate both full-facility and process-area fires to determine whether safety-significant controls (e.g., fire barriers) need to be identified, (4) reevaluate whether safety functions, functional requirements, performance criteria, and seismic design criteria have been properly identified, (5) reevaluate the selection of bounding criticality accident parameters and revise the associated analyses and controls as necessary, and (6) reevaluate whether criticality safety controls are accurately characterized (e.g., passive versus administrative) and whether they should be elevated to the technical safety requirements consistent with the recently revised Y-12 criticality control review criteria.

Facility Risk Review (FRR) for Buildings 9204-2E and 9215. Last year YSO completed a study that re-evaluated, and updated as necessary, the conclusions and recommendations of the 2006 FRR for Building 9212 (see the 5/13/11 report). In March, a team of subject matter experts representing YSO, B&W, and DOE Headquarters plans to initiate a similar study for Buildings 9204-2E and 9215. The approach will be to 1) validate/update original FRR accepted risks and baseline assumptions, 2) validate/update original FRR production schedule based upon projected programmatic requirements and projected facility process moves to UPF, 3) validate/update original FRR production risks matrices for process material condition, 4) evaluate early shutdown of enriched uranium process mission or facility and develop contingency options, 5) validate the 2006 FRR conclusions and recommendations, and 6) make recommendations. It is anticipated that a final report will be issued by April.