

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 May 18, 2012

Staff member R. Raabe visited Oak Ridge to discuss completion of the Tank W-1A project, walkdown radiography systems in Y-12 nuclear facilities, and discuss the status of the design of radiography systems for the Uranium Processing Facility (UPF).

ORNL Tank W-1A. UCOR has completed its activities associated with the removal of Tank W-1A and the surrounding contaminated soil (see the 4/13/12 and 6/10/11 reports). It is noteworthy that there were no skin contamination events or internal exposures during these removal activities. In total, UCOR shipped 316 B-25 boxes of contaminated soil to the Nevada National Security Site. The average total external exposure received by the 19 individuals who worked full-time in the weather enclosure was approximately 350 mrem; the highest total external exposure was 536 mrem. There were numerous lessons learned during the Tank W-1A Removal Project that DOE-ORO intends on capturing in its project closeout report.

Facility Risk Review (FRR) for Buildings 9204-2E and 9215. In 2007, B&W, YSO and NNSA completed a FRR of Buildings 9204-2E and 9215, which identified actions for ensuring continued safe operations in these facilities through 2022 (see the 8/31/07 report); the 2007 FRR team assumed that enriched uranium operations would be transitioned from these facilities to UPF by 2021. In February 2011, YSO and B&W management committed to reevaluate the recommendations and conclusions of the 2007 FRR (see the 3/4/11 report). In February 2012, NNSA Headquarters provided Y-12 guidance that transition of enriched uranium operations from Buildings 9204-2E and 9215 to UPF be deferred (see the 2/17/11 report). NNSA has yet to formalize the details regarding this deferment; for example, NNSA has yet to formally determine how long these capabilities will be deferred and whether or not they will continue to be included within the scope of the UPF project. The guidance from NNSA also requested that YSO and B&W evaluate potential incremental investments that may be required for facility risk reduction in Buildings 9215 and 9204-2E.

In March, a team of subject matter experts representing YSO, B&W, and DOE Headquarters initiated reevaluation of the 2007 FRR (see the 1/20/12 report). Last week, the review team issued their final report, which included the following noteworthy items:

- This team based their review on the assumption that enriched uranium operations would continue in Buildings 9204-2E and 9215 until at least 2030.
- The load-out of the Highly Enriched Uranium Materials Facility (see the 4/9/10 report) resulted in a 60 percent reduction in the material at risk in Building 9204-2E and a 90 percent reduction in the material at risk in the 9215 Complex.
- The team recommended that 28 projects be executed to address the risks of continuing enriched uranium operations in these facilities until at least 2030 including replacing electrical equipment (e.g., switchgear and electrical panels), safety-significant sprinkler heads (see the 3/16/12 report), and ventilation equipment (e.g., fans and ductwork). YSO directed that B&W provide a funding strategy for these projects by June 15th.
- In 2030, Buildings 9204-2E and 9215 will be 60 and 70 years old, respectively. The team highlighted that these facilities do not meet current standards for seismic capability and confinement ventilation and concluded that, to ensure the safety of enriched uranium operations beyond 2030, it is imperative that future UPF project planning support transition of enriched uranium operations from these facilities to UPF in the 2030 timeframe.