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 June 17, 2011

Uranium Processing Facility (UPF). Last month, in response to funding direction from NNSA Headquarters, B&W submitted three project execution alternatives to NNSA (see the 5/20/11 report). This week, NNSA directed B&W to proceed with the preferred alternative, which includes the following project milestones: (1) beneficial occupancy of the UPF building in FY2020, (2) startup of chemical recovery and casting operations in FY2021, and (3) installation of metal production, machining, assembly, and disassembly equipment in FY2024.

Also this week, B&W submitted its revised Safety Design Strategy (SDS) to YSO (see the 4/15/11 report). The revised SDS includes the following:

- No events involving the release of *radiological* materials result in consequences that exceed thresholds that would require safety-class or safety-significant controls.
- Release of *toxicological* materials during fire events could result in consequences that exceed thresholds that would require safety-significant controls.
- *Toxicological* hazards to facility workers will be addressed and controlled as standard industrial hazards.
- Design features for seismic tolerance will be identified and implemented to prevent a criticality accident from occurring as the result of a design basis seismic event.

B&W is planning to issue a full-scope Preliminary Safety Design Report for UPF next month.

ORNL Building 3019/Uranium-233 Disposition. Last November the Deputy Secretary of Energy tasked DOE-ORO to begin an alternative analysis for the disposition of the Uranium-233 in Building 3019 (see the 10/1/10 report). Their recommendations from this effort included the direct disposition (i.e., without downblending or processing) of (1) Consolidated Edison Uranium Solidification Project (CEUSP) containers to the Nevada Test Site and (2) material that can be used to support programmatic missions at other DOE sites (e.g., Zero Power Reactor plates). In April DOE Headquarters directed DOE-ORO to proceed with the direct disposition campaign as soon as possible and continue the alternatives analysis to identify the preferred alternative(s) for processing the remaining U-233 (see the 4/29/11 report).

Last week DOE-ORO held a kickoff meeting for its *Accelerated Shipping Campaign.* The objective of this campaign is to initiate the first shipments of programmatic material (approximately 12 percent of the total U-233 containers) by the end of this year. DOE-ORO anticipates that shipping the programmatic material will take approximately six months. Concurrently, DOE-ORO is continuing its preparations for the direct disposition of the CEUSP canisters (e.g., identifying an appropriate shipping container). By this end of this fiscal year, DOE-ORO plans to provide its recommendation for processing the remaining U-233.