DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Steven Stokes, Acting Technical Director
FROM: William Linzau and Rory Rauch, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending March 8, 2013

Uranium Processing Facility (UPF): This week, NPO approved the preliminary safety design report (PSDR) for UPF. In the PSDR, B&W recommended that the facility structure and fire barriers be designed and built as safety class structures consistent with the DOE Standard 1189 philosophy of a heightened degree of conservatism early in design. NPO concluded that the consequence analysis was conservative and the safety controls were sufficiently robust not to warrant designation as safety class. However, to minimize the risk to the project cost and schedule due to impacts from the remaining uncertainties associated with the resolution of space/fit concerns, NPO directed B&W to design these structures such that later designation of these structures as safety class is not precluded.

Fire Protection: A team from NNSA Headquarters conducted a short-notice review of the site's fire protection program with a focus on alarm response and the use of compensatory measures for deficient conditions. This review was conducted to address an anonymous employee's concerns related to fire protection issues at Y-12. The team found that only one of the four concerns was partially substantiated. Specifically, the team confirmed the existence of fire system impairments with compensatory measures in place for extended periods of time. The team stated in the exit briefing that additional management attention on this issue is required. In addition, the team gave a more comprehensive evaluation of Y-12's fire protection program and noted some positive comments and the need for improvements. The team noted that improvements are needed associated with the number of disabled and recurring "nuisance" signals and alarms, including the responses to these conditions. The team clearly stated that the Fire Department has adequately demonstrated the ability to detect and respond to fires and that B&W and NPO are actively addressing this issue, but more management attention is also required in this area.

Quality Assurance: Last week, B&W management wrote a nonconformance report (NCR) to address the procurement and use of containers that did not have sufficient quality checks to comply with site procedures. These containers were purchased to meet DOT 7A requirements, but the site uses these containers for applications that involve nuclear and criticality safety. The site procedures require items used for these applications to undergo a commercial grade dedication process. The procurement specification used to date included vendor certification and receipt inspection, but to comply with site procedures, checks of tolerances associated with DOT 7A requirements and specific checks of tolerances important to nuclear safety are required. B&W Engineering is generating quality requirements that comply with site procedures.

Pressurized Drums: Last weekend, a B&W management review board approved the response team's latest proposal to attempt to vent the bulging stainless steel drum and a co-located unvented drum with similar contents in Building 9204-2E (see 2/22/13 report). The response team subsequently attempted to puncture the drum using a tool with a steel bit (previous attempts had used a brass bit). The attempts to vent the drum with this bit were unsuccessful (the bit bent substantially after three attempts to puncture the drum). Later in the week, after installing a heat-treated steel bit, the response team successfully vented both drums. Production management is taking measures to ensure drums with similar contents (depleted uranium turnings in water) are placed in a vented configuration in the future.