

## 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 July 8, 2011

**ORNL Tank W-1A.** Last week, ORO formally requested DOE Headquarters' concurrence to initiate the DOE Operational Readiness Review (ORR) for startup of Tank W-1A removal activities prior to completing some prerequisites required by DOE Order 425.1C, *Startup and Restart of Nuclear Facilities* (see the 6/10/11 report). The subject prerequisites are for ORO to verify that Bechtel Jacobs Company (BJC) has completed its preparations for startup—including its contractor ORR—prior to initiating the DOE ORR. The fundamental purpose of the exemption is to save project cost and schedule by allowing DOE to perform its ORR in parallel with the contractor ORR. ORO's request states that the exemption is justified because it meets the exemption criteria described in DOE Standard 3006, *Planning and Conducting Readiness Reviews*. Specifically, the Tank W-1A removal project is a short duration, one-time activity in that it is expected to be completed eight weeks after startup.

ORO's request highlights the following two risks associated with the exemption: (1) the independence of the DOE ORR team could be compromised and (2) the DOE ORR could be initiated prematurely. ORO's request states that these risks will be mitigated by (1) ensuring that the DOE ORR team is staffed with members that understand the requirements for independence and (2) increasing the robustness of the contractor management self-assessment (MSA). BJC plans to initiate its MSA next week.

**Conduct of Operations.** In June 2010, DOE Headquarters approved and issued DOE Order 422.1, *Conduct of Operations*, which superseded DOE Order 5480.19. DOE Headquarters tasked all DOE sites to fully implement the requirements of the new Order by June 2011. B&W developed an implementation plan that identified actions required to complete implementation of the new Order. These actions included (a) revising its Conduct of Operations Applicability Matrix and (b) developing and conducting training. The most significant impact of the new Order on existing Y-12 programs is associated with 'control of interrelated processes', which includes new requirements for controlling processes outside nuclear facilities that could impact the safety of operations within nuclear facilities. YSO determined that interrelated processes at Y-12 include the following systems: electrical distribution, compressed air, potable water, steam, and nitrogen. B&W completed its training and YSO approved B&W's revised Applicability Matrix. Therefore, DOE Order 422.1 is considered implemented at Y-12.

**Fire Protection.** National Fire Protection Association (NFPA) standards state that "where sprinklers have been in service for 50 years, they shall be replaced or representative samples from one or more sample areas shall be submitted to a nationally recognized testing laboratory ... for field service testing." Last month, B&W requested YSO's concurrence on its Aged Sprinkler Testing Program. In 2010, B&W issued a design analysis calculation that establishes criteria for determining whether, from a safety basis and limiting conditions of operation perspective, sprinklers should be considered operable based on results of field service testing. In general, B&W concluded that sprinklers can be considered operable as long as the representative samples have a response time less than 200 seconds and release at a pressure less than 15 psig (the NFPA replacement criteria is a response time greater than 130 seconds or release at a pressure greater than 5 psig).