

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 9, 2009

TO: Timothy Dwyer, Technical Director  
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives  
SUBJECT: Activity Report for Week Ending January 9, 2009

**Congressional Commission Visit to Y-12.** The Congressional Commission on the Strategic Posture of the United States visited Y-12 to meet with various managers from production sites for the nuclear weapons complex. Y-12 management discussed the degrading infrastructure at Y-12 and need for modernization/new facilities. Commission members toured Building 9212 and the Highly Enriched Uranium Materials Facility.

**Uranium Processing Facility (UPF).** Responding to prior staff inquiry (see the 9/5/08 site rep. report), B&W was to implement a new requirement calling for process/system engineers in Y-12 operating facilities to document and formally transmit information on operational events or other experience that could be useful to UPF design or operational planning. In October, the B&W Engineering Division issued a Standing Order that calls for process/system engineers to compile a monthly summary of events or issues relevant to UPF design and submit the compilation to the UPF project or meet with project personnel to discuss the issues. The Standing Order is valid until April when the requirement is to be incorporated into engineering procedures.

**Freeze Protection Program.** B&W convened a critique on the recent event involving a cracked flange in the safety-significant fire suppression system in Building 9206 (see the 1/2/09 and 12/24/08 site rep. reports). The critique primarily identified corrective actions specific to Building 9206; however, this event clearly demonstrates that the improvements to the site-wide freeze protection program are warranted. The top-level Y-12 freeze protection program procedure does not currently assign any roles/responsibilities to the nuclear facility operations managers despite safety-related systems under their responsibility being impacted by freezing weather. The procedure also does not include a requirement for responsible personnel in a given facility to create a list of specific actions to be taken on vulnerable systems during the onset of freezing weather. The site reps. discussed these observations with YSO and B&W management. B&W intends to revise procedures associated with its freeze protection program.

**Special Material Capability Project.** In late 2007 YSO approved Critical Decision-3B, Start of Construction, for the Special Material Capability Project (see the 11/02/07 site rep. report). This project includes a new negative-pressure glovebox system in a Y-12 facility that provides additional worker protection. This week, YSO personnel briefed the staff and site rep. on construction progress and readiness planning. Construction is about 80% complete with major machines installed. Construction completion is projected by February and system-level testing is to be completed by July. YSO has approved a B&W Readiness Assessment to confirm readiness for startup, still projected for early 2010.

**Fire Water Supply.** The city of Oak Ridge water treatment plant supplies water to several safety-related fire suppression systems through the Y-12 Potable Water System (PWS). On Tuesday and Wednesday, the city of Oak Ridge experienced two separate power disruptions, which interrupted the capability of the raw water pumping station to feed the water treatment plant. Early Wednesday, after observing a drop in pressure of the PWS, the Plant Shift Superintendent directed that Y-12's back-up tanks be brought on-line. Late Wednesday, the city restored its pumping capability and the supply of water to Y-12.