

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 December 10, 2010

Uranium Processing Facility (UPF). Last week, B&W submitted Revision 3 of the UPF Safety Design Strategy (SDS) to YSO for review and approval (see the 11/19/10 report). In its revision of the SDS, B&W changed the safety designation of the confinement ventilation system from safety-significant to defense-in-depth (see the 6/18/10 report). B&W's basis for this change includes the following:

- Fire barriers and sprinkler systems are credited as safety-significant controls for mitigating facility fires.
- Material-at-risk inventory limits are established to limit the consequences of facility fires.
- Failure of the confinement ventilation system would not significantly increase the consequences to facility workers in the event of a facility fire.

B&W has committed that the confinement ventilation system for UPF will meet the criteria specified in DOE's *Ventilation System Evaluation Guidance*, which DOE developed and issued in response to Recommendation 2004-2, *Active Confinement Systems* (see the 7/31/09 report).

Safety Systems/Documented Safety Analysis (DSA). A seismic switch in the Oxide Conversion Facility (OCF) is credited by the DSA for Building 9212 to isolate the supply of hydrogen and hydrogen fluoride to OCF and to shut off heaters in OCF subsequent to a seismic event. Four months ago, B&W developed a revision to its surveillance procedure for the seismic switch to, in part, facilitate determining the operability of the accelerometers in the switch. After taking three months to execute the procedure modification request (see the 7/16/10 report), B&W performed the revised surveillance procedure and determined that one of the three accelerometers in the switch was inoperable. B&W promptly declared the entire seismic switch inoperable and entered the appropriate Limiting Condition of Operation, which included suspending OCF operations. B&W subsequently determined that, although the system was declared inoperable, the capability of the seismic switch was never degraded such that it was unable to perform its safety function (i.e., the other two accelerometers were operable and only one is required for the switch to function). Last week, B&W externally reported this event as a management concern. This week, B&W revised its external report to identify this event as a Potential Inadequacy in the Safety Analysis (PISA).

Nuclear Facility Risk Reduction (NFRR) Project. Last week, YSO authorized B&W to proceed with long lead procurement and minor construction activities for the NFRR project. YSO directed B&W to issue a formal plan that identifies measurable milestones associated with the early start of construction activities (i.e., prior to the March 2011 baseline).

Quality Assurance (QA). B&W has completed a gap analysis of its sitewide QA program against the requirements of ASME NQA-1-2008, *Quality Assurance Requirements for Nuclear Facility Application*, and is updating more than 50 sitewide procedures (see the 3/5/10 report). B&W has also fully transitioned to its new process for procuring safety-related systems, components, and services.