

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 19, 2010

TO: Timothy Dwyer, Technical Director
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending February 19, 2010

B53 Dismantlement. B&W is scheduled to begin dismantling B53 components during the next 12 months. In preparation for performing these operations, B&W is planning to develop new/revised procedures and applicable training in addition to revising the criticality safety evaluation and safety analysis documentation. B&W expects the changes to the safety analysis to be minimal and does not anticipate needing to alter the accident analyses or controls.

In January 2008, YSO approved B&W's Startup Notification Report (SNR) determination that an independent readiness review of B53 dismantlement operations would *not* be required prior to startup. In response to questions raised by the site reps. regarding the scope of the proposed dismantlement operations, YSO rescinded its approval. In November 2009, however, YSO approved a subsequent SNR determination by B&W that concluded the startup of B53 dismantlement operations does not involve any "new tasks" and, therefore, does not require an independent readiness review prior to startup. The site reps. have again questioned Y-12 management on the basis for this determination. Concurrently, YSO has questioned B&W's application of the term "new tasks" in its SNR process for determining the appropriate level of readiness review (i.e., a review performed by contractor line-management, independent contractor personnel, or DOE).

Oxide Conversion Facility (OCF). Late last week, a hydrogen fluoride (HF) detector in the vaporizer enclosure alarmed during a purging operation of HF piping. The vaporizer enclosure serves as secondary confinement to the HF piping and is exhausted to the dock scrubber; no release of HF was detected outside of the vaporizer. Operators secured the purge and isolated the HF piping. B&W has determined from process data (HF concentration vs. time) that the highest concentration was less than 3 ppm (by volume). B&W has completed planning to complete the purge and begin troubleshooting on the cause of the leak.

ORNL Building 3019/Uranium-233 Disposition. DOE-ORO has directed Isotek to revise their Safety Design Strategy to designate the Annex confinement ventilation system and passive confinement structures as safety-significant (rather than defense-in-depth). DOE-ORO is planning to conduct a 90% design review by June. The Preliminary Documented Safety Analysis is to be submitted this summer.

Reactor Fuel Fabrication. B&W has recently started development work in Buildings 9212 and 9215 on fabrication of uranium-molybdenum (U-Mo) alloy reactor fuel. This effort is to support a potential future project to supply low-enriched fuel foil elements for use in research reactors. Such fuel fabrication will involve casting of U-Mo plates, rolling of plates to fuel foil thickness, and shearing into fuel foils.

Feedback and Improvement. B&W has issued a standing order that requires Operational Performance Improvement (OPI) personnel to regularly evaluate B&W's critiques of Y-12 events. The OPI department manager has issued a critique evaluation checklist that includes the following criteria: did the responsible manager have all related procedures, drawings, logs and other documentation; did the responsible manager take ownership of the critique; and did the critique properly analyze what actually happened versus what was required to happen.