

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 6, 2006

TO: J. Kent Fortenberry, Technical Director
FROM: R. Todd Davis/Donald Owen, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending October 6, 2006

A. Warehouse - Small Fire. On September 22nd, a small fire occurred in the Warehouse during an inspection of uranium metal items in a container that had not been opened in more than 30 years. The container had been moved from storage into a glovebag and opened. As the operators were handling/inspecting the items in the container, sparks were observed and the plastic and tape wrapping the items caught fire. The work crew called the fire department, and obtained coke and extinguished the fire in the container. BWXT externally reported the event and Warehouse management conducted initial evaluation last week. BWXT Manufacturing Division management also appointed an independent team to investigate the event and the investigation was in progress this week and is expected to be completed by late October.

This inspection activity was for numerous legacy containers; several containers had been opened and items inspected prior to this container. This campaign had not been identified in the BWXT Startup Notification Report and no independent readiness review had been conducted. The site rep. notes that another Warehouse campaign using glovebags to determine if uranium items had plutonium contamination had been identified in the BWXT Startup Notification Report and a Readiness Assessment was completed for that campaign in June (see the 6/2/06 site rep. report). The coke that was used to extinguish the fire was not pre-staged as a planned control for this activity, but rather had to be obtained from another area of the Warehouse. The investigation team is evaluating these and other aspects involving definition of work scope, activity hazard analysis and conduct of operations in their overall causal analysis.

B. Oxide Conversion Facility. During a quarterly surveillance of various safety interlocks for the dock scrubber system on Thursday, a small amount of gaseous hydrogen fluoride (HF) was released from its primary containment. Operators observed the HF in the HF vaporizer enclosure and enclosure HF alarms actuated. No HF alarms outside of the enclosure were actuated. Operators evacuated the area and the dock scrubber system was started per applicable response procedure. The HF is believed to have been remnant in the HF system vaporizer after a required vaporizer draining evolution (back to the HF storage cylinder) prior to the surveillance.

During the preparation to test a pressure sensing safety interlock, a valve that isolates the vaporizer vent line to the dock scrubber is opened. The vaporizer enclosure also has a vent line to the dock scrubber. Without the dock scrubber system running (per procedure), a path is created for gaseous HF from the vaporizer to circulate back to the vaporizer enclosure via the enclosure vent line. In the prior surveillances, it is believed that the vaporizer had been drained and purged. In this event, the vaporizer had been drained but not purged; there was no procedural requirement to purge the system. BWXT investigation of the event continues.

C. Wet Chemistry Operations. This week, BWXT conducted the first successful runs of the Wiped Film Evaporator and the Denitrator processes since late last year (see the 9/22/06 site rep. report).