

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Steven Stokes, Acting Technical Director
FROM: William Linzau and Rory Rauch, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending May 24, 2013

Board members Joseph Bader and John Mansfield and staff members Dave Campbell and Carter Shuffler visited Y-12 to discuss the Uranium Processing Facility Project and tour select facilities.

Highly Enriched Uranium Materials Facility (HEUMF): A roll-up door that is part of the safety-significant Secondary Confinement System failed to close during an activation of the HEUMF fire alarm system. The fire alarms were activated due to smoke from a belt of a fan with a failed bearing, but there was no fire. The signal to the door closure device should cause a cable to release allowing the door to close, but this did not occur because permanent deformation (kinks) in the cable caused it to knot when tension was released. B&W engineers are evaluating the design of the closure mechanism with particular attention on the deformed cable.

Radiological Control (RADCON) Practices: Last week, a work evolution in the basement of 9212 was stopped because the area was not properly posted with signs indicating respiratory protection was required. Workers were planning to start the evolution (size-reducing contaminated piping) in the morning, but they were redirected to another job. The supervisor failed to inform the RADCON technician of the change in plans and the area was not posted. In the afternoon workers donned respiratory protection and commenced work in the area without it being posted. The error was discovered when an NPO Facility Representative entered the un-posted area and encountered personnel wearing respiratory protection. Similar events involving breakdowns in the implementation of radiological controls have been noted recently (see 5/3/13 and 5/10/13 reports). B&W management has initiated efforts to improve RADCON practices and raise the performance of all personnel involved in implementing the RADCON program.

Building 9204-2E: Per the Building 9204-2E technical safety requirements (TSRs), the shift manager must provide alternate protection to workers in areas where the Criticality Accident Alarm System may not be heard. The TSRs define alternate protection as the use of calibrated personal radiation detection instruments (PRDIs), or other equipment that meets specified ANSI requirements. Late last week, B&W declared a TSR violation after two workers entered an area requiring alternate protection while wearing PRDIs with expired calibrations. One contributing factor to the event was the fact that these PRDIs were kept in the utility operators' office while all others were maintained and distributed by the shift manager. Production management has discontinued this practice while B&W evaluates its process for notifying PRDI owners when calibrations are due. B&W is also evaluating PRDI user training.

Fire Protection: Two recent surveillances of dry pipe fire protection systems (DPS, one of which is credited as a safety-significant system in the Y-12 safety basis) have revealed corrosion of the active components of the DPS valve. B&W and NPO fire protection engineers do not believe the identified corrosion would prevent the valve from opening; however, there is concern that corroded components of the valve assembly could dislodge and become an obstruction that impacts system operability. B&W fire protection engineers have not yet determined the cause of the corrosion. Fire department personnel plan to perform an extent-of-condition review, starting with the three remaining credited DPS systems. The evaluation of these systems should be completed in the next two weeks, at which time B&W will extend its review to non-credited systems greater than 10 years old. The subject surveillance is not in the TSRs. However, B&W recently requested NPO approval to increase the frequency of this surveillance for credited systems from every three years to every year.