

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 15, 2019

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Matthew Duncan and Brandon Weathers, Resident Inspectors  
**SUBJECT:** Oak Ridge Activity Report for Week Ending February 15, 2019

**DNFSB Staff Activity:** A staff review team conducted a teleconference with CNS and NPO personnel to discuss the results of the staff's review of the Building 9212 safety basis revision that provided an exclusion to an operational restriction to allow concurrent operation of the secondary extraction and high capacity evaporator processes (see 10/12/18 and 1/18/19 reports).

**Building 9215:** According to the criticality safety evaluation and technical deviation for an operation in Building 9215, floor scrubber liquid contained in a safe bottle may be poured into a 30-gallon drum after a gamma scan confirms the safe bottle contains negligible amounts of fissile material. Last week, the criticality safety officer informed a Nuclear Criticality Safety (NCS) engineer that a 30-gallon drum containing liquid had been moved to an in-process storage array after a failed gamma scan and requested guidance. Neither movement of the drum when filled nor storage in an array is allowed. The shift manager's office was contacted and a 15-foot administrative control boundary was established. The NCS engineer provided guidance to place the drum under administrative control and collapse the administrative control boundary to the drum.

**Uranium Processing Facility (UPF):** Last Friday, a 12 inch potable water line was accidentally breached during tie-in work to connect a water source to temporary trailers at the UPF construction site. The water leaked at a rate of approximately 3000 gallons per minute. Utilities and UPF project personnel responded to isolate the break. Upon isolating the Construction Support Building loop and then the system water feeds to the Construction Support Building loop, a water hammer event occurred that caused multiple water leaks across Y-12. The most significant water leak was a process line break in a development facility (Building 9202). Radiological control personnel reported no contamination in the Building 9202 flooded area hallway or outside of the building. The leak in the UPF water line resulted in a decrease of system pressure in the downstream fire suppression systems for nuclear facilities, including Building 9212, but the system pressure did not drop below the required minimum water supply pressure in the Technical Safety Requirements.

**Building 9206:** This week, workers noticed a yellow dusting on the floor while removing linoleum flooring. This material was present both on the floor and on the underside of the removed linoleum floor sheet. Radiological control personnel investigated the yellow material and determined that it contained uranium. NCS personnel were notified and a 15-foot administrative control boundary was established around the area. NCS provided guidance to clean up the material and place it in NCS approved storage. After cleanup and removal of the linoleum floor sheet, the remaining 2-foot section of linoleum flooring may be removed. If additional uranium-bearing material is discovered, it will be cleaned up following NCS guidance. Similar examples of facility personnel conservatively following the procedure for an abnormal condition involving fissile material have occurred during legacy material cleanout activities in the building (see 10/5/18 report).