

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 4, 2016

TO: Steven Stokes, Technical Director  
FROM: William Linzau and Rory Rauch, Site Representatives  
SUBJECT: Oak Ridge Activity Report for Week Ending March 4, 2016

Staff member R. Arnold was on site shadowing site rep activities.

**Building 9215:** In June 2014, the previous contractor introduced a new step in enriched uranium (EU) chip processing operations to rinse the chips with a limited amount of demineralized water to reduce the adhered coolant before chip packing and briquetting operations (see 6/13/14 report). The rinsing step reduces the amount of coolant in the briquettes, which in turn reduces the amount of oxide produced when the briquettes are used as feedstock for casting operations (see 12/25/15 report). When chip rinsing was introduced in 2014, the process was conducted at an unused machining station that was not designed for chip rinsing. This week, operators conducted the first operations with a new EU chip rinsing station that was installed to improve operational ergonomics and allow better control of the rinsing process. The new station has a pouring fixture that holds the cans of chips and eliminates ergonomic strain on the operators when pouring out the rinse water. The site reps and an NPO facility rep watched the first operation of the rinsing station, which was conducted without incident.

**Building 9212:** On February 25, 2016, the Building 9212 Operations Manager declared a potential inadequacy in the safety analysis (PISA) after a nuclear criticality safety (NCS) engineer identified an unanalyzed NCS scenario involving the possibility that a container could spill fissile material into a storage array and contact or enter containers already stored inside the array. The PISA was identified during the extent-of-condition review following a PISA declaration for a similar concern in Building 9215 (see 1/15/16 report). The Building 9215 PISA was declared on January 14, 2016, and the extent-of-condition review team identified the Building 9212 concern in late January. However, a miscommunication between the team members and NCS engineering management delayed the latest PISA declaration. The Building 9212 Shift Manager has taken the affected storage positions out of service. CNS is designing container restraints as a potential control to address the unanalyzed scenario.

**Emergency Management:** In January 2016, NNSA approved Critical Decision-1 for the Emergency Operations Center (EOC) project at Y-12. This new facility will replace Y-12's Plant Shift Superintendent's Office, Technical Support Center and the Fire Department alarm room. The EOC for Y-12 is located at East Tennessee Technology Park and will not be replaced by this project. The emergency response capabilities that will be relocated into the new facility are currently housed in facilities that were built in the mid-1940's and do not meet modern DOE requirements for seismic performance and habitability. The preliminary project execution plan indicates that the new facility, which is scheduled to be operational in early 2021, will be designed to current code requirements for facilities with emergency response capabilities.

**Conduct of Operations:** Last week, Power Operations personnel executed an electrical power outage in a portion of the Building 9212 complex without obtaining shift manager permission. No safety SSCs were affected by the outage. The CNS Y-12 Conduct of Operations Manual requires personnel to obtain permission from the shift manager prior to beginning work that could change the status of structures, systems, and components (SSCs) in the facility. The outage was in support of Construction activities in the area and Construction personnel had obtained work start approval on behalf of Power Operations several hours earlier, but neither organization notified the shift manager just prior to the outage. Utilities Management plans to review Power Operations procedures for consistency with conduct of operations requirements.