

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 28, 2017

TO: Steven Stokes, Technical Director  
FROM: Jennifer Meszaros and Rory Rauch, Resident Inspectors  
SUBJECT: Oak Ridge Activity Report for Week Ending August 25, 2017

**Transuranic (TRU) Waste Processing Center (TWPC):** North Wind and the Central Characterization Program (CCP) Mobile Load Team have successfully restarted waste shipments from TWPC to the Waste Isolation Pilot Plant. In August, North Wind and CCP personnel loaded and shipped two TRU Packaging Transporter Model II trailers.

**Fire Protection/Highly Enriched Uranium Materials Facility (HEUMF):** Earlier this month, a fire protection engineer identified that several check valves installed on the HEUMF fire water distribution system have not been inspected as required by NFPA code. Fire protection operations personnel test the functionality of the check valves annually, but NFPA code also requires that they be internally inspected every 5 years. The fire protection engineer identified this issue while reviewing a draft, facility-specific fire protection surveillance procedure that implements NFPA code requirements. This week, CNS held a fact-finding meeting to discuss the issue. During the meeting, attendees noted that these check valves have never been internally inspected because they are installed on a portion of the system that is unique to HEUMF. As such, CNS personnel responsible for HEUMF startup never identified that surveillances listed in a particular section of the site manual summarizing NFPA code requirements also applied to these check valves. Fire protection engineering thus committed to review the site manual and evaluate whether it requires revision. Attendees also committed to inspect the check valves as required by NFPA code and perform a site-wide extent-of-condition review.

**Conduct of Operations:** The CNS Enterprise Conduct of Operations and Event Investigation (ECI) organization revised the Y-12 technical procedures chapter of the conduct of operations manual in April 2017. The resident inspectors recently reviewed the requirements governing recovery from abnormal conditions, as defined in the revised chapter, and provided feedback to the ECI director regarding potential vulnerabilities introduced by the revision. Specifically, the new requirements do not address situations when a responsible manager should develop a technical procedure to govern the recovery from an abnormal condition (these situations would occur after the shift manager directs any immediate actions necessary to achieve a safe and secure condition). The resident inspectors previously communicated a concern to CNS senior management regarding instances in which CNS management approved recovery actions through informal, undocumented means (see 7/24/15 and 2/13/15 reports). The resident inspectors also note that Y-12 does not currently have a temporary procedure process, which could supplement abnormal event recovery efforts. The ECI director is considering these comments.

**Work Planning and Control:** In July, a CNS project manager found that the reported uranium content of packaged UF<sub>4</sub> material scheduled to be shipped offsite was higher than expected. Further investigation revealed that the high uranium content values were incorrect because analytical laboratory personnel utilized the wrong testing protocol to evaluate representative samples. Laboratory personnel have since reanalyzed sample material using the correct protocol. This week, CNS held a critique to further discuss this issue. Meeting attendees identified corrective actions to implement several database software changes that will ensure laboratory personnel utilize the correct analysis methodology. The resident inspectors note that the critique did not fully evaluate the miscommunication between project management and laboratory personnel that resulted in the laboratory's use of the wrong analytical method because project management personnel did not attend the critique. They provided this feedback to CNS management; CNS is reconvening the critique next week to further evaluate this issue.