

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 13, 2018

TO: Steven A. Stokes, Technical Director
FROM: D. Shrestha and B. Weathers, Acting Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending April 13, 2018

Board Acting Chairman Bruce Hamilton, and staff members D. Shrestha, R. Tontodonato, and B. Weathers visited Oak Ridge this week. NNSA Production Office (NPO), Oak Ridge National Laboratory (ORNL) Environmental Management, and contractor personnel briefed Acting Chairman Hamilton and staff on the status of operations, safety initiatives, and ongoing design efforts at Y-12 and ORNL. Acting Chairman Hamilton and staff walked down Buildings 9212, 9204-2E, and 9215 at Y-12, and ORNL's Transuranic Waste Processing Center (TWPC).

Buildings 9212 and 9215/Extended Life Program: On March 28, 2018, NPO approved Revision 2 of the Safety Strategy for the Extended Life Program for Buildings 9204-2E and 9215. NPO sought and received advice from the Office of the Chief of Defense Nuclear Safety (CDNS) on this approval. Among the items identified by NPO and CDNS for consideration in the next revision of the Safety Strategy is the implementation of DOE Standard 3009-2014. In NPO's response to Operating Experience Level 1: 2015-1, *Evaluation of Existing Facilities to DOE-STD-3009-2014*, Building 9215 is expected to implement DOE Standard 3009-2014. In the Safety Strategy approval letter, NPO directed CNS to evaluate the implementation of DOE Standard 3009-2014 for Building 9204-2E; which is considered an enduring facility.

Building 9720-5: On April 11, 2018, NPO personnel conducted a criticality safety evaluation walk-down of Building 9720-5. The walk-down focused on observing storage units, some operations, and upcoming changes to the safety basis. These safety basis changes include modifications to the control logic for annunciating the Criticality Accident Alarm System and procurement of DT300 drums to replace 6M/2R drums used for storage of special nuclear material.

TRUPACT-II Loading Operations: During a TRUPACT-II loading operation on March 27, 2018, operators heard an uncharacteristic noise from the 5-ton overhead crane in the TWPC Multi-Purpose Building (MPB). The 5-ton overhead crane is used to load the drums and the casks into TRUPACT-II shipping containers. The crane is not a safety system but is vital for TWPC's mission to ship waste to Waste Isolation Pilot Plant. Subsequent to the noise, the operation was stopped and the crane was inspected. The inspection revealed what appeared to be abnormal wear of the sheave/pulley and wire rope parts of the crane hoist. A follow-on inspection was conducted by TWPC maintenance personnel who determined that the observed wear was normal. Additionally, an independent crane inspector from Crane-1 Services was called in to perform another inspection and determined that the observed wear was indeed normal. Crane-1, an approved TWPC supplier, supplied new rope and sheaves; the crane was repaired, load tested, and returned to service. Following the repairs, TWPC personnel loaded a TRUPACT-II on April 10 and shipped it on April 11.

ORNL Site Wide Emergency Drill: On April 4, 2018, TWPC personnel participated in the ORNL site wide emergency drill. This emergency drill involved a simulated fire involving a forklift and a single drum in the MPB at TWPC. No significant issues were identified.