

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 4, 2015

TO: Steven Stokes, Technical Director
FROM: Bradford Sharpless, Idaho Cleanup Project Cognizant Engineer
SUBJECT: Idaho National Laboratory (INL) Report for November 2015

DNFSB Staff Activity: Board's staff member R. Quirk was on site on November 30, to observe waste simulant processing operations at INL's Integrated Waste Treatment Unit (IWTU). The Board's staff provided an average of 1.8 man-weeks of on-site oversight per month for the first 11 months of 2015.

Integrated Waste Treatment Unit: On November 15, facility workers commenced feeding simulated waste into IWTU's processing systems for performance testing. As of November 30, IWTU processed approximately 24,000 gallons of waste simulant. IWTU's managers expect to process a total of 60,000 gallons of simulant as part of the performance testing.

Radioactive Waste Management Complex (RWMC): On November 11, workers at RWMC's Accelerated Retrieval Project (ARP)-V conducting Sludge Repackaging Operations encountered a drum containing material from an unexpected waste stream. The material had not been evaluated for repackaging operations and is known to contain fissile material. Upon identifying the unexpected waste, the Operations Foreman immediately entered the facility into a Limiting Condition for Operation (LCO), stopped work, and notified the Nuclear Facility Manager and Criticality Safety Officer (CSO). The CSO subsequently determined that the quantity of fissile material in the package being processed did not exceed RWMC's Beyond Extremely Unlikely criticality safety risk and the facility exited the LCO. Workers segregated the drum and stored it in the ARP-V retrieval area until its waste stream is evaluated for processing.

Advanced Mixed Waste Treatment Project (AMWTP): On November 11, a technician performing maintenance activities in AMWTP's WMF-676 building crossed from the building's Cell 345 to Cell 335 without Fortress key protection in place for Cell 335. A Fortress key is used to de-energize all equipment in the cell, protecting an entering worker from hazards involving moving equipment.

Two electrical technicians and one mechanical technician were assigned to complete the required maintenance activities. The initial cell entry plan specified that the technicians would first enter Cell 335, then proceed to Cell 345. Before the Shift Supervisor (SS) approved the work, planners determined that the breathing air manifold for Cell 335 was contaminated. The entry plan was modified such that the technicians would only enter Cell 345. The technicians were briefed on the change to the plan and Fortress key protection was put in place for Cell 345 only.

While conducting the work, the mechanical technician accidentally crossed into Cell 335 where the chain that should have blocked its entrance had been left down. Using installed cameras, an operator remotely controlling the systems in Cell 335 noted the mechanical technician's presence and notified the SS. The SS ordered the technicians out of the cell. Further entries into cells with multiple entry points using gates and chains for access restriction were suspended.