

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 3, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: Timothy L. Hunt, Acting Cognizant Engineer
SUBJECT: Idaho National Laboratory (INL) Report for April 2019

DNFSB Staff Activity. Board's staff members conducted 2 person-weeks of on-site activities during April 2019. The Board's staff has provided an average of 1 person-weeks per month of on-site oversight for the first seven months of fiscal year 2019.

Improper Cell Entry at the New Waste Calcining Facility (NWCF). Poor communication of the work scope between waste management (WM) and balance-of-plant (BoP) supervisors and significant procedure violations by WM and NWCF operators created the potential to inadvertently pressurize the alpha-contaminated decontamination cell. Due to miscommunication between supervisors, the BoP supervisor informed the NWCF operator that no cell entries would be performed on the day of the event. The NWCF operator was not contacted regarding the cell entry until WM operators were at the outer cell door and ready to enter. The technical procedure (TPR) requires that WM operators request the NWCF operator to adjust the building HVAC to high-flow and obtain approval from the BoP supervisor to open both outer and inner cell doors to avoid losing contamination control. The NWCF operator incorrectly gave the go-ahead to enter the cell without confirming that the ventilation was properly configured. The NWCF operator received a low-flow alarm and realized only one exhaust fan was operating but made the non-conservative decision to leave the ventilation lineup as-is, since system response can vary and take time to fully stabilize. WM operators were inside the cell for 28 minutes and exited before management realized that the entry had been made prior to release of the governing TPR or authorization via the plan-of-the-day. Surveys found no contamination outside the cell. A fact-finding determined that two full pages of the TPR describing required preparations for cell entry had not been performed by the NWCF operator, including two steps marked "OPERATIONS HOLD." Proposed corrective actions were to establish a standard protocol to communicate work scope between WM and BoP supervisors and evaluate procedures of both organizations.

Accelerated Retrieval Project (ARP) V Status. On April 25, 2019, DOE-ID received concurrence from the Idaho Department of Environmental Quality on proposed recovery actions to restart sludge repackaging operations at ARP V. Recovery operations related to the April 11, 2018, drum overpressurization include processing and repackaging waste from 27 trays, 4 overpacked event drums, 3 drums of cleanup debris, 15 drums from the vacuuming process, and 37 drums containing waste awaiting processing at the time of the drum event. All waste will be processed with added controls and operational restrictions to address potential chemical reactions. Drum packaging station operations and repackaging of waste is expected to start in early-May.

Integrated Waste Treatment Unit (IWTU) Status. As of April 25, 2019, IWTU had processed 22,571 gallons of simulated waste and was on day 15 of the 50 day run. A plug in the transfer line between a product receiver cooler and a can fill station developed and was cleared twice during the run. When these plugs occur, the feed rate must be reduced by the use of only one of three available feed nozzles. The cause of and potential mechanisms to prevent the plugging have yet to be determined.