

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 2, 2022

**TO:** Katherine Herrera, Acting Technical Director  
**FROM:** Erin A. McCullough, Cognizant Engineer  
**SUBJECT:** Idaho National Laboratory (INL) Report for November 2022

**DNFSB Staff Activity.** The Board's cognizant engineer attended regular calls with the Department of Energy Idaho Operations Office (DOE-ID) and Idaho Environmental Coalition, LLC (IEC) personnel. On November 8-9, 2022, one staff member observed the Carlsbad Field Office, DOE-ID, and IEC personnel discuss difficult waste certification issues related to the National Transuranic Program accepting specific INL waste for final disposition at the Waste Isolation Pilot Plant (WIPP). Two staff members attended the joint Department of Energy (DOE) and Energy Facility Contractors Group Fire Protection workshop at INL, where they also observed a DOE Fire Safety Committee Meeting.

**COVID-19 Update.** The Centers for Disease Control and Prevention COVID Data Tracker shows that all counties near INL facilities have "Low" COVID-19 Community Levels.

**Calcine Disposition Project (CDP) Drone Test Flights.** The CDP will use remote equipment to pneumatically retrieve the calcine radiological waste from Calcined Solids Storage Facilities #1 (CSSF #1) and transfer it to CSSF #6. In order to collect data on the operating and physical environment within the CSSF #1, CDP engineers completed three flights with an Elios-3 drone. These flights allowed for the collection of light detection and ranging (LIDAR) and radiological data. Post-flight data evaluation suggests that the LIDAR data from within CSSF #1 is accurate. For example, the LIDAR data depict the floor to ceiling inside the CSSF to be 7.996 feet while the engineering drawings show the distance as eight feet. On the third flight, in which the drone attempted to collect radiological data, a down draft of cold air overcame the drone as it attempted to exit the vault at full throttle. Unable to exit, the drone rests on a bin holding calcine radiological waste, which is structurally safe with the drone there. CDP engineers are weighing options to recover the drone, even though it is not essential for the remainder of the project.

**Sampling Waste Drums at the Advanced Mixed Waste Treatment Project (AMWTP).** Abnormal shipping events with the TRUPACT-148 and 180 containers resulted in personnel at the WIPP sending the containers back to INL. This led managers at the AMWTP to begin a drum ultrasonic testing campaign pursuant to a work package that cites a statistical sampling plan. They will sample about ten percent of the drums staged at the AMWTP, focusing on those from 2019 and newer because of their contents. For lots of greater than 1,400 drums, managers plan to sample at least 125 of them. If fewer than three sample drums fail the ultrasonic campaign, then the managers will presume the entire lot is safe to ship to WIPP.

**Lockout Tag/Tagout (LOTO) Assessment Results.** The LOTO assessments mentioned in the September 2022 *INL Monthly Report* for the Radioactive Waste Management Complex and Idaho Nuclear Technology and Engineering Center (INTEC) are complete. The RWMC LOTO assessment did not identify any programmatic or systemic errors, while the INTEC LOTO assessment described how "human performance shortcomings ... resulted in instances of placing individual workers or others at risk of exposure to hazardous energy."