

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 3, 2023

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Erin A. McCullough, Cognizant Engineer  
**SUBJECT:** Idaho National Laboratory (INL) Report for February 2023

**DNFSB Staff Activity.** The Board's cognizant engineer attended regular calls with Department of Energy Idaho Operations Office and Idaho Environmental Coalition, LLC (IEC), personnel. The cognizant engineer and another staff member visited selected INL facilities during the week of February 20, 2023. On February 24, 2023, the Board transmitted a report to the Secretary of Energy explaining that "some nuclear waste drums at INL pose a risk of deflagration, which could potentially expose workers to radiological waste released from the drum."

**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.

**Leak Develops within Integrated Waste Treatment Unit (IWTU) Process Cell.** During a routine Resource Conservation and Recovery Act surveillance on February 26, 2023, IWTU personnel discovered via cameras stains that indicated a potential simulant leak inside the Process Cell. IWTU personnel remotely investigated for the potential source of the simulant leak. Due to limited vantage points of the cameras, they were unable to identify the source remotely, requiring a personnel entry into the Process Cell to complete the investigation. Safety basis restrictions for personnel access into the Process Cell made it necessary to transition IWTU to Shutdown Mode. The duration of the outage depends on the extent of repairs required once IWTU personnel complete the investigation. This leak follows a suite of other operational setbacks at IWTU, most recently a material clog in the Carbon Reduction Reformer Additive Feed Line and a contained solid materials release in Upper Canfill 0 Cell. Although the Board's staff members are concerned about the reliability of infrastructure at IWTU, it is noteworthy that no clog or leak issue has exceeded a boundary credited in applicable safety basis documents, and that IEC personnel took actions to prevent the specific issues from recurring.

**Field Observations Related to Waste Processing at AMWTP.** At the end of January 2023, a staff subject matter expert (SME) in conduct of operations identified multiple questionable practices during his routine walkdowns at AMWTP. It appeared to the staff member that waste drums failing visual inspection criteria for drum integrity were not effectively indicated as having a nonconformance status. Furthermore, the staff member noticed that visual inspection worksheets appeared pre-filled, with boxes already checked "No" and the comment section marked as "N/A." A visual inspector also told the staff member that it was common practice to discard inspection records whenever a drum fails an inspection. During the staff visit in February, the AMWTP Director pointed out to the Board's staff members some improvements to onsite recordkeeping and inspections, while they visited AMWTP.

**Likely Suspect/Counterfeit Items (S/CI) at INTEC.** IEC personnel discovered S/CI (e.g., bolts, beam clamps) throughout the Idaho Nuclear Technology and Engineering Center (INTEC). Federal quality assurance (QA) SMEs identified more than 120 S/CI at INTEC and found that over 90 percent of them failed the requisite quality standard.