

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 1, 2022

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Erin A. McCullough, Cognizant Engineer  
**SUBJECT:** Idaho National Laboratory (INL) Report for March 2022

**DNFSB Staff Activity.** Three of the Board's staff members visited INL in March for oversight activities. The Board's INL cognizant engineer observed early diagnostics for the Idaho Nuclear Technology and Engineering Center (INTEC) Integrated Waste Treatment Unit (IWTU).

**COVID-19 Update.** The Centers for Disease Control and Prevention COVID Data Tracker indicates that all counties surrounding INL facilities have "Low" COVID-19 Community Levels. Protective face masks are optional for all employees unless COVID-19 Community levels increase to "Medium" or "High."

**IWTU Shutdown and Diagnostics.** Multiple rapid shutdown system alarms activated within the IWTU at the end of February, resulting in a full shutdown the first week of March. IWTU operations and engineering staff accessed the process gas filter (PGF) on March 7, 2022. Opening the PGF revealed white powder piles of simulant material that had bypassed the filters and scattered on the "clean" side of the PGF tube sheet. IWTU engineering staff identified multiple hold-down bolts that had become loose. An inspection of the "dirty" lower side of the PGF found that one of the ceramic filter elements had broken near its flange connection. The filter vendor is currently examining the broken filter. Timelines for completing all diagnostics and repairs are "to be determined."

**Advanced Mixed Waste Treatment Project (AMWTP) "Stand Down."** A series of procedural violations led operations management to issue a Stand Down direction on February 9, 2022, effective through all of March at the Treatment Facility. This Stand Down direction stopped all waste handling and processing work so that operations management could review whether current procedures were adequate. Operations at the Treatment Facility will tentatively resume in April. Maintenance activities discontinued on March 7, 2022 due to misunderstandings of maintenance procedures among supervisory and craft personnel. Maintenance activities resumed on March 14, 2022, following procedural updates and employee retraining.

**Radiation Area (RA) Boundary Crossed without a Radiological Work Permit (RWP).** On March 23, 2022, an electrician and an engineer entered an RA within the INTEC New Waste Calcining Facility without first signing onto the applicable RWP. The RA boundary was marked with a RA sign hanging from a yellow and magenta rope near the normal radiological buffer area boundary demarked by yellow and magenta tape on the floor. For nearly two minutes, the individuals were within the RA before radiation protection personnel noticed and questioned them. The electrician and engineer explained to radiation protection personnel that they did not read the sign thoroughly enough to recognize that they needed to be on the RWP. Radiation exposure levels in the area would not have exceeded 1 millirem per hour. The Federal Perspective on the Initial Notification Report noted how a "lack of a questioning attitude and a lack of attention to details on the part of both the electrician and the engineer were major contributors to this event."