

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 4, 2022

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

**DNFSB Staff Activity.** The Board's cognizant engineer attended regular calls with the Department of Energy Idaho Operations Office and Idaho Environmental Coalition, LLC (IEC) personnel. One staff member observed the Advanced Mixed Waste Treatment Project (AMWTP) annual characterization and certification audit. That staff member also attended a briefing between the Department of Energy Carlsbad Field Office and INL personnel to obtain status updates about the recovery efforts for the TRUPACT II-148 and TRUPACT II-180 shipping containers after the Waste Isolation Pilot Plant rejected the shipments and returned them to INL.

**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. On October 6, 2022, the INL laboratory director distributed an internal memorandum that discontinued the COVID-19 vaccination requirement to come on site.

**Integrated Waste Treatment Unit (IWTU) Technical Review Group (TRG) Report.** The TRG is an independent panel that periodically reviews technical issues and corresponding resolutions at the IWTU. For the last TRG meeting in September 2022, the primary focus was the confirmatory run, which processed over 137,000 gallons of simulant liquid waste. The TRG reviewed the overall IWTU system performance, including major repairs and modification since the last outage, commenting that "the auger-grinder, particulate filters, and product transport systems all functioned normally and appear ready for extended operation." The TRG unanimously concluded that "all major technical issues have been resolved and the remaining minor issues are on a path to closure." The Board's staff will consider the perspectives in this report while reviewing the DOE Readiness Assessment Final Report.

**Probabilistic Volcanic Hazard Assessment (PVHA).** Safety basis documents for the Idaho Clean-up Project rely on natural phenomena hazard analyses that INL staff conduct for the entire site. This PVHA effort is identifying and characterizing the risks that multiple volcanic hazards near INL facilities pose. According to the *Working Meeting #3 Agenda* for October 17-21, 2022, the INL PVHA Technical Integration Team addressed uncertainties, approaches, and inputs into original volcanic hazard models. Outcomes from this meeting include spatial density models that provide reproducible results and lava flow models subject to additional testing with a wide range of parameters. Preliminary analyses suggest that lava flow inundation is the most likely volcanic hazard at the INL facilities, although the influence of topography varies from facility to facility. The preliminary hazard models and results will be discussed at a public workshop in May 2023.

**Contaminated Pallet Found in AMWTP WMF-633 Type II Storage Facility.** On October 20, 2022, operations personnel saw a "rusty area" when moving a stack of empty pallets. They sampled the rusty area, identifying a Pu-239 source reading 1,700 disintegrations per minute (DPM) of fixed contamination and 15 DPM on a smear, which is below the reporting threshold. Operators wrapped the pallet in plastic and disposed of it as radiological waste.