

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 4, 2023

**TO:** Timothy J. Dwyer, Acting Technical Director  
**FROM:** Erin A. McCullough, Cognizant Engineer  
**SUBJECT:** Idaho National Laboratory (INL) Report for July 2023

**DNFSB Staff Activity.** The Board's INL cognizant engineer held weekly meetings to maintain awareness of site activities. The Board's Chair, Acting Deputy Technical Director, and cognizant engineer visited INL during the week of July 17, 2023.

**Integrated Waste Treatment Unit (IWTU) Crane Operations.** On July 6, 2023, a crane operator inadvertently caused damage to the maintenance crane and structural building components at IWTU. The operator was using the crane to hoist sacks of petroleum coke for the Carbon Reduction Reformer to the second level of IWTU. While still wearing the belly box crane controller and looking for the necessary equipment to move the coke onto the second level of IWTU, the crane operator unknowingly adjusted the east-west switch on the box controller. This action caused the crane to start traveling west. The crane cables then caught on a structural beam, causing the hook of the crane to snag a Unistrut. At the management review meeting, the accountable supervisor acknowledged that the pre-job briefing for the personnel involved was undocumented and more limited than it should have been. A combination of administrative and human factors contributed to this event.

**IWTU Operational Challenges.** Operators at IWTU continued responding to challenging plant conditions this month. High Denitration Mineralization Reformer (DMR) bed differential temperature events continued (see INL Monthly Reports for May and June 2023), requiring operators to run the facility on reduced and paused feed rates. Waste feed nozzles continued to clog, with Nozzle C completely obstructed. This ongoing operational challenge does not have a clear path to resolution.

**Accelerated Retrieval Project (ARP) Decontamination and Demolition (D&D).** During July 2023, operators performed D&D activities as part of an ongoing reclamation effort for the ARP-V facility. Department of Energy Idaho Operations Office (DOE-ID) personnel confirmed that the ARP-V structure is on the ground. A DOE-ID facility representative closely observed the D&D activities, noting that operators successfully executed the work as planned and authorized in the work order. Before bringing the ARP-V facility down, operators sprayed fixative inside the facility to limit and contain the spread of radiological contamination with the potential to become airborne. As the D&D effort progressed, there was no spread of radiological contamination as verified by contamination monitors immediately outside the ARP-V facility.

**Probabilistic Seismic Hazard Assessment (PSHA).** In November 2022, the project team concluded its effort to update the PSHA for INL, which informs the safety analyses for all defense nuclear facilities. Battelle Energy Alliance, LLC (BEA) nuclear safety personnel are currently reviewing how the findings in this report impact existing safety basis documents for the nuclear energy assets they administer. During a briefing to the Board's Chair, Idaho Environmental Coalition, LLC (IEC) nuclear safety personnel discussed their intent to wait for BEA's analysis to conclude in order to inform IEC's forthcoming efforts.