

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 4, 2022

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

DNFSB Staff Activity. The Board's INL cognizant engineer held weekly meetings to maintain awareness of site activities. One Board's staff member attended training at INL in January.

COVID-19 Update. In response to medical staffing shortages due to the COVID-19 omicron variant, the Idaho Department of Health and Welfare re-enacted "Crisis Standards of Care" this month for three southern Idaho public health districts. While the health district nearest INL is not subject to these standards, it continues to experience COVID-19 caseloads above the count by which "Crisis Standards of Care" were previously in effect there. High COVID-19 caseloads caused INL to delay executing its re-entry plan, which calls staff back into the office, until February 28, 2022. Since January 10, 2022, over one quarter of all the Department of Energy Idaho Clean-up Project staff experienced break-through COVID-19 cases.

Disruption of Nitrogen Gas (N₂) Supply Delays Readiness Assessments (RA) for the Integrated Waste Treatment Unit (IWTU) at the Idaho Nuclear Technology and Engineering Center (INTEC). IWTU is currently a radiologically clean facility that will treat sodium-bearing waste at INTEC. The facility requires a steady supply of N₂ gas for bed fluidization during startup and numerous inerting purge processes during operation. Truck driver shortages disrupted routine N₂ deliveries to IWTU this month, causing operators to shut the facility down. This delayed the forthcoming Contractor RA for IWTU radiological operations.

Initial Notification Report – Advanced Mixed Waste Treatment Plant (AMWTP) Criticality Alarm and Building Evacuation Due to Maintenance Activities. On January 18, 2022, during housekeeping activities, operators vacuumed the tops of "Resource Conservation and Recovery Act (RCRA) clean" drums holding polymer liners in the AMWTP Filter Room while the drums were touching or nearly touching a conduit on the wall that connects to the Criticality Incident Detection and Alarm System (CIDAS) detector in the room. The operators reported that they could hear the CIDAS make audible but unsustained "chirping" noises. A systems engineer came to investigate the issue and, against protocol, verbally directed the operators to re-enact the conduct causing the chirping noises. As operators followed his direction and started vacuuming, the CIDAS activated. Before the alarm activated, the systems engineer saw a static electricity spark migrate from the drum to the conduit of the CIDAS detector. The Board's staff is reviewing this event.

Initial Notification Report – New Waste Calcine Facility (NWCF) Shield Door Contact with In-cell Crane. On January 13, 2022, operators at the INTEC NWCF lowered the Valve Cubicle shield door at the NWCF and inadvertently contacted a one-ton bridge crane mounted on the cell walls. The collision between the shield door and crane resulted in damage to the crane, which is necessary to operate shielded valves that facilitate transferring liquid waste from the tank farms to the IWTU. Although neither the crane nor the shield door serve as a credited safety-significant control, the crane is a single point-of-failure for forthcoming radiological operations at IWTU.