

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 5, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: Timothy L. Hunt, Cognizant Engineer
SUBJECT: Idaho National Laboratory (INL) Report for May 2020

DNFSB Staff Activity: No staff members were on site during May 2020.

COVID-19 Response Update. The roll-out of Phase 1 activities at the Idaho Cleanup Project (ICP) officially started May 11, 2020, and was fully implemented by May 21, 2020. DOE headquarters approved the advance to Phase 2, which covers high priority, medium risk activities where social distancing can be maintained, on June 2, 2020. ICP has developed a reconstitution plan with a phased approach to returning to normal operations following the COVID-19 pandemic. This plan is consistent with DOE's four "phase" approach to resuming normal operations as well as the Idaho state "stages" for reopening. Idaho businesses advanced to Stage 3 on May 30, 2020. Stage 3 changes include consent to resume non-essential travel, termination of 14-day self-quarantine for people entering Idaho, and approval for gatherings of up to 50 people.

Positive Unreviewed Safety Question (USQ) Determination for Nuclear Criticality Scenario. On April 30, 2020, the Idaho Nuclear Technology and Engineering Center (INTEC) declared a positive USQ based on new information increasing the likelihood of an inadvertent criticality scenario due to the failure of safety-significant fuel storage devices housing fuel elements. The criticality safety evaluation for the Outdoor Fuel Storage Facility at INTEC is being revised to include a new control for handling shield plugs over potentially flooded fuel-loaded vaults. The drop of a shield plug from greater than two feet over flooded vaults with possible damage to fuel elements or the fuel element supporting structures would increase the likelihood of a criticality through a change in fuel element geometry. Existing requirements do not impose a lift height restriction on the shield plug. INTEC has developed an evaluation of the safety of the situation for shield plug handling with lift height controls based upon the results of vault inspections.

Downed Power Pole at the Radioactive Waste Management Complex. On April 30, 2020, INL experienced winds in excess of 70 mph, resulting in multiple false alarms from the video fire detection system at ARP VIII. In addition, the engine-control panel for the WMF-743 auxiliary diesel fire water pump lost power due to a downed power pole. The primary electric and diesel fire pumps in WMF-639 were unaffected. Despite the loss of power, the capability of the auxiliary pump to start upon a loss of fire water system pressure was maintained. The auxiliary pump provides pressure to the subsurface disposal area fire water loop should the primary fire water pumps be lost. Fluor Idaho completed repairs to the power pole on May 15, 2020.

Failure to Follow Proper Radiation Protection Protocol. A Battelle Energy Alliance, LLC (BEA) radiographer was not wearing his optically stimulated luminescence dosimeter while performing a radiography test on Integrated Waste Treatment Unit pipe welds. The radiographer had taken off his lanyard, with dosimeter attached, and placed it on nearby scaffolding since it was in the way while setting up the radiography equipment. The radiographer was not in the immediate vicinity of the radiography beam during the test, however, the lanyard with dosimeter was. BEA personnel are performing a dose resolution/investigation.