

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 2, 2020

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

DNFSB Staff Activity: Board's staff member R. Quirk was on site from September 21-24, 2020, performing oversight duties.

COVID-19 Update. INL remained in Phase 2 of its Reconstitution Plan throughout September.

Integrated Waste Treatment Unit (IWTU) Readiness Activities. On September 10, 2020, Fluor Idaho issued the semiannual update to its Startup Notification Report (SNR). The SNR proposes four separate readiness events prior to startup of IWTU radiological operations. Two contractor management self-assessments will precede a contractor readiness assessment (CRA) and DOE readiness assessment (DRA). The CRA and DRA will follow the current maintenance outage and occur prior to the start of the confirmatory run to validate system modifications and personnel proficiency, as well as safety documentation and procedures. These two activities are scheduled for January 2021 and February 2021, respectively. Another CRA and DRA will evaluate worker readiness to safely operate IWTU under radiological conditions with the focus on implementation of radiological practices and procedures during maintenance and operations. The CRA and DRA for the confirmatory run are scheduled for the April 2021 timeframe.

Unexpected Electrical Spark at IWTU. On September 12, 2020, force account electricians observed an electrical spark when they pulled wiring for the wet decontamination system (WDS) through a conduit that passed through the Process Cell. The conduit through which the 1 gauge WDS wire was being pulled already contained 12 gauge wires for the process cell lighting system. The heavier weight and more rigid WDS conductor pulling over the smaller lighting conductor appears to have contributed in large part to the damage. The smaller lighting conductor was physically separated (open), and the arc discharge in the conduit caused damage to the heavier conductor, both of which will need to be replaced. Although lighting in the process cell went out, the process cell lighting breaker did not trip during the event but was subsequently opened and tagged out. Work was stopped while IWTU engineering looked at other work that pulls wiring through conduits with live wires.

Inadvertent Lifting of Empty Spent Nuclear Fuel (SNF) Canister at the Idaho Nuclear Technology and Engineering Center. On September 2, 2020, SNF operations personnel, while staging for HFEF-14 cask loading in support of Experimental Breeder Reactor (EBR) II fuel transfers to the Radioactive Scrap and Waste Facility, inadvertently lifted the outer canister during an attempt to remove the outer canister lid. The outer canister is seated in the HFEF-14 cask and an inner canister is installed in the outer canister. The outer canister and its lid were lifted approximately one inch prior to the lid separating from the canister. There was no fuel loaded in the HFEF-14 cask and no personnel were injured. A similar event occurred about a year ago when the inner canister was inadvertently raised as operators were attempting to lift the lid off the inner canister. Fluor Idaho engineers determined that binding of the neoprene gasket between the canister lid and body was the cause in both events.