

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 2, 2021

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Timothy L. Hunt, Cognizant Engineer  
**SUBJECT:** Idaho National Laboratory (INL) Report for June 2021

**DNFSB Staff Activity:** No staff members were on site during June 2021.

**Limiting Condition for Operation (LCO) Entered at the Advanced Mixed Waste Treatment Project (AMWTP) Treatment Facility after Required Action Missed.** On June 15, 2021, a drum containing potentially pyrophoric RF-762 waste was emptied into a boxline tray in the Treatment Facility. The visual examiner incorrectly determined the material to be RF-742 waste and, thus, it was processed without the required 24-hour hold. The nuclear facility manager discovered the error and entered the appropriate LCO, which requires the waste to be returned to the point in the procedure where the 24-hour hold was missed to be reprocessed.

**Technical Safety Requirement (TSR) Violation When Combustible Loading Limit Exceeded.** On June 10, 2021, a TSR violation occurred in Pad 1 of the AMWTP Transuranic Storage Area – Retrieval Enclosure (TSA-RE) when a specific administrative control (SAC) limiting the volume of free fossil fuel to 40 gallons was exceeded. The safety function of the SAC is to limit the amount of free fossil fuel available (i.e., less than 40 gallons) in the event of a fire in the TSA-RE. Workers were required to fill a vehicle located within Pad-1—using the 100-gallon refueling trailer located outside the facility—under the work order for removing the asphalt as part of the facility closure project. The work order did not address the TSR requirement directly in the section the workers were executing, instead the requirement was in an attachment. After talking to the fire protection engineer, the workers thought that they had permission to proceed with fueling the truck by bringing the hose into the building from the trailer. This violated the TSR by increasing the available free fossil fuel to 100 gallons.

**Non-Radiological Spill at the Integrated Waste Treatment Unit (IWTU).** On June 16, 2021, a non-radiological spill occurred from a simulant/nitric acid pressure indicating line in IWTU. The instrument line was being used for a zero energy verification in conjunction with a lockout/tagout (LO/TO) in preparation for installing a tie-in to the new 8,700-gallon simulant tanks. The piping had not been used or pressurized in some time, but residual nitric acid solution was still anticipated in the system due to previous test runs of the steam reforming process. In preparation for the tie-in work, a LO/TO had been installed on valves isolating the tie-in and piping. As part of the required zero energy check, the isolation valve was verified open and the downstream fitting cracked open to verify no continuous flow from the valve. About eight gallons of residual simulant flowed from the instrument line as expected and then stopped. The isolation valve and downstream fitting were left open, with a bucket underneath, until work recommenced two days later, at which time IWTU personnel noted a couple more gallons of residual simulant below the instrument line. The engineering calculations showed that the additional liquid should have been expected. The primary remaining concern is whether the fitting that had been cracked open downstream of the isolation valve would have been closed, as necessary, following the completion of work. Neither the LO/TO record sheet nor work order addressed this action as part of the LO/TO removal.