

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 5, 2019

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Timothy L. Hunt, Cognizant Engineer  
**SUBJECT:** Idaho National Laboratory (INL) Report for March 2019

**DNFSB Staff Activity.** Board's staff members did not conduct any on-site activities during March 2019. The Board's staff has provided an average of 0.83 person-weeks per month of on-site oversight for the first six months of fiscal year 2019.

**Accelerated Retrieval Project (ARP) V Restart.** Fluor Idaho recently completed an independent verification review of new controls from Evaluation of the Safety of the Situation (ESS)-137 and a management self-assessment (MSA) at ARP V. The MSA identified three pre-starts, all related to administrative procedure errors. ARP V is scheduled to enter operations mode in early April. Upon approval to restart ARP V operations, the four event drums and the 15 drums of vacuumed material will be sampled for flammable gas prior to handling and repackaging. Of note, the aforementioned drums will not be the first to be repackaged in ARP V. Operations has decided to process the material at lower risk first, i.e., the 27 trays of waste in the retrieval area. This will allow the operators to gain experience with the new ESS controls and the defense-in-depth operational controls prior to treating the 19 drums (and the 37 untreated drums). The process will consist of raking the 27 trays of SD-176 waste and holding for 24 hours to allow for any reactions to start, followed by drum packaging station (DPS) processing and repackaging of waste. After processing and thermal monitoring at the DPS, the waste will be placed into drums for shipment to the Advanced Mixed Waste Treatment Project (AMWTP).

**INL Fire Department (FD) Response to Failed Heater in ARP II.** The INL FD responded to a smoke alarm in ARP II resulting from a personnel area heater with a damaged element. This is the same model of heater that caused a small fire in ARP VIII in January 2019. ARP II contains drums of waste awaiting shipment to AMWTP in the same room as the faulty heater. As a result of the January heater fire, compensatory actions were taken to preclude the storage of combustibles beneath these units. FD responders donned full turnout gear with breathing protection prior to entry into ARP II. The lessons from the ARP V event of April 2018 appear to have been incorporated into FD procedures. A work package has been written to install manufacturer-supplied fault limiting devices (i.e., fuses) in the electrical supply for these heaters.

**MSA Filter Failure.** An MSA combination HEPA/charcoal filter came apart at the seam during doffing in ARP VII. Radiological surveys found no personnel contamination. Fluor Idaho experienced a similar issue in 2017. At that time, all filters from the identified lot number were returned to MSA. Following the recent event, Fluor Idaho discovered that a single box of the previously identified lot number was received at INL in January 2019. Although MSA instituted a formal recall in September 2018, the INL supplier apparently was not responsive.

**Integrated Waste Treatment Unit Status.** The project has completed all recovery actions following the loss-of-power event and ensuing outage in mid-February. The facility initiated a normal startup on March 27 and started cold bed material addition to the denitration mineralization reformer in support of the next 50-day non-radiological test.