

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 4, 2016

**TO:** Steven Stokes, Technical Director  
**FROM:** Bradford Sharpless, Idaho Cleanup Project Cognizant Engineer  
**SUBJECT:** Idaho National Laboratory (INL) Report for October 2016

**DNFSB Staff Activity:** Board's staff members K. Amundson, F. Bamdad, R. Quirk, B. Sharpless, and B. Weathers were on site during October 24–28, 2016, to conduct a review of the Radioactive Waste Management Complex's safety basis. The staff members also had an opportunity to view corroded Sludge Repackaging drums stored at the Advanced Mixed Waste Treatment Project's (AMWTP) Waste Management Facility (WMF)-636. The Board's staff provided 5 man-weeks of on-site oversight for the first month of fiscal year 2017.

**Advanced Mixed Waste Treatment Project.** On October 4, 2016, managers at AMWTP reported that four separate Powered Air Purifying Respirator (PAPR) events occurred during the previous three-month period. The events are listed below:

- 1) On June 28, 2016, while performing drum unpacking, a PAPR filter was observed to be missing from an operator's filter cartridge belt.
- 2) On July 28, 2016, while an operator was exiting from the waste retrieval area, his PAPR hose inadvertently disconnected from the PAPR motor.
- 3) On September 6, 2016, while performing door maintenance in the Retrieval Containment Enclosure (RCE) airlock, an operator's PAPR hose inadvertently disconnected from his hardhat hood.
- 4) On October 1, 2016, during an entry into the RCE, an operator's PAPR hose inadvertently disconnected from his hardhat hood.

AMWTP's managers recognized this series of events as an unsatisfactory trend. They directed that a training course that was used to improve PAPR employment proficiency following the second event be updated to address the weaknesses leading to the later events. No skin or internal contamination was detected on any of the affected operators after each event.

**Idaho Nuclear Technology and Engineering Center (INTEC).** On October 27, 2016, a tour group visited INTEC's Irradiated Fuel Storage Facility, located in Chemical Processing Plant (CPP)-603. As the group exited CPP-603, a Radiological Control Technician (RCT) performed contamination surveys on the tour participants. At approximately 1230, the RCT identified a particle of contamination on the right shoe of one member of the group. The RCT's frisking instrument indicated a reading of 20,000 counts per minute of beta-gamma radiation. No alpha contamination was found. The RCT successfully removed the particle from the shoe using tape and found no further contamination on the individual.

RCTs performed a full radiological survey of the tour group's path from INTEC's CPP-666, where a previous contamination survey had been performed on the group's members, and inside CPP-603. They found no additional detectable contamination.