

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 4, 2017

**TO:** Steven Stokes, Technical Director  
**FROM:** Bradford Sharpless, Idaho Cleanup Project Cognizant Engineer  
**SUBJECT:** Idaho National Laboratory (INL) Report for July 2017

**DNFSB Staff Activity:** Board's staff members R. Quirk and B. Sharpless were on site at INL July 24–28 to conduct a review of the passive safety-significant systems, structures, and components (SSC) at the Idaho Nuclear Technology and Engineering Center (INTEC) to verify that these SSCs will perform their designated functions when required. The Board's staff members provided lines of inquiry to the Department of Energy Idaho Operations Office (DOE-ID) and Fluor Idaho, LLC, (Fluor) regarding nuclear safety basis, design, and maintenance aspects of passive safety-significant SSCs at INTEC. The staff members discussed these lines of inquiry with DOE-ID and Fluor personnel and conducted walkdowns of the applicable SSCs, accompanied by the respective system engineers and/or operations managers. Before leaving the site, the Board's staff members conducted a briefing with DOE-ID representatives to provide their observations resulting from the review.

The Board's staff provided an average of 1.5 person-weeks per month of on-site oversight for the first ten months of fiscal year 2017.

**Radioactive Waste Management Complex (RWMC).** On July 11, 2017, DOE's RWMC Facility Representative (FR) identified work being performed at RWMC's WMF-658 facility (housing offices and computer servers) without an appropriate Lockout/Tagout (LOTO) in place. He observed that there was a piece of cardboard taped over part of the opening created by the removal of the upper intake panel on a heating, ventilation, and air conditioning (HVAC) unit containing exposed energized fans. The FR contacted the on-duty RWMC-Accelerated Retrieval Project (ARP) Shift Supervisor and requested that he accompany the FR to observe this job site. Upon returning to the job site, it was determined that an Information Technology (IT) technician assigned to WMF-658 had been performing unauthorized work on the HVAC unit.

Earlier in the day, the IT technician entered WMF-658's Room 115A and detected the odor of overheating electrical equipment. A desk thermometer read 87°F and two other thermometers in the room read 98°F and 109°F. The IT technician de-energized the room's HVAC unit, removed its metal upper intake panel, then re-energized the unit. There was still no air flow to the room. He again de-energized the unit and taped cardboard over part of the intake opening, leaving the squirrel cage fans exposed. The IT technician re-energized the unit. At this point, the HVAC unit began to operate, pulling outside air into the room and dropping the room's air temperature by approximately 10°F.

After the FR discovered the situation with the cardboard, the IT technician approached the FR and explained what he had done. RWMC managers initiated a step-back due to work being performed outside of Fluor's work control process and all work on the HVAC unit was suspended. RWMC personnel conducted a fact finding discussion. After consultation with DOE-ID and Fluor LOTO subject matter experts, RWMC-ARP's Nuclear Facility Manager categorized the event as "ORPS reportable."