

**Issued on August 17, 2017**

**DOE-ID Operations Summary  
For the Period October 1- December 1, 2016**

***EDITOR'S NOTE:** The following is a summary of contractor operations at the Idaho National Laboratory Site, managed by the DOE- Idaho Operations Office. It has been compiled in response to a request from stakeholders for more information on health, safety and environmental incidents at DOE facilities in Idaho. It also includes a brief summary of accomplishments at the Site. POC: Danielle Miller, (208) 526-5709.*

***Idaho Cleanup Project (ICP)***

October 1: Personnel at the Radioactive Waste Management Complex discovered a fallen power line while trying to determine the cause of a loss of power to fire watch cameras. The power line failed where one end had fallen to the ground. The powerline and area in which ground contact was made was inspected by Idaho National Laboratory Power Management. The power line was disconnected from incoming power lines and tied to ground. Power to the affected fire watch cameras was provided by a back-up generator. No injuries or personnel contact occurred, additionally, no brush fire occurred. [EM-ID--FID-RWMC-2016-0002]

November 1: A member of a tour group exiting the Irradiated Fuel Storage Facility (IFSF or CPP-603) was found to have contamination on their right shoe. The particle was successfully removed from the shoe of the tour group member with tape and no further contamination was discovered. The travel path of the tour group was also surveyed and found to be clean. [EM-ID-FID-FUELRCTR-2016-0002]

***Notable Accomplishments: New Idaho Site Robotic Technology Adds Muscle, Enhances Safety:*** Thanks to new robotic gear, EM's Idaho Site is better armed to safely and compliantly handle the cleanup complex's transuranic radioactive waste.

A safe, reliable and accessible tool for opening waste drums and boxes, the new robotic arm began operating this month at the Advanced Mixed Waste Treatment Project's (AMWTP) Treatment Facility.

It's the first of two arms being installed, replacing the facility's original robotic arms used to examine, sort and treat much of the legacy waste at AMWTP in the past 12 years.

The new arms are intended to create a safer work environment, enhance productivity and reduce maintenance costs by an estimated 80 percent. In 2015, maintenance personnel entered the facility's highly contaminated box lines more than 500 times, each time at a cost of at least \$3,600. These replacement robotic arms will reduce the number of box line entries, reducing worker risks, and saving repair costs. Crews also report the new arm is easier on their hands and wrists.

Updating AMWTP's capabilities is timely as retrieval crews remove the last of the waste containers stored at the site for nearly a half century.

The crews currently deal with the most challenging degraded containers. Experience from retrieving more than 64,000 cubic meters of stored waste has helped them prepare to remove the last 550 cubic meters.

In preparing for the final retrieval work, crews reported the need for equipment for increased ventilation to reduce potential contamination levels. Their suggestions led EM to develop a system of pulleys and rails to move a newly designed ventilation hood and hose inside the inner contamination enclosure, a large, movable tent for seriously degraded drums and boxes. The system increases air flow and prevents the crews from sustaining strains and sprains caused by moving the ventilation equipment.

AMWTP's retrieval operations are scheduled for completion in 2017.

### *Idaho National Laboratory (INL)*

October 4: The Advanced Test Reactor Critical (ATRC) was shut down during normal reactor startup by manual SCRAM in response to abnormal indication on a Log Count Rate Meter (LCRM) Recorder Channel B. All other LCRM instrument indications were as expected. The failure of the LCRM Recorder Channel B instrument was determined to be the result of the equipment having reached the end of its expected/normal service life. [NE-ID--BEA-ATR-2016-0034]

October 17: An electrician working for a subcontractor in the Materials and Fuels Complex Analytical Lab (AL) was retracting a metal measuring tape when it buckled and collapsed, coming in contact with an electrical plug and the receptacle in which it was plugged. An arc and noise were observed indicating an electrical short. The tape was burned and had metal removed. The circuit breaker did not trip, and the worker did not receive a shock. No one was injured. [NE-ID--BEA-AL-2016-0001]

October 24: Personnel at the Advanced Test Reactor (ATR) discovered a break in a drain line which drains the Reactor Control Room (RCR) break room sink to the sewer system. The drain line break was located in the ATR canal area, outside the confinement area. A maintenance work request was generated to seal the breach from the RCR break room and the canal area. [NE-ID--BEA-ATR-2016-0035]

October 25: Materials and Fuel Complex (MFC) cafeteria personnel were preparing food when they discovered a small fire in one of their ovens. Cafeteria staff utilized a Class-K fire extinguisher to extinguish the fire. An employee in the cafeteria pulled the manual fire alarm and the tenants of building evacuated. The Idaho National Laboratory INL Fire Department (FD) responded. The flame was extinguished before the FD arrived. The FD ensured the fire was extinguished. [NE-ID--BEA-MFC-2016-0013]

November 1: An employee at the Specific Manufacturing Capability (SMC) facility discovered four taped and bagged potentially contaminated lead bricks in a newly assigned locker in the women's locker room. SMC radiological controls technicians (RCT), determined three of the four bricks showed contamination on a direct frisk through the bag and tape there was no contamination on the outside of the bags. The locker had been empty for some years, and SMC had no records showing to whom it was assigned previously. The origin of the bricks is unknown

although labels on two of the bricks indicated that they may have come from the Test Area North facility. [NE-ID--BEA-SMC-2016-0004]

November 8: A safety rod at the Advanced Test Reactor failed into insert properly during a manual reactor SCRAM. The ATR has six safety rods, five of which were required to be operable to safely shut down the reactor. The five remaining safety rods inserted as expected. At the time of discovery, the ATR was performing a planned shutdown to enter a scheduled maintenance outage. Operators performed immediate actions for response to a stuck safety rod, ensuring that the reactor was safely shut down. [NE-ID--BEA-ATR-2016-0036]

November 15: Radiation control personnel working at the Advanced Test Reactor discovered that a constant air monitor (CAM) located in the ATR first basement had failed. The monitoring equipment is required to be in service to warn personnel of any increased airborne contamination levels in the area. The CAM was declared out of service and alternate air monitors were in service in the area. No personnel were exposed to unsafe conditions. [NE-ID--BEA-ATR-2016-0038]

November 17: Subcontractors performing electrical work at an Idaho National Laboratory substation failed to replace the door to a walk-in electrical cabinet potentially failing to prevent others from entering unintentionally, exposing them to potential hazardous electrical energy. INL Power Management was notified, and barricaded the area with danger tape. [NE-ID--BEA-CFA-2016-0005]

***Notable Accomplishments: Recycling technology claims another prize: INL wins Idaho Innovation award:*** Electronic waste is closer than ever to having a sustainable, safe and environmentally friendly method of recycling due to award-winning technology developed at Idaho National Laboratory.

The Idaho Innovation Awards honored inventors Tedd Lister and Luis Diaz Aldana recently at a reception in Boise. It was the third major award received this year by Electrochemical Recycling Electronic Constituents of Value (E-RECOV), which uses an electrochemical cell to efficiently reclaim valuable metals and rare-earth elements from discarded electronic equipment. The technique leads to more thorough recycling of materials while significantly minimizing chemical use and waste generation, and can be accomplished domestically and economically. The annual Idaho Innovation Awards recognize innovations, innovative professionals and companies throughout the state. Stoel Rives LLP, a full-service, U.S. business law firm, has organized and hosted the program since 2006.

The technology was developed with funding from DOE's [Critical Materials Institute](#). Other awards won by E-RECOV include [Federal Laboratory Consortium Far West Regional](#) and [TechConnect](#) National Innovation Award. This patent-pending technology is also the focus of a collaborative [Small Business Voucher project](#) with Ohio-based eMaterials Recovery, LLC. The E-RECOV process is currently available for licensing. Interested parties can contact [Ryan Bills](#) for further information. You can learn more about E-RECOV in this [video](#) from the Idaho Innovation Awards or in this INL fact sheet [here](#).

