

**Distributed on July 07, 2014**

**DOE-ID Operations Summary  
For the Period May 15, 2014 through June 16, 2014**

***EDITOR'S NOTE:** The following is a summary of contractor operations at the Idaho National Laboratory, managed by 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.*

***Advanced Mixed Waste Treatment Project (AMWTP)***

May 21, 2014: While performing operating parameter checks on a trailer-enclosed portable breathing air unit, an Idaho Treatment Group operator technician heard a loud bang and observed a vapor discharge from the air unit chiller vents. The operator technician was startled by the loud bang, causing the technician to step backwards, trip over the trailer wheel well and fall approximately two feet to the asphalt outside the trailer. The operator sustained abrasions to his right hand and wrist, and was treated by the on-site medical representative and returned to work without restriction. [EM-ID--ITG-AMWTF-2014-0005]

***Notable Accomplishments: Sludge Repackaging Project near completion:*** On June 16, the Advanced Mixed Waste Treatment Project loaded the last of 6,000 drums containing inorganic and organic waste, for transfer to CH2M-WG, Idaho (CWI), completing the transfer of untreated waste to the Sludge Repackaging Project (SRP).

The drums contain inorganic and organic waste and were sent to AMWTP from the now closed Rocky Flats Plant. Their contents consisted of organic and inorganic sludge from the production of nuclear weapons.

The SRP drums were sent to CWI, which operates the facility to empty, treat, and repackage Waste Isolation Pilot Plant prohibited items and the waste stemming from that process. The waste is then returned to AMWTP. Drums containing transuranic waste are prepared for shipment out of Idaho, while the mixed low-level secondary waste is disposed at a federal disposal site. Treatment and repackaging is expected to be complete by July.

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

June 16, 2014: A maintenance craftsman working for CWI identified a valve that had been improperly locked and tagged while performing a pre-job walk down. At no time were personnel at risk of harm or danger; however the installation of the Lockout/Tagout was contrary to the procedure. Lockout/Tagout energy isolation devices are needed to ensure safety when performing maintenance on machinery or equipment. A fact finding meeting was convened to discuss the event and develop corrective actions. [EM-ID--CWI-FUELRCTR-2014-0002]

June 16, 2014: During a test of the Integrated Waste Treatment Unit (IWTU), a safety instrumented function (SIF) tripped due to high temperature of off-gas as an automatic function to protect downstream equipment. IWTU operations personnel were in the process of performing this test as a first time evolution. Testing was suspended and a fact finding meeting was held to better understand the cause of the trip and adjustments that need to be made to the process to lower the temperature of the off-gas. [EM-ID--CWI-IWTU-2014-0007]

**Public Comment Opportunity:** The public comment period is open for the permit modification request (PMR) for the Secondary Sodium System tank system storage unit associated with demolition activities at Experimental Breeder Reactor-II. The public comment period closes on August 1, 2014. All comments should be addressed to: Idaho Department of Environmental Quality Attention: Mr. Robert Bullock 1410 North Hilton Boise, ID 83706

***Idaho National Laboratory (INL)***

May 19 2014: A Battelle Energy Alliance (BEA) Advanced Test Reactor (ATR) Supervisor observed air bubbles coming from a canal bulkhead seal. Further investigation revealed that the seal pressure indicated that the seal was leaking.

Operations in the canal were stopped. Water makeup was confirmed to be available to the irradiated fuel storage section of the canal, and a canal door was shut to provide additional isolation as required. [NE-ID--BEA-ATR-2014-0013]

May 22, 2014: During a technical evaluation of an ATR safety document, a potentially inadequate analysis was determined. The evaluation calculated the acceptable pressures and temperatures for the ATR IPT bellows, and showed that the maximum allowable pressure is less than the normal operating pressure. Further determinations are being conducted. [NE-ID--BEA-ATR-2014-0014]

May 22, 2014: The High Inlet Pressure Pump Shutoff system was unintentionally tripped during testing of newly installed starters for the ATR pressurizing pumps. The trip was determined to be caused by pressure transients on the coolant system. The pump shutoff system protects the cooling system from experiencing excessive pressure by automatically shutting off both the pressurizing pumps. Further evaluation determined that the Pressurizing Pump Shutoff System functioned as designed when a high pressure was reached during the pressure transient initiated by checking the pressurizing pump standby feature. [NE-ID--BEA-ATR-2014-0015]

June 4, 2014: ATR experienced an automatic shutdown of the reactor due to a fault in a digital output module in an experimental loop remote processing unit. Plant operations personnel responded in accordance with established procedures, and all safety systems performed as designed when the automatic shutdown was initiated. The faulty digital output module was replaced, tested satisfactorily, and the reactor was restarted. [NE-ID--BEA-ATR-2014-0016]

June 16, 2014: BEA technicians performing routine zone inspections at the Hot Fuel Examination Facility identified potential suspect counterfeit fasteners in piping flanges on a shielding system. An evaluation was completed on the suspect counterfeit fasteners and also identified additional fasteners that were unmarked and therefore, not able to verify meeting system design requirements. The shielding system has been entered in to the repair mode until an operability review of the affected system components can be completed. [NE-ID--BEA-HFEF-2014-0001]

**Notable Accomplishments:** INL archaeologists work to preserve WWII B-24 Liberator crash site: The great expanse of Idaho National Laboratory's 890 square miles is home to both prehistoric and modern history. Some of that history is mournful, deserving of special protection and preservation.

"While we estimate that INL may have as many as 75,000 prehistoric sites worthy of preservation, this year we identified and began safeguarding the crash site of a World War II B-24 Liberator bomber," said Julie Williams, technical lead for INL's Cultural Resource Management Office. "Seventy years ago, the aircraft crashed in the southeast portion of INL's desert Site during a training flight and sadly, all seven crew members died."

In January 2014, Williams was contacted by Marc McDonald of Project Remembrance's Pocatello office. He was conducting historical research on the Army aircraft crash that happened on Jan. 8, 1944, but could not be certain the site was located on INL property.

Used during World War II by several Allied air forces and navies, the B-24 still holds the distinction as the most-produced American military aircraft with more than 18,400 planes delivered. During its service, the aircraft earned a distinguished war record with operations in the Western European, Pacific, Mediterranean and China-Burma-India theaters.

McDonald provided additional information gleaned from the U.S. Department of Defense in the training flight accident report. Williams, and her co-worker, INL archaeologist Hollie Gilbert, combined this new information with what was in the records to begin a process of pinpointing the location to organize a search. Williams and Gilbert combined the new information with data from their research and then used satellite imagery technology to identify three potential locations on the INL Site.

"We were not sure how accurate our calculations were from the available information, but Marc McDonald joined us in a trek out to the desert during March 2014," Williams said. "INL archaeologist Brenda Pace and Dan Mahnami, CH2M-WG Idaho GIS analyst for World War II ongoing ordnance cleanup, also went along to provide their expertise. We walked to our first location with no results, and then a second location delivered the same. We walked toward the third location and quickly realized that we had found the site."

McDonald was pleasantly surprised, saying, "I was quite impressed with Julie Williams and the rest of the team. They had calculated very well and we found the crash site within about 90 minutes of arriving in the general area. Usually, it takes days or weeks of searching."

The search team found a narrow swath of debris and some concentrations that included, for example, fragments of the aircraft frame, the aircraft engine's manufacturing data plate, a door handle, a bomb release mechanism and some other small items.

"What gave all of us pause was when Hollie found a ring belonging to one of the crew members," Williams recalled. "This item represents the people who perished in this accident and makes this tragedy personal in a way that we'd not experienced at other archaeological sites."

The Archeological Resources Protection Act of 1979 prohibits the release of exact locations of such sites, plus some other important restrictions. INL's Cultural Resource Management Office is careful to preserve and protect archaeological sites and events that have occurred on the Site. The office has a team experienced in surveying and inventorying prehistoric and historical cultural resources working with communities and special interest groups. The team also works to promote awareness and sensitivity to the value of the cultures represented on the Site.

"This is one of the most satisfying parts of volunteering to help family members learn more about what happened in aircraft accidents during war or peace," McDonald said. "Returning personal items often means so much to these families, our fellow citizens."