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**DOE-ID Operations Summary
For the Period August 1, 2014 through September 30, 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)

September 7: A forklift tipped forward due to suspected overloading during soil removal operations at the Advanced Mixed Waste Treatment Project. The forklift was placed in a safe configuration and taken out of service. [EM-ID--ITG-AMWTF-2014-0010]

September 23: Three Idaho Treatment group employees were potentially exposed to unhealthy working conditions when they failed to immediately evacuate a working area after identifying a strong sulfur odor coming from three underground fire water system tanks. A door in the area was opened to better ventilate the area, and the workers eventually evacuated. Industrial Safety/Industrial Hygiene samples indicated Volatile Organic Compound (VOC) levels of 2.5 ppm at the tank opening and 2.4 ppm in the local breathing zone. [EM-ID--ITG-AMWTF-2014-0011]

Notable Accomplishments: ITG Names Dave Richardson as Acting President and Project Manager at AMWTP

Idaho Treatment Group, LLC (ITG) announced that Dave Richardson will be succeeding Danny Nichols as its President and Project Manager, in an acting role. ITG manages operations of the Department of Energy's (DOE) Advanced Mixed Waste Treatment Project, located on the Department's Idaho site.

The change was created by Mr. Nichols' decision to accept a position in Tennessee, in order to return to his home. Mr. Richardson is extremely familiar with the Idaho site, as he also served as the Associate Laboratory Director for Nuclear Operations for Battelle Energy Alliance.

A Naval officer with more than 20 years in that service, Mr. Richardson held several senior management positions within the DOE Complex. Most recently, he served as President and General Manager of B&W Y-12.

“Dave brings extensive experience in nuclear facility operations to AMWTP,” said Chuck Spencer, President of Babcock & Wilcox Technical Services Group. “With his familiarity of the Idaho site and his solid reputation throughout the DOE complex, he is ideally suited for this temporary assignment.”

“I'm excited about leading such an outstanding workforce at the Department's premier waste treatment facility,” Mr. Richardson said. “Idaho has been my home for the past 15 years so it's great to lead such an important project in an area where I have so many friends.”

Idaho Cleanup Project (ICP)

August 5: A small fire was observed inside a hot cell at the Idaho Nuclear Technology Center. At the time of the fire, operators were using a grinding wheel to size-reduce drum rings. The crew noticed the fire on a small piece of terry cloth approximately 2-inch square, which they extinguished using a remote manipulator. The Idaho National Laboratory Fire Department responded and confirmed the fire was out. There were no personnel injuries, contamination, or equipment damage. [EM-ID--CWI-ICPWM-2014-0003]

August 8: A safety-significant denitration mineralization reformer steam feed valve was declared inoperable during process startup activities at the Integrated Waste Treatment Unit (IWTU). The valve did not respond to a command to close. IWTU entered a Limiting Condition for Operation and appropriate notifications were made. This event prompted an engineering evaluation of the DMR steam feed valve. [EM-ID--CWI-IWTU-2014-0008]

June 20: Integrated Waste Treatment Unit (IWTU) operations personnel determined that the fluidizing steam flow indicator had been providing an inaccurate flow indication during the transition from nitrogen fluidizing gas to steam fluidizing gas. The denitration mineralization reformer (DMR) steam feed valve was declared inoperable and IWTU entered a Limiting Condition for Operation. The facility was placed in a stable condition and appropriate notifications were made. [EM-ID--CWI-IWTU-2014-0009]

July 5: While operating the IWTU maintenance ridge crane, a spreader bar contacted the bridge rails, resulting in damage to the spreader bar. The spreader bar had not been rotated correctly to fit between the bridge crane rails. The crane was placed in a safe configuration and notifications were made. [EM-ID--CWI-IWTU-2014-0010]

August 22: The nuclear facility manager at the Integrated Waste Treatment Unit (IWTU) declared a noncompliance of specific administrative control (SAC) when it was determined that the waste feed pump had operated during the same time frame that access had been permitted to the pipe chase in which the pump is located. The SAC requires the waste feed pump to be shut off and locked and tagged prior to access to the pipe chase being granted. [EM-ID--CWI-IWTU-2014-0011]

August 30: A flow element located on the Integrated Waste Treatment Unit (IWTU) waste feed tank recirculation line was noted as being installed in an incorrect orientation during a maintenance activity. IWTU has not processed any radiological material. There were no personnel injuries or releases to the environment from this discovery. [EM-ID--CWI-IWTU-2014-0012]

Notable Accomplishments: Passageway allows safe re-use costly heavy equipment for multiple radioactive and hazardous waste cleanup projects

A simple yet innovative idea has allowed the re-use of contaminated heavy equipment at a cost savings to the taxpayers of millions of dollars.

Construction crews at the Accelerated Retrieval Project recently completed a fully enclosed, above-ground fabric tunnel nearly 600 hundred feet long to transport machinery and equipment

to a facility where radioactive and hazardous wastes buried since the 1960s are being exhumed and repackaged.

The tunnel, which cost about \$200,000 for material and labor, allowed crews to safely move specially designed, already-contaminated heavy equipment from one buried waste retrieval enclosure to another.

The cost savings of using existing equipment versus having to dispose of the contaminated machinery and buy and modify new equipment for another waste retrieval enclosure exceeds \$3 million. Without the tunnel, the contaminated equipment could not be transported from one building to another because of environmental and worker-protection concerns. Decontaminating the equipment would have been problematic – if not impossible – due to the secondary waste that would be. Additionally, the time necessary to attempt to decontaminate the equipment would subject workers to prolonged exposure to contaminants.

“This is another example of how our employees have come up with innovative solutions to technical challenges, while saving the Department of Energy a significant amount of taxpayer dollars,” said CWI Vice President Hoss Brown.

Idaho National Laboratory (INL)

August 6: A Battelle Energy Alliance shift supervisor at the Analytical Laboratory discovered that a Lock-Out/Tag-Out (LO/TO) that had been developed for a repetitive research activity did not include the proper tags for the work that had been performed. [NE-ID--BEA-AL-2014-0003]

August 12: Battelle Energy Alliance Life Safety Services (LSS) personnel and the INL Fire Department identified a lack of compensatory measures related to alarm response in adjacent buildings at the Materials and Fuels Complex while preventative maintenance processes are being performed. [NE-ID--BEA-MFC-2014-0004]

August 13: It was discovered that proper LO/TO procedures were not implemented at the Advanced Test Reactor Complex during a minor maintenance activity that had been completed on July 24. Management was notified. NE-[ID--BEA-ATR-2014-0021]

August 30: A manual reactor scram was performed at the Advanced Test Reactor when operating personnel identified an elevated leak rate. The initial leak investigation, performed with the experiment loop at temperature and pressure, determined that the leak was likely caused by pressurizer vent valves leaking by the seats of the valves. The manual scram was performed as a precautionary action prior to reaching the abnormal procedure mandated scram action point. [NE-ID--BEA-ATR-2014-0024]

September 8: A Battelle Energy Alliance operator received a minor shock while working at the Materials and Fuels Complex. The operator receiving the shock notified their immediate supervisor and was immediately escorted to medical. The shock did not result in injury to the operator. The operator was evaluated and returned to work without restrictions. It was determined that the shock came from a broken ground wire inside of a stop box. [NE-ID--BEA-FCF-2014-0001]

September 15: An Advanced Test Reactor Technical Safety Requirement was not met, when a Process Operator noticed water coming from a pipe that connected to the Process restroom.

Inspection of the restroom drain pipe hole showed that the pipe hole was above the drain pipe P-trap and resulted in a leak from confinement. At the time of discovery the ATR was in outage and defueled and confinement was not required. A Work Request was issued for investigation and repair of the drain pipe. [NE-ID--BEA-ATR-2014-0025]

September 16: During the performance of weekly radiological surveys at the Analytical Laboratory, three smears showed Plutonium-238 alpha contamination. The source of contamination was determined to be a Pu-238 standard. The affected areas were isolated and all personnel surveyed out. Air monitoring was established, and employees who were in the affected area have undergone assessments for exposure through the bioassay program. [NE-ID--BEA-AL-2014-0004]

September 18: A two to three minute loss of all telephone and fire alarm systems occurred at Test Area North when the system unexpectedly entered reset mode. All communications were restored once the system reset. The cause of the unexpected reset is under investigation. [NE-ID--BEA-SMC-2014-0002]

Notable Accomplishments: Two Idaho researchers honored for work related to nuclear fuel cycle

Troy Unruh and Cathy Riddle of Idaho National Laboratory were both prize winners in the Department of Energy 2014 Innovations in Fuel Cycle Research Awards Program.

These awards are given annually to graduate and undergraduate students who have completed significant research in nuclear science or engineering.

Unruh, who is currently pursuing his Ph.D. in nuclear engineering from the Idaho State University, won second place in the Advanced Fuels Category. His winning paper, entitled "In-core Flux Sensor Evaluations at the ATR Critical Facility," is part of a joint INL-ISU-French Atomic Energy Commission project. The paper documents results from tests of a new capability that Unruh helped to establish that measures neutron flux in a nuclear reactor.

Unruh has worked at INL since 2008 as an engineer in the High Temperature Test Laboratory. His research efforts center on the development of various in-reactor detection systems, which give detailed information on the performance of fuel and material samples within a nuclear materials testing reactor.

Riddle, who received her Ph.D. in radiochemistry from the University of Nevada, Las Vegas, in May, won first place in the "Competition for Students Who Attend Universities with less than \$600 Million in 2012 R&D Expenditures." Her winning paper was entitled "Characterization of Bismuthate Oxidized Americium (V, VI) in Acidic Solution using X-ray Absorption Fine Structure Spectroscopy" and formed one of three research chapters in her dissertation.

Riddle has worked for 15 years in the Aqueous Separations and Radiochemistry Group at INL. Her research focuses on finding a better way to separate americium from the lanthanides, a process that could factor into possible recycling methods for used nuclear fuel. She is an active member of the American Nuclear Society, and since July 1, she has been chair of the Idaho Section of the organization.