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DOE-ID Operations Summary
For the Period September 30, 2014 through November 1, 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.*

* Due to recent interest and feedback the Department has received from various public stakeholders information about the October 23, 2014 ventilation upset event at the New Waste Calcining Facility is being included as a courtesy. Although this event did not meet any technical reporting criteria for the Occurrence Reporting and Processing System, it was of significant management concern. We are taking action within the Idaho Operations Office and with the INL Site contractors to ensure that events of similar significance will be reported and communicated appropriately.

Advanced Mixed Waste Treatment Project (AMWTP)

October 19: Idaho Treatment Group operations technicians were moving fiberglass reinforced plywood boxes that were suspected to be damaged in order to re-wrap/repair them. After movement of one of the boxes, surveys by the Radiological Control Technician supporting the activity detected radioactive contamination on one of the boxes and the floor where two of the boxes had been stored. Operations were suspended, the contaminated areas were covered to reduce potential spread of contamination, and a boundary was established around the area. No personnel or equipment were contaminated, and the area containing the remaining plastic wrapped FRP boxes was posted as a Contamination Area. [EM-ID--ITG-AMWTF-2014-0012]

October 22: An Idaho Treatment Group employee working at the Advanced Mixed Waste Treatment Project (AMWTP) slipped and fell on a slick walking surface, resulting in an injury to the right knee. The individual was transported to Idaho Falls for evaluation, and it was determined that there was significant injury to the right knee requiring surgical repair. [EM-ID--ITG-AMWTF-2014-0013]

Notable Accomplishments: On Thursday, October 9, 2014, for the eighth consecutive year, AMWTP passed an audit by representatives from the Waste Isolation Pilot Plant, certifying AMWTP to continue shipping waste to that New Mexico facility. When work resumes at WIPP, AMWTP will be approved to validate and ship transuranic waste to that facility.

This annual exercise is required to maintain AMWTP's certification to ship transuranic waste to WIPP. The audit evaluates the adequacy, implementation, and effectiveness of the Quality Assurance Program and the technical processes related to the AMWTP transuranic waste characterization and certification activities.

Then, on Thursday, Oct. 30, 2014 an audit team from the Nevada National Security Site validated AMWTP's Mixed Low Level Waste-Low Level Waste program meeting the NNSS's Waste Acceptance Criteria.

It was the ninth consecutive year that the NNSS team had no findings, or observations after

evaluating the MLLW-LLW organization's documentation, processes, and procedures. Auditors were very complimentary of the personnel and the program.

Idaho Cleanup Project (ICP)

September 9: A small fire occurred in an excavator at the Accelerated Retrieval Project as a result of a significant hydraulic leak that had developed while performing excavation activities. The excavator was being moved to the service bay when EcoSafe fluid leaked from its boom onto the turbocharger and subsequently ignited. Workers evacuated from the facility. There were no injuries or significant damage to equipment, and no environmental damage. [EM-ID--CWI-RWMC-2014-0001]

September 18: The Integrated Waste Treatment Unit (IWTU) nuclear facility manager (NFM), identified that a positive unreviewed safety question existed due to a potential inadequacy in the current controls for process confinement area access. [EM-ID--CWI-IWTU-2014-0013]

September 30: Idaho Site contractor, CH2M-WG Idaho (CWI) received from the State of Idaho Department of Environmental Quality (DEQ) a Notice of Violation for five alleged violations at the Radioactive Waste Management Complex. These violations came from an Idaho Hazardous Waste Management Act/Resource Conservation and Recovery Act inspection which DEQ performed in the spring of 2014. [EM-ID--CWI-INLPROGM-2014-0001]

October 1: Idaho Site contractor, CH2M-WG Idaho (CWI) received notification from a sub-contractor that an unqualified weld procedure had been performed on a waste feed nozzle at the Integrated Waste Treatment Unit (IWTU). IWTU has not processed any radiological material. There were no personnel injuries or releases to the environment from this discovery. [EM-ID-CWI-IWTU-2014-0014]

October 9: A potential inadequacy was identified in safety documentation related to a waste feed pump contactor proof test interval at the Integrated Waste Treatment Unit. IWTU was verified to be in Shutdown Mode and appropriate personnel were notified. [EM-ID--CWI-IWTU-2014-0015]

October 9: A piece of equipment weighing nearly 1,100 lbs. fell off of wheeled jack stands at the Integrated Waste Treatment Unit (IWTU). The equipment was being transported at the time; the equipment fall did not result in any injury to personnel. [EM-ID--CWI-IWTU-2014-0016]

* October 23: CH2M-WG Idaho, LLC (CWI) personnel were performing routine remote-handled transuranic waste (RH-TRU) repackaging activities in a decontamination cell at the New Waste Calcining Facility (NWCF), when a ventilation upset occurred while the cell hatch cover was being moved to allow for the removal of a waste container from the cell. The ventilation upset caused pressure in the cell to momentarily exceed hallway pressure, resulting in the spread of radioactive contamination outside the cell and into a radiologically controlled area adjacent immediately adjacent to the cell. NWCF hot cells are normally supplied with sufficient ventilation flow to maintain a vacuum within the cell with respect to the hallways adjacent to the cell to prevent the spread of contamination. The adjacent hallways are radiologically controlled to account for the possibility of events like this. Facility operators and CWI personnel immediately responded to the abnormal condition as trained, by replacing the cell hatch cover, evacuating the areas immediately adjacent to the cell, and restoring proper ventilation system

flows. The event was determined to be inadequate preparation of the ventilation system by personnel prior to the cell hatch cover removal, and two ventilation system anomalies including a faulty pressure sensor and improper damper position. The contractor immediately stabilized the affected areas and conducted radiation and contamination surveys, and the event was thoroughly investigated. Corrective actions included correction of the ventilation system, decontamination of the areas within the affected portions of the facility, development of lessons learned, implementation a number of corrective actions to prevent event recurrence, and thorough training of affected personnel on the event lessons learned. Normal RH-TRU repackaging activities in the affected portion of the facility resumed in December 2014.

October 27: A failed mechanical seal on an exhaust blower was discovered while personnel were performing maintenance activities at the Integrated Waste Treatment Unit (IWTU). [EM-ID--CWI-IWTU-2014-0017]

October 30: Control room personnel were notified that a rupture disk had ruptured at the Integrated Waste Treatment Unit (IWTU), via the facility's alarm notification system. Operations personnel were performing the last stages of maintenance outage activities when the rupture occurred. It was determined the rupture resulted from a valve misalignment. The valve misalignment was corrected and the rupture disk was replaced. [EM-ID--CWI-IWTU-2014-0018]

Notable Accomplishments: Information not provided

Idaho National Laboratory (INL)

September 30: During an inspection of underground fuel storage tanks at the Central Facilities Area, the Idaho Department of Environmental Quality (IDEQ) identified several inadequacies related to non-functional status lights. The status lights have been repaired. The tanks do not contain radiological material. [NE-ID--BEA-CFA-2014-0003]

September 30: Idaho Site contractor, Battelle Energy Alliance (BEA) received a Notice of Violation from the Idaho Department of Environmental Quality for failing to provide notice to the Department of Environmental Quality (DEQ) Director of planned changes to a permitted facility for storage of Resource Conservation and Recovery Act (RCRA) waste located at the Materials and Fuels Complex, and failure to submit a permit modification. No RCRA waste is currently being stored there. On October 22, BEA participated in a compliance conference as a result of the Notice of Violation from the Idaho Department of Environmental Quality. BEA negotiated terms for a consent order which included payment of a donation to a Supplemental Environmental Project; the final consent order is pending. No RCRA waste is currently being stored there. [NE-ID--BEA-TSD-2014-0001]

October 7: Three Advanced Test Reactor Complex non-emergency stationary Reciprocating Internal Combustion Engines (RICE) generators were operated 15 times in the fourth quarter of FY-14. The three generators do not meet current emission standards for hazardous air pollutants, and are operated under a Voluntary Consent Order (VCO). In accordance with the VCO, the generators may be operated only for emergency purposes after April 30, 2015. The commercial power based uninterruptible power supply (UPS) will replace the non-emergency use of these generators. [NE-ID--BEA-ATR-2014-0027]

October 7: A Battelle Energy Alliance shift supervisor determined that repairs performed on an exhaust damper located at the Materials and Fuels Complex had been performed on the incorrect damper. It was noted that the lockout/tagout procedure used for the repair was not specific to the damper repair but had been previously approved for work on the system's exhaust fan. It was determined that the non-specific LO/TO may have contributed to the confusion. Hazardous energy was not present, and there were no personnel injuries or releases to the environment from this discovery. [NE-ID--BEA-MFC-2014-0005]

October 7: A Department of Energy (DOE) Facility Representative (FR) noted that the hasp for a Lockout/Tagout (LO/TO) lock-box located at the Advanced Test Reactor Complex was not properly fastened. Work under the control of the LO/TO was not in progress, and all required keys were verified present in the lock-box. All isolation components remained locked in the required position and no personnel were exposed to any hazardous energy source. [NE-ID--BEA-ATR-2014-0028]

October 13: Unexpected low levels of transuranic contamination were detected on facility air monitor filters at the Fuels Manufacturing Facility at the Materials and Fuels Complex. The Continuous Air Monitors located in the affected area had not alarmed, and no detectable contamination was found on personnel, personal protective equipment, or equipment as determined by surveys, direct scans, and large area wipes. The area has been posted as an airborne radiation area, and the source of the contamination is being investigated. [NE-ID--BEA-FMF-2014-0001]

October 13: While performing operations at the Hot Fuel Examination Facility, a component of the Safety Significant Confinement Boundary for the main cell was placed out of service when it was inadvertently opened too far and was lifted out of the door pivot mounts. All operations in the cell were suspended, and the main cell has been placed out of service until the component can be repaired. [NE-ID--BEA-HFEF-2014-0003]

October 13: A Battelle Energy Alliance subcontractor working at the Materials and Fuels Complex penetrated a conduit while core drilling through a wall. The penetration exposed two electrical conductors without insulation damage. Core drilling activities were stopped, and conduct of operation processes related to this type of work is currently under review. [NE-ID-BEA-HFEF-2014-0004]

October 14: Battelle Energy Alliance personnel were programming/testing the newly installed electrical upgrade equipment at the Central Facilities Area when a relay switch malfunctioned short circuiting the associated relays causing a piece of the equipment to become displaced. Personnel in the vicinity were wearing the required personal protective equipment. No injuries occurred due to the event. A stop work was initiated, the equipment was placed in a safe configuration, and the equipment failure is under investigation. [NE-ID--BEA-CFA-2014-0004]

October 21: Reactor operators inserted a manual reactor SCRAM when they detected an anomaly while performing pre-startup testing at Advanced Test Reactor Critical (ATRC). The ATRC was not in reactor operation at the time of this event. Pre-startup testing activities were terminated and the ATRC reactor was placed in a safe, shutdown condition. [NE-ID--BEA-ATR-2014-0029]

October 25: A hot cell window at the Materials and Fuels was cracked during an oil drain/fill operation. The window was subsequently drained to prevent the possibility of the glass from

breaking out of the window and releasing the oil into the operating corridor. There were no personnel injuries or releases to the environment from this event. [NE-ID--BEA-HFEF-2014-0005]

Notable Accomplishments: INL's LEED Platinum research laboratory wins national award

Idaho National Laboratory's newest research facility was selected as the Best Green Project in the nation for 2014 by the flagship construction magazine Engineering News-Record. The Energy Innovation Laboratory was chosen as the national winner for exceptional sustainable design and construction among the 10 top regional best green projects in ENR Magazine's annual competition.

The gateway to INL's Research and Education Campus in Idaho Falls, EIL has now received regional, national and international acclaim for sustainable design and construction. As a U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) Platinum facility, the EIL consolidates research and development to enable innovative solutions for national energy challenges, advanced clean energy and related environmental projects.

"The outstanding success of this project is due to the expertise of the project team led by Reed Miller of Ormond Builders and Kath Williams, the LEED coordinator," said Todd Allen, INL Science and Technology deputy lab director. "The team's collaboration with INL's Project Management Office, Supply Chain Management and Campus Development Office produced a nationally recognized facility."

In its "Best of the Best" announcement, ENR Magazine noted that the selection of the best projects nationwide was "the culmination of a seven-month effort put forth by dozens of industry judges and the ENR editorial team to identify the pinnacle of design and construction achievement in the U.S. among projects completed between June 2013 and June 2014." ENR's competition involved 700 projects designed and constructed in the U.S.

"Once the regional winners were chosen, the top winners in each category from each region moved up to the national competition," the magazine noted. "A brand new set of judges from across the country and from all walks of the industry examined each project in an effort to distinguish the best from the best in terms of teamwork, safety, overcoming challenges, innovation and quality."

Completed in late 2013, the 148,000-square-foot EIL has earned the U.S. Green Building Council's LEED Platinum certification. Worldwide, fewer than 5 percent of research labs in the LEED registry are Platinum-certified. The ENR Best Green Project national award honors the efforts of many individuals and organizations – including Ormond Builders, Inc., Plan One/Architects, Engineering System Solutions, INL as the tenant plus other firms – over the course of several years.

"Every person on that team participated – made corrections as necessary – and was committed, and trusted each other to build this modern, efficient research space for INL's missions," said Randy Bargelt, INL Project Management Office director.

The entire project team – from architects to project managers to hundreds of workers who built the EIL – overcame challenges and difficulties to construct the research facility to the highest

international green standards, said John Baker, INL Project Management Office director of planning, estimating and scheduling. “In the design and construction arena, this is a huge honor,” Baker said, “and we are humbled to be chosen from among outstanding projects throughout America.”