



News Release

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ECBC transitions new WMD elimination technology to JPEO-CBD *Demonstration draws DoD stakeholders to Edgewood Area of APG*

ABERDEEN PROVING GROUND, Md. – The U.S. Army Edgewood Chemical Biological Center (ECBC), in partnership with the Defense Threat Reduction Agency (DTRA), signed a technology transfer agreement with the Joint Program Executive Office-Chemical Biological Defense (JPEO-CBD) on June 27. The official transition took place upon completion of the demonstration of a new transportable, high throughput neutralization system: the Field Deployable Hydrolysis System (FDHS).

The FDHS would help further the mission of chemical agent disposal operations and is designed to be deployed worldwide, with operational capability anywhere in the world within 10 days of going mobile. The FDHS is designed to change chemical warfare materiel into compounds not useable as weapons. It has the capability to neutralize bulk amounts of known chemical warfare agents and their precursors through chemical reactions involving reagents such as water, sodium hydroxide and sodium hypochlorite.

The FDHS uses mixing and heating to facilitate chemical reactions and optimize throughput with a destruction efficiency of 99.9 percent.

“It has been six months to the day since we first conceptualized the design of the FDHS, and now we have a functional working model,” said Tim Blades, director of operations for ECBC’s CBARR Business Unit. “The funding from DTRA got us started and with the technical efforts of more than 50 ECBC employees that accounted for 13,000 hours of work, we have now transitioned the project from science and technology to advanced development with the transfer to JPEO-CBD.”

Department of Defense (DoD) stakeholders across numerous organizations attended the demonstration, which included an information session about the technology and a walk-through of the simulated project site, including support equipment, mobile laboratory and personnel decontamination station. Resident subject matter experts (SMEs) engaged with stakeholders during the tour and answered questions regarding the components, design, functionality and overview of the entire system. ECBC, DTRA, JPEO-CBD, the U.S. Army Chemical Materials Activity (CMA) and the U.S. Army Contracting Command are responsible for the design, procurement, fabrication, testing and training of the FDHS.

“The team that worked on this project has delivered a beginning-to-end solution for a complex problem,” said Blades. “Every organization came together and brought their expertise to the table. It’s been a team effort from the start, and it’s nice to see it transition for further development.”

ECBC’s rapid prototyping capabilities and field operational experience were vital to the design and functionality of the FDHS. Engineers and technicians discussed various design plans and blueprints, and screened and analyzed more than 40 technologies throughout the process. This technical expertise was combined with CMA’s experience in building and operating chemical agent neutralization facilities like those located at Aberdeen Proving Ground and Newport Chemical Depot in Indiana, and Pine Bluff Arsenal in Arkansas. Those facilities have safely and successfully completed their chemical agent disposal missions.

Once onsite, a crew of 15 personnel is needed each shift for 24/7 operational capability. The full FDHS site includes power generators and a laboratory that is fully capable out of the box, needing only consumable materials such as water, reagents and fuel to operate. The FDHS is also equipped with redundant critical systems that ensure maximum reliability. Throughput varies from five to 25 metric tons per day, depending on the material being treated. To increase throughput rates, multiple units can be co-located onsite, which also enables the sharing of security and other assets.

Photo Caption: Tim Blades, CBARR director of operations, addresses the audience at the June 27 demonstration of the FDHS at the Edgewood Area of APG.



For more information about ECBC, visit <http://www.ecbc.army.mil/>.

ECBC is the Army’s principal research and development center for chemical and biological defense technology, engineering and field operations. ECBC has achieved major technological advances for the warfighter and for our national defense, with a long and distinguished history of providing the Armed Forces with quality systems and outstanding customer service. ECBC is a U.S. Army Research, Development and Engineering Command laboratory located at the Edgewood Area of Aberdeen Proving Ground, Maryland. For more information about the Edgewood Chemical Biological Center, please visit our website at <http://www.ecbc.army.mil> or call (410) 436-7118.

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