



News Release

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Field Operations and Laboratory Analysis Support OPCW Mission *2013 Nobel Peace Prize winner serves as standard for chemical demilitarization efforts*

ABERDEEN PROVING GROUND, Md. – The U.S. Army Edgewood Chemical Biological Center (ECBC) has long supported the non-proliferation of chemical weapons and the demilitarization of their stockpiles and destruction facilities. These two areas reflect the mission of the Organisation for the Prohibition of Chemical Weapons (OPCW), which will be awarded the 2013 Nobel Peace Prize Dec. 10 “for its extensive efforts to eliminate chemical weapons.”

One of ECBC’s core competencies is chemical demilitarization field operations. Nearly a year ago, the U.S. Department of Defense (DoD) identified a capability gap in chemical agent disposal operations and sought a solution that would meet mission critical needs by the following summer. ECBC had only six months to produce an operational model of a new transportable elimination technology that could neutralize chemical warfare materiel: the Field Deployable Hydrolysis System (FDHS). Through unprecedented collaborative efforts across multiple government organizations, ECBC led the FDHS effort through full lifecycle development, from design and fabrication to engineering and test evaluation of the system. As a result, the FDHS can neutralize bulk amounts of known chemical warfare agents and their precursors at a 99.9 percent destruction efficiency rate, converting chemical warfare materiel into compounds not usable as weapons.

“The most difficult aspect of designing a system in such a short time period was the need to concurrently perform tasks that would normally be performed sequentially,” said Adam Baker, ECBC chemical engineer. “Equipment was already being procured while reaction chemistry and skid design were still being finalized. To overcome this challenge, ECBC and the Joint Program Executive Office for Chemical and Biological Defense’s Joint Project Manager for Elimination (JPM-E) incorporated proven technology to the greatest extent possible, which helped keep late design changes to a minimum.”

On June 27, 2013, ECBC and DTRA signed a technology transfer agreement with JPEO-CBD. The transition signified advanced development and future integration into the Chemical Biological Defense Program Portfolio

In addition to the FDHS elimination technology, the ECBC’s Chemical Transfer Facility

(CTF) also supports the U.S. chemical agent disposal program where bench scale analysis and large volume neutralization experiments are conducted. The CTF serves as the single repository for the Army's research and development stock of toxic chemical agents. It was designated as the only U.S. declared Single Small Scale Facility (SSSF) under the OPCW's Chemical Weapons Convention (CWC), and is the only U.S. declared Chemical Weapons Storage Facility and Chemical Weapons Destruction Facility. Chemical agents stored at the CTF are used to conduct defensive research and development for the DOD, whose research is imperative to maintaining an effective defense posture against the new world chemical threat.

A second ECBC facility, the Forensic Analytical Laboratory also supports the OPCW. In 2013, the lab received an "A" grade in the latest international proficiency test (33rd OPCW IPT) administered by the OPCW.

"Conducting tests like these are critical for ECBC and for the nation," said Stan Ostazeski, Ph.D., Forensic Analytical Center Chief. "It brings sponsors with analytical needs to ECBC, and our "A"-grade offers confidence that we can successfully perform. Information like this is essential to our nation's security."

ECBC is one of two OPCW-designated laboratories in the United States; the other is at Lawrence Livermore National Laboratory in California. Of the 12 labs worldwide that participated in the proficiency test, only two received an "A," and two laboratories received a "B," the minimum grade required for a laboratory to maintain its status as an OPCW-designated laboratory. There are currently 21 OPCW-designated laboratories worldwide that specialize in the analysis of samples for chemical warfare agents, byproducts, precursors and other compounds of interest. These laboratories must adhere to strict administrative guidelines, maintain accreditation by an internationally recognized organization and successfully complete an annual international proficiency test in order to maintain their status as an OPCW-designated lab.

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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