



# News Release

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## ECBC Opens New Chemical and Biological Detection Test Facility

**Aberdeen Proving Ground, MD** — Edgewood Chemical Biological Center (ECBC) marked the opening of its new chemical and biological detector evaluation facility yesterday with a ribbon-cutting ceremony, attended by approximately 40 Department of Defense leaders and employees.

This detector evaluation facility, called the “Vortex Chamber,” creates a cloud that safely simulates a chemical or biological threat cloud. This new facility allows scientists to evaluate novel “standoff” detector systems capable of detecting threat clouds several kilometers away. The 20-foot diameter simulated threat cloud is held in suspension by a vortex created within the chamber and contained by a pair of aerodynamic windows.

The aerodynamic windows are truly novel features of this facility, which make this chamber completely invisible to the system under test. From the perspective of the chemical or biological detector the cloud appears to be suspended in mid air. This chamber also allows controlled and accurate measurement of the cloud characteristics, such as concentration and particle size distribution. For the first time ever, precise standoff detector performance measurements under true east coast environmental conditions can be achieved at significant distances. This increased precision reduces uncertainty about the potential field performance of standoff detectors.



The chamber was designed for testing with a variety of materials that simulate the optical characteristics of chemical and biological warfare agents. In addition, selected toxic industrial chemicals as well as many common materials that may interfere with the detection of the agents, such as smoke, pollen, and diesel exhaust, can be tested. The chamber can be used with materials in both vapor and aerosol form. It is the only one of its kind in the country and was constructed by Raytheon, El Segundo, CA,

“The ability to rapidly and accurately detect chemical and biological warfare material is fundamental to our nation’s defense,” said Mr. Jim Zarzycki, ECBC Director. “The new Vortex Chamber will allow us to develop, evaluate, and characterize new advanced technologies for

standoff biological detection and very quickly put this technology in the hands of our warfighters and civilian responders.”

ECBC’s campus includes over one million square feet of laboratory, chamber and engineering space and is worth an estimated \$1 Billion. The \$2 Million Vortex Chamber is one of more than 200 buildings spread across the Edgewood peninsula operated by ECBC, many of which are unique in their ability to handle chemical, biological and radiological materials as well as mixed or unknown toxic substances.

“The value of this new facility is in the improvement of detection technology products developed by ECBC as a result of our ability to conduct high fidelity testing,” said Ms. Cindy Swim, Senior Team Lead for Detection at ECBC. “This is an exciting new milestone for detection technology.”

**Photos of the Vortex Chamber and the event are located at <http://www.ecbc.army.mil/pr/pr.htm>.**

*ECBC is the Army’s principal research and development center for chemical and biological defense technology, engineering and services. ECBC has achieved major technological advances for national defense, civilian needs and industrial competitiveness, with a long and distinguished history of providing the Armed Forces with quality systems and outstanding customer service. ECBC is a US Army Research and Development Command laboratory located at the Edgewood Area of Aberdeen Proving Ground, Maryland. For more information about the Edgewood Chemical Biological Center, please visit our Web site at <http://www.ecbc.army.mil> or call (410) 436-3610.*

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