

## Infrastructure

Several years ago, ECBC set out to transform its research and engineering infrastructure into a state-of-the-art chemical and biological defense research campus. This was necessary so that ECBC could continue to fulfill its urgent and expanding national mission. In 2005, ECBC made enormous progress toward meeting this goal with construction of new facilities as well as renovations of existing buildings.

In 2005, ECBC opened its new Advanced Chemistry Laboratory, a 75,000-square foot facility designed for working with surety compounds. Highly instrumented and adaptable, primary facilities within the laboratory include advanced toxic agent laboratories, environmental chambers and secure work spaces for classified materials.

Chemical agent operations conducted in this building will be analytical chemistry, Chemical Weapons Convention treaty support, filtration and decontamination technology development and evaluation of chemical agent detectors. A central feature of the lab is the Nuclear Magnetic Resonance suites, where scientists will study the properties and effects of chemical threat materials.

On October 5, 2005, ECBC held a ceremony dedicating the building to Dr. Edward Poziomek, a former ECBC director of research. The ceremony was attended by many elected officials, Department of Defense officials, media, ECBC employees and the Poziomek family. Visitors and media representatives were toured through the facility.



Also in October, ECBC broke ground on its newest facility—the Chemical Biological Radiological Sample Receipt Facility. This facility will serve as the only full-range national resource to receive, triage, sample and screen “unknowns” coming from military theaters of operation, intelligence organizations and law enforcement agencies. The new facility will allow disassembly and evidentiary exploitation of improvised terrorist devices and munitions, including explosively configured munitions. It will also expand ECBC’s current capabilities to include use of robotics, gamma irradiation and non-intrusive detection. Technicians will also be able to conduct remote intrusive sample processing of explosive munitions, high-throughput sample bar coding and preprocessing including a solid chain of custody system and agent neutralization and detoxification. The facility also includes a containment capability for biologicals/toxins. The new 30,000 square-foot facility is scheduled for completion in 2007.

In last year’s Annual Report we described the Standoff Detection Evaluation Technology Facility, a prototype facility constructed to allow precise performance measurement of standoff detection systems. The main feature of this facility is a Vortex Chamber, which utilizes a curtain of air to contain a homogenous material cloud allowing scientists to release and maintain a calibrated material scatter so that a stand-off detection system positioned up to several kilometers away can be accurately evaluated under true environmental conditions. In 2005, we began construction on a permanent facility to house the Vortex Chamber and completed the exterior of the new building. This new facility is scheduled to be completed in 2006 and operational in 2007.

ECBC is actively engaged in understanding emerging and new threat agents and has been developing a unique infrastructure for testing and evaluating equipment against these threats. In 2005, the design for the Next Generation Aerosol Chamber was finalized. This facility is currently under construction and expected to be completed by the end of 2006 and operational in 2008. This new facility is a critical component of ECBC’s ability to protect and defend the warfighter and the nation against emerging chemical and biological threats.

In 2005, ECBC also improved its existing facilities and added additional laboratory capacity by converting administrative space to laboratories. Toxicologists, microbiologists, chemists and filtration specialists will all see improvements to their specialized laboratory workspaces in order to accommodate a growing workforce and expanding customer base.

New construction, renovation and continued maintenance and upgrade of ECBC’s infrastructure are critical to our country’s ability to address the chemical and biological threat. In 2005, ECBC achieved major milestones in this area.

