

The U.S. Army Combat Capabilities Development Command (DEVCOM) leads in the discovery, development and delivery of technology-based capabilities to enable Soldiers to win our nation's wars and come home safely. DEVCOM is a major subordinate command of the U.S. Army Futures Command. The DEVCOM Chemical Biological Center is the Army's principal research and development center for chemical and biological defense technology, engineering and field operations. The DEVCOM Chemical Biological Center is headquartered at Aberdeen Proving Ground, Maryland.

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Army Engineers Provide Obscurant Expertise to Marine Corps

By Jerilyn Coleman



Vehicle-launched smoke grenades create an overhead smokescreen while various instruments gather data on the effectiveness of the smoke against visible and infrared observation. The DEVCOM CBC was part of a VIP demonstration held for Marine Corps officials seeking ways to protect vehicles from overhead attack.

Aberdeen Proving Ground, MD – Engineers at the U.S. Army's Combat Capabilities Development Command Chemical Biological Center (DEVCOM CBC) used their expertise in obscurant technologies to assist the U.S. Marine Corps in the mission to test obscurants to see how well they can protect against overhead attack.

The Marine Corps Warfighting Laboratory approached CBC with one question: Is there a light-weight, low-cost way to protect a vehicle from overhead attack? The Center's Smoke and Target

Defeat Branch took on the task and led a development effort called the Advanced Obscurants Top Attack (AOTA). The VIP demonstration day took place at M-Field on Aberdeen Proving Ground where Marine Corps personnel visited to observe how well the obscurants worked. During the demonstration, Center experts placed vehicle-launched smoke grenades on top of a surrogate platform and oriented them to provide the best possible overhead coverage. According to Center mechanical engineer John D'Agostino, CBC measured the performance by using a variety of equipment, including unmanned aerial vehicles (UAVs). The UAVs provided imagery looking down through the cloud of smoke and collected data that will be used to evaluate the effectiveness of different types of grenades within different spectra, including visible and infrared light.

Demonstrations such as this one help Center engineers show customers, senior



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leadership and developers what capabilities can be developed to meet their needs. "It shows that our obscurant capabilities are realizable, feasible and that they work. The assessment and detailed testing is going to help us inform requirements and bring these capabilities to fruition," said D'Agostino.

Moving forward, the Center's Smoke and Target Defeat team will document their findings from the demonstration and recommend a path forward for further research and development. "We have the expertise, the technology and access to the range which is a unique capability," D'Agostino said. "We also have the instrumentation which gives us the capability to measure results. We can measure the performance of various technologies in a fair way and deliver results and recommendations to the customer."

Capabilities such as the AOTA support emerging Marine Corps requirements for survivability against attack by long-range precision fires, as described by the Commandant of the Marine Corps in his vision for Force Design 2030. The Marine Corps Warfighting Laboratory often partners with other service development organizations, such as DEVCOM CBC, with expertise in land, sea and air domains. As the Army's science and technology experts for obscurants, the Center's goal is to make projects like the AOTA demonstration as effective as possible to ultimately provide the warfighter advanced protection against modern threats.

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