

THE NEXT GENERATION ADVANCED BOMB SUIT: THE FUTURE OF SOLDIER PROTECTION

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Fort Belvoir, VA — Explosive Ordnance Disposal (EOD) Soldiers have one of the most life-threatening jobs in the military. They not only must be able to defend themselves in the battle space, but also protect themselves from the unpredictable environment that explosives create.

Program Executive Office (PEO) Soldier is addressing both of these concerns with the Next Generation Advanced Bomb Suit (NGABS), the latest development in Soldier protective equipment.

The NGABS increases Soldier readiness to respond to evolving threats by providing 360-degree ballistic protection and reducing weight burdens via its modular scalable design. The increased mobility and enhanced protection that these features offer can be tailored to various situations globally and support increased survivability of the force.



In accordance with Army Modernization efforts and the 2018 U.S. National Defense Strategy, the NGABS' innovative Modular Sensor Suite (MSS) incorporates visible, Low Light, and Long Wave infrared data and sensors with the ability to fuse them for display in the suit's Heads Up

Display (HUD). This pushes technology advancement in the C5ISR arena and delivers an increase in situational awareness that enhances mission capabilities.

"NGABS provides increased mobility and survivability through significant weight reduction from the ABS – a threshold reduction of 10% and an objective reduction of 40%," said Maj. Justin Bond, Assistant Product Manager, Soldier Protective Equipment (SPE), PEO Soldier, contrasting the NGABS with the older, legacy Advanced Bomb Suit (ABS).

SPE, a product team of PEO Soldier's Soldier Survivability (SSV) program office, has driven the development of the NGABS since its inception.

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PEO Soldier recently completed the first Human Factors Evaluation with the 52nd Ordnance Group at Fort Campbell, KY where Soldiers assessed the NGABS for two weeks. The first week focused on static assessments of the form, fit, and functionality of the bomb suit while the second week had test participants wear the NGABS during operationally relevant scenarios. The feedback provided by the Soldiers is helping to further refine the NGABS design.

"NGABS also offers the first ever ballistic protection against small arms threats," said Bond. "Typically, the bomb suit



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techs have to take off their body armor to put on the bomb suit helmet and vest. NGABS is built around the Modular Scalable Vest (MSV), Army hard armor plates, and the Integrated Head Protection System (IHPS), providing first ever ballistic vital-torso and head protection while executing an EOD bomb suit mission."

The legacy ABS systems provide no situational awareness during obscured and low light level operations. With NGABS, the MSS is fed to the newly-designed HUD inside the bomb suit's protective visor that Bond highlighted as one of the unique capabilities the NGABS provides.

"Current technicians have to rely on visible lights during night and reduced visibility operations, which only exposes them to a small arms threat against which they have no protection in legacy bomb suits," Bond said. "The ability to operate in reduced visibility through the use of the MSS being fed to the HUD gives a significant advantage to U.S.

EOD Forces. It means they can operate in reduced visibility without exposing themselves to observation or direct fire threats by turning on lights."

Bond also laid out the next steps in the acquisition process.

"The NGABS is scheduled for production in FY22," said Bond. "Because the NGABS incorporates the latest and greatest helmet, vest, battery, and sensors, the suit will see incremental updates as the Next Generation (NG) IHPS takes the place of the legacy IHPS and the conformable, wearable battery evolves along with sensor and HUD technology."

The NGABS provides Soldiers more protection than before, which will allow for a greater focus on the mission and increase Soldier survivability.\\