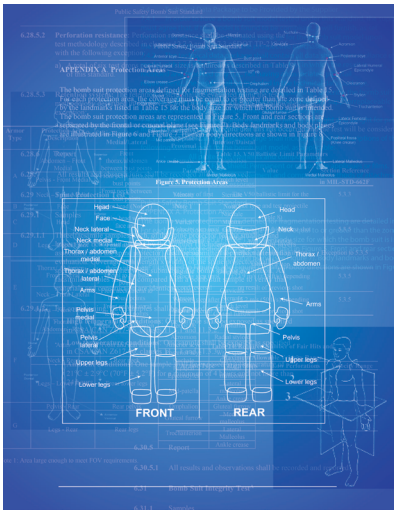
NIJ ISSUES A REVISED BOMB SUIT EQUIPMENT STANDARD

BY **BRIAN MONTGOMERY**

The revised standard provides updated test methods and requirements for the protective ensembles worn by public safety bomb technicians.



Public safety responders regularly use protective equipment in hazardous situations — for example, when they clear meth labs, mitigate bomb threats, or respond to other incidents that can lead to significant loss of life or property damage. Those who risk their lives and use the equipment and those who make decisions about buying it need to be sure it is going to work as intended. That is where equipment performance standards and conformity assessment programs come in.

NIJ standards define performance requirements for equipment and provide precise, detailed methods for testing to those requirements. Committees of scientists, engineers, compliance experts and relevant first responders develop the standards through a consensus process, and manufacturers and the public provide input through public comment opportunities. The responders who use the equipment know best how it needs to perform. The scientists and engineers match those performance needs with requirements and testing criteria. Manufacturers help identify unrealistic test methods and expectations about performance.

In March 2012, NIJ issued *Public Safety Bomb Suit NIJ Standard 0117.00,* the first performance standard for the specialized protective ensembles that public safety bomb technicians wear when they identify, disable and dispose of explosive devices and materials. In April 2016, NIJ issued a revised standard, *Public Safety Bomb Suit NIJ Standard 0117.01*.

There are many reasons to revise a standard: advances in technology, improved test methods, identification of additional requirements and issues with the existing standard, to name a few. As bomb suits were tested to the original standard, issues arose with the test methods (related to field-of-view and other ergonomic requirements) and with flammability testing. NIJ investigated each issue and developed a draft standard that incorporated revised test methods and requirements. Before publishing, the Institute released the draft standard for public comment and addressed the comments received.

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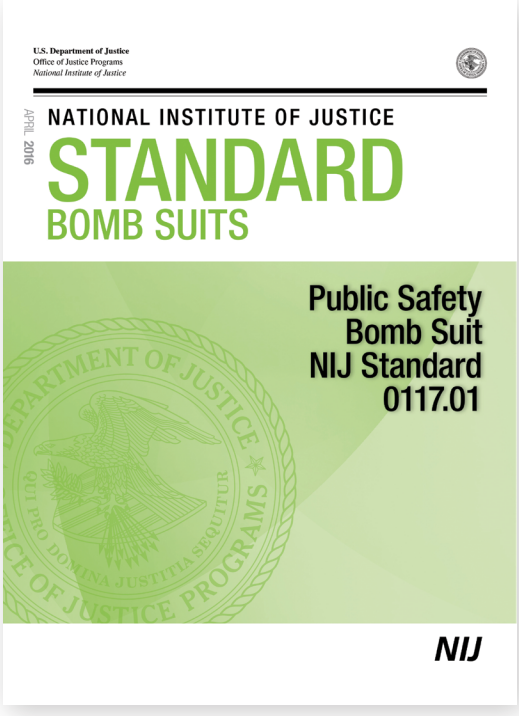
Identifying performance requirements and test methods for a particular piece of equipment and publishing a standard are only the first steps. The next step is identifying models that meet the standard's requirements. This is done through conformity assessment programs, which can include self-declaration by a manufacturer and third-party certification. In the case of bomb suits, the Safety Equipment Institute (SEI), a private-sector certification body, has established a program to certify models to the NIJ bomb suit standard. SEI will oversee testing; certify compliant models; monitor to ensure certified models continue to meet the standard; and establish guidelines for safety concerns, including complaints and recalls. Other certification bodies could establish additional conformity assessment programs to test bomb suits to the NIJ standard.



Download the revised bomb suit standard at NIJ.gov, keyword: 249560.

NIJ collaborates with public and private standards development organizations and certification bodies like SEI to maximize resources and speed the introduction of needed standards and conformity assessment programs. Other collaborators include the National Institute of Standards and Technology, the National Fire Protection Association and ASTM International. NIJ teamed with ASTM International to provide the complete library of standards and test methods developed by ASTM Committee E54 on Homeland Security Applications to eligible law enforcement, corrections and forensics professionals free of charge. For free access to these standards and test methods, visit NIJ.gov, keyword: ASTM.

Public Safety Bomb Suit NIJ Standard 0117.01 lays out minimum performance requirements. A model tested and found to meet those requirements may not necessarily meet the specific needs of a particular agency. Agencies are responsible for determining whether a particular model meets their needs.

About the Author

Brian Montgomery is a general engineer in NIJ's Office of Science and Technology's Research Division.

For More Information

Download a copy of the *Public Safety Bomb Suit NIJ Standard 0117.01* at NIJ.gov, keyword: 249560.

A full list and description of the NIJ standards program can be found at NIJ.gov, keywords: standards program.

Image source: Illustration by Freddy Trejo with background image from the National Institute of Justice.

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