



**Homeland  
Security**

Science and Technology

# Highlight

**U.S. Department of Homeland Security**



**System Assessment and Validation for Emergency Responders**

The U.S. Department of Homeland Security (DHS) established the System Assessment and Validation for Emergency Responders (SAVER) Program to assist emergency responders making procurement decisions.

Located within the Science and Technology Directorate (S&T) of DHS, the SAVER Program conducts objective assessments and validations on commercial equipment and systems, and provides those results along with other relevant equipment information to the emergency responder community in an operationally useful form. SAVER provides information on equipment that falls within the categories listed in the DHS Authorized Equipment List (AEL). The SAVER Program mission includes:

- Conducting impartial, practitioner-relevant, operationally oriented assessments and validations of emergency response equipment; and
- Providing information, in the form of knowledge products, that enables decision-makers and responders to better select, procure, use, and maintain emergency response equipment.

Information provided by the SAVER Program will be shared nationally with the emergency responder community, providing a life- and cost-saving asset to DHS, as well as to Federal, state, and local responders.

The SAVER Program is supported by a network of technical agents who perform assessment and validation activities. Further, SAVER focuses primarily on two main questions for the emergency responder community: "What equipment is available?" and "How does it perform?"

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## Laser-Based Explosives Detectors

Explosives detectors are used to screen people, luggage, and packages; investigate unknown substances; and prevent suicide attacks and damage from roadside bombs. No single technology can counter every threat and research continues into new and improved methods for explosives detection. Laser-based detection techniques hold promise for new capabilities, especially in standoff and multi-threat detection.

To provide emergency responders with information on laser-based explosives detectors, the National Urban Security Technology Laboratory (NUSTL) prepared a technote for the System Assessment and Validation for Emergency Responders (SAVER) Program. The *Laser-Based Explosives Detectors TechNote* provides background information, considerations, and an overview of mature technologies and available products.

All reports in this series will be placed in the SAVER section of the Responder Knowledge Base website (<https://www.rkb.us/saver>) as they become available. Information on other technologies evaluated by the SAVER Program can also be found on the website.



*Photograph courtesy of  
Lawrence Berkeley National  
Laboratory*

### Standoff Explosives Detection