



**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 response 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 responder equipment;
- Providing information that enables decision makers and responders to better select, procure, use, and maintain emergency responder equipment.

Information provided by the SAVER Program will be shared nationally with the 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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## Powered Air-Purifying Respirators

Powered Air Purifying Respirators (PAPRs) are battery-powered respiratory devices that pump filtered-clean air into the user's mask, hood or helmet. PAPRs provide respiratory protection to emergency responders operating in environments that are not oxygen deficient but require respiratory protection from contaminants such as asbestos, fibers, riot control gases, and chemical and biological agents.

As a SAVER Program Technical Agent, Texas A&M Engineering—Texas Engineering Extension (TEEX) Service Urban Search & Rescue, (US&R) Texas Transportation Institute (TTI), and the Dwight Look College of Engineering (COE) have been tasked by the DHS to provide expertise and analysis on key emergency response-related subject areas concerning PAPRs and other technical search systems.

In support of this tasking, data was gathered regarding currently available PAPRs and presented to an emergency responder focus group. The focus group established evaluation criteria, operational outcomes, and potential assessment scenarios. The focus group recommendations are available in the *Powered Air Purifying Respirators Focus Group Recommendations Report*.

A market survey was conducted to identify PAPRs with similar employment techniques and capabilities that are representative of commercial off-the-shelf and government off-the-shelf products currently available to the emergency responder community. The *Powered Air Purifying Respirators—Market Survey* addresses PAPR user-needs, equipment procurement issues, and the implementation of PAPRs in emergency response situations.

All reports in the series are located on the SAVER Web site (<https://www.rkb.us/SAVER>) as they become available. Reports on other technologies can also be found on the Web site.