



**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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<https://www.rkb.us/saver>

Cutting Torch Systems

Cutting torches are an important tool used throughout the emergency response community for many different purposes including entry into collapsed buildings and victim extrication. Law enforcement often uses cutting torches primarily for forcible entry. In addition, cutting torches may be used in underwater rescue and tactical situations.

As a SAVER Program Technical Agent, Texas A&M Engineering (TAMU)—Texas Engineering Extension 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 cutting torch systems, other technical search devices and emergency response management systems.

In preparation for an assessment, TAMU held a focus group regarding currently available cutting torches. The focus group established evaluation criteria, operational outcomes, and potential scenarios for the cutting torch assessment. Focus group recommendations are available in the *Cutting Torch Focus Group Assessment Recommendations Report*.

In addition, a market survey was conducted to identify the various types of cutting torch systems that are representative of commercial off-the-shelf products currently available to the emergency responder community, including oxygen-fuel cutting torches, exothermic cutting torches, and plasma cutting torches. The results of their efforts may be found in the *Cutting Torches Market Survey Report*.



Exothermic Cutting Torch

The *Cutting Torches—Technology Guide* was also published by TAMU as a resource for first responders regarding the most common operational environments and different applications in which cutting torch systems may be used.

The cutting torch systems assessment provides the emergency response community with comparative information on the three most common torch systems used for the purposes of victim extrication, search operations, and removal of obstacles limiting access to areas of operation. Results may found in the *Cutting Torch Systems—Final Report*.

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