



**Homeland Security**  
Science and Technology

# Newsletter

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 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?"

For more information on the SAVER Program, contact the SAVER Program Support Office.

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## Non-Magnifying Patrol Rifle Sights Assessment

The Space and Naval Warfare Systems Center (SPAWARSYSCEN) Atlantic recently completed an assessment of non-magnifying patrol rifle sights for the System Assessment and Validation for Emergency Responders (SAVER) Program. Non-magnifying patrol rifle sights aid in aiming the weapon while allowing the user to keep both eyes open; this provides a full field of view, enhances situational awareness, and helps the user maintain depth perception.

Prior to the assessment, SPAWARSYSCEN Atlantic conducted a focus group to recommend evaluation criteria, product selection criteria, and possible scenarios for the assessment. Eight responders from various jurisdictions participated in the focus group. Each participant had at least 10 years of law enforcement experience as well as operational experience with non-magnifying patrol rifle sights.

The focus group recommended 14 evaluation criteria for assessment: reliability, ease of use, size, user manual, target acquisition, optical quality, durability, mounts, reticle, compatibility, easy to maintain, warranty, technical support, and setup. More information on evaluation criteria can be found in the *Non-Magnifying Patrol Rifle Sights Focus Group Report*.

Focus group participants also identified operations in which they use non-magnifying patrol rifle sights such as active shooters, barricaded subjects, perimeter containment, building searches, and urban tracking. Participant recommendations for assessment scenarios were based on these applications.

SPAWARSYSCEN Atlantic conducted the assessment of six non-magnifying patrol rifle sights at the Federal Law Enforcement Training Center (FLETC) in Cheltenham, Maryland, in July 2012. A range safety officer was present and FLETC range rules were followed throughout the assessment.

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*Active Shooter Scenario Using Non-Magnifying Patrol Rifle Sights*

The assessment was conducted in two phases: the specification assessment and the operational assessment. During the specification assessment, the evaluators assessed the sights using vendor-provided information and specifications. Hands-on experience using the sights during pre-fire, live-fire, and active shooter scenarios served as the basis of the operational assessment.

The pre-fire scenario gave evaluators an opportunity to familiarize themselves with the sights. They reviewed user manuals; adjusted the windage and elevation settings; adjusted the size, pattern, color, and intensity of each reticle; and removed and reinstalled batteries.

During the live-fire scenario, evaluators mounted and zeroed the sights to patrol rifles according to the instructions in the user manual. They then aimed and fired at silhouette paper targets from different distances in various shooting positions, lighting conditions, and with and without obstacles.

During the active shooter scenario, one friend target and one foe target were placed side-by-side on rotating mounts at two locations on the range, and obstacles were placed approximately 10 yards from the targets. Evaluators approached the obstacles, used the sights to view the target, and made shoot or no-shoot decisions for each target.

As evaluators completed the assessment scenarios, they were given the opportunity to rate each sight based on its performance. Evaluators then reviewed the ratings and comments for all of the sights at the conclusion of the assessment. SPAWARSCEN Atlantic is in the process of reviewing and analyzing the criteria ratings for each product and the evaluator feedback gathered during the assessment. Assessment results will be presented in the *Non-Magnifying Patrol Rifle Sights Assessment Report*.

## **Life Safety Ropes**

Responders use life safety ropes to access steep, vertical, and near-vertical terrain; ascend and descend multi-story

buildings; and conduct search, rescue, and recovery operations in maritime environments. When combined with auxiliary equipment such as harnesses and carabineers, life safety ropes form an adaptable system to support a wide range of response activities.

In order to provide information to responders, the U.S. Army Natick Soldier Research, Development and Engineering Center produced the *Life Safety Ropes Focus Group Report* and the *Life Safety Ropes Market Survey Report*.

The focus group identified several procurement considerations including: durability, flexibility, weight, available sizes, flame resistant, color options, reflective, easy to clean, ease of inspection, shelf life, ease of modification, directional markings, storage, and best value. More information on these considerations can be found in the focus group report.

The market survey report includes standards that address the emergency response applications of life safety ropes. Product data is also included for a sample of ropes that are certified as National Fire Protection Association (NFPA) 1983:2006 general-use life safety ropes, light-use life safety ropes, escape ropes, and throwlines.



*Water Rescue Training Using Life Safety Ropes*

## **Potable Water Distribution Systems**

Potable water is considered safe for human consumption according to established health standards. Potable water distribution systems are used by responders to transport, store, and supply drinking water in the event of a natural disaster or other situations where drinking water has been compromised or is unavailable. These systems are typically designed for short-term use and are easily cleaned and filled to support rapid response.

In order to provide responders with information on current system technologies and related equipment, Science Applications International Corporation (SAIC) produced



Potable Water Distribution System

the *Potable Water Distribution Systems Procurement Guide*. The guide includes system application information, equipment descriptions, associated standards and regulations, procurement considerations, and a sample of products in the current commercial marketplace.

The information presented in the guide is restricted to currently available commercial off-the-shelf potable water distribution systems that are designed to quickly transport, store, and distribute drinking water to disaster-stricken areas or to the scene of other emergencies.

## Recent SAVER TechNotes

The SAVER Program provides information to the responder community through several types of documents. One such document, the TechNote, provides responders with a high-level introduction to a technology area by answering basic questions about the technology such as “What is it?” “What is it used for?” “Who is using it?” “How does it work?” “Why is it important to the responder community?” and “Where can I find more information on this?”

As a Technical Agent, the National Urban Security Technology Laboratory (NUSTL) recently completed several TechNotes for the SAVER Program. These TechNotes cover a wide range of technologies, which are described in the following paragraphs.

### Blast Resistant Trash Receptacles

Blast resistant trash receptacles are designed to diffuse the force of an explosion by directing the blast upwards, thereby protecting bystanders from fragmentation that results when an explosive device is detonated in an ordinary trash can.



### Escape Route Modeling Tools

Escape route modeling tools can quickly identify point-to-point evacuation routes to use during a hurricane, flood, fire, terrorist attack, or other emergencies. They can also simulate extensive and complex evacuation networks in a large region to support the development of effective evacuation plans.



### Radiation Mitigation Blankets

Radiation mitigation blankets provide temporary shielding from ionizing radiation, acting as a physical barrier that reduces or eliminates the passage of radiation. These blankets help prevent contamination and reduce exposure to radiation; however, they are not effective in protecting against inhalation of airborne radioactive material.



### Standoff Radiation Detectors

Standoff radiation detectors are used to locate remote radioactive sources and determine if they constitute a threat. These systems usually contain gamma and neutron detectors, as both types of radiation are emitted from the special nuclear material used in nuclear devices.



### Laser-Based Explosives Detectors

Explosives detectors are used to screen people, luggage, and packages; investigate unknown substances; and prevent suicide attacks and damage from improvised explosive devices. Laser-based detection technologies are being investigated to determine if they can provide new standoff and multi-threat detection capabilities.



The reports listed in the Winter 2013 Newsletter are published in the SAVER section of the Responder Knowledge Base (RKB) website. These reports are available to the responder community.