

SENSOR TEST & EVALUATION CENTER

at the Nuclear Security Technology Complex

PARTNERING FOR NUCLEAR SECURITY

The Sensor Test & Evaluation Center (STEC) is a 72-acre facility dedicated to the design, development, and real-world testing of current, new, and emerging sensor technologies. At STEC, physical protection experts from Sandia National Laboratories partner with government, industry, and university partners from the U.S. and around the world to evaluate interior and exterior intrusion detection and alarm assessment technologies, conduct technology evaluation and vulnerability assessment, and provide sensor system design, implementation, and user training.

STEC Facilities and Staff

- A large, secure facility that can be configured as needed to test technologies and train users
- Comprehensive testing and evaluation at the component and system level, including 24/7 monitoring capabilities through an integrated Alarm Communication and Display (AC&D) system
- Next-generation modeling and simulation capabilities
- Expert staff with deep experience in national and international physical protection who provide unbiased assessments of technologies and systems
- Access to national lab staff with broad experience for next-generation technology design, development, and implementation

Test and Evaluation Process

The STEC team of engineers, testers, designers, and analysts follow the Design and Evaluation Process Outline (DEPO) test and evaluation method, a systematic process developed at Sandia National Laboratories as part of nuclear weapon development. DEPO incorporates input from stakeholders, government requirements, and best practice guidelines. Whether evaluating current or new technologies, this testing philosophy ensures that all components are thoroughly tested in both ideal and degraded conditions to understand plausible sensor vulnerabilities and strengths and to discover any potential defeat methods.



TRAINING

Experienced instructors provide classroom and hands-on training of physical protection systems methodologies and systems. Our classes, which can be customized for designers, facility operators, trainers, or regulators, include:

- DEPO fundamentals
- Design, install, and performance testing training
- Inspector training for various types of physical protection technologies
- Radiation source protection
- Operator training

EQUIPMENT

- Sensors: Electric field, ported coax, fence disturbance, microwave transmission, radar, passive and active infrared, taut wire
- Unmanned Aerial System (UAS) detection
- LIDAR
- AC&D
- Wireless communication

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