

NEUTRALIZATION OF IMPROVISED EXPLOSIVE DEVICES

The Response and Defeat Operations Support (REDOPS) program is a Department of Homeland Security (DHS) Science and Technology Directorate (S&T) effort that supports public safety bomb technicians and provides a collaborative structure for addressing Improvised Explosive Device (IED) response and defeat capability gaps identified by federal, state, and local bomb technicians; including the National Bomb Squad Commander's Advisory Board (NBSCAB).

IEDs are generally easy to develop, difficult to combat, and cause damage to life and/or property. To address the evolving threats, REDOPS has established a systems analysis approach involving explosives countermeasures experts from all levels of government and conducts Research, Development, Testing & Evaluation (RDT&E) of technologies and capabilities needed by public safety bomb squads. The new capabilities developed - as well as the Tactics, Techniques, and Procedures (TTPs) help protect and save the lives of State and Local Bomb Technicians (SLBT) and the public. In addition, the outputs associated with this project provide SLBT the ability to perform their duties more effectively, efficiently, and securely.

R&D FOR DEFEATING IEDS

REDOPS builds on existing investments; supports easy-to-use solutions; and transitions technologies to the end user. The program's portfolio includes five primary thrusts:

- **Micro R&D Systems:** REDOPS works closely with bomb technicians from across the United States to identify locally manufactured tools that will meet the capability needs of the broader bomb technician community. Products are assessed for effectiveness and safety prior to being shared with the end users via multiple communication channels.
- **Test Bed Assessments:** REDOPS performs operational assessments of emerging technologies, emphasizing the compatibility of new technologies with current fielded systems or tools. National-level collaborators include the Federal Bureau of Investigation (FBI), the interagency Joint Program Office for Countering IEDs, the Department of Defense, and NBSCAB. Knowledge products are shared with the end user via the FBI.



A public safety bomb technician prepares to disable an IED. (Robert Ausura)

- **Research and Prototyping for IED Defeat (RAPID):** RAPID develops and assesses specialized tools and capabilities to address evolving threats. The results of these efforts are transitioned directly to bomb technicians through the FBI's Hazardous Devices School.
- **Long Term R&D Solutions:** REDOPS develops technologies based on prioritized capability gaps identified by bomb technicians supporting the First Responders Resource Group (FRRG). Deliverables include robotics, defeat technologies, and other protective systems.
- **Research and Prototyping for Tactical Operations Response (RAPTOR):** RAPTOR evaluates existing and emerging technologies in a realistic operational environment through the primary thrust areas of REDOPS to support tactical operators in the first responder community.

REDOPS

RESPONSE & DEFEAT OPERATIONS SUPPORT