Explosion Hazards Evaluation

Accidental explosions and deliberate bombings by criminals and terrorists cause extensive structural and property damage, personal injury, and loss of life. Southwest Research Institute® (SwRI®) provides practical solutions to problems associated with blast effects, fragmentation, penetration, and protection. The SwRI Engineering Dynamics Department offers a unique blend of experimental, analytical, and numerical expertise which permits a multifaceted approach to solving safety problems.

Capabilities
- Fundamentals of explosions
- Software development
- Loading from blast waves and fragment impact
- Structural response
- Debris dispersion
- Blast-resistant design
- Human injury prediction
- Safety and hazards analyses
- Hydrocode simulation
- Finite element analysis
- High-speed data acquisition
- High-speed photography

Experience
- Code development for security evaluation
- Car bomb source prediction
- Short course development and instruction
- Hazards evaluation of high explosives (HE) facilities
- Shaped charge development
- Many varied experimental programs

Facilities
- Ballistics and explosives test range
- Remote test sites
- Testing up to 1000 lbs HE
Southwest Research Institute is a premier independent, nonprofit research and development organization using multidisciplinary services to provide solutions to some of the world's most challenging scientific and engineering problems. Headquartered in San Antonio, Texas, our client-focused, client-funded organization occupies more than 1,500 acres, providing more than 2.3 million square feet of laboratories, test facilities, workshops, and offices for approximately 3,000 employees who perform contract work for government and industry clients.

SwRI Engineering Dynamics Department staff members analyze the explosive effects of bare and cased charges including structural breakup, debris throw, air blast, and scaling.

We welcome your inquiries.
For more information, please contact:

Donald J. Grosch
Manager
Ballistics and Explosives
210.522.3176
dgrosch@swri.org

Engineering Dynamics Department
Mechanical Engineering Division
Southwest Research Institute
6220 Culebra Road • PO Box 28510
San Antonio, Texas 78228-0510
ballistics.swri.org