



Journal of Hazardous Materials 149 (2007) 243-244

## Journal of Hazardous Materials

www.elsevier.com/locate/jhazmat

## Book review

Understanding, Assessing, and Responding to Terrorism: Protecting Critical Infrastructure and Personnel, B.T. Bennett. John Wiley & Sons, Hoboken, NJ (2007). 481 pp., Price: US\$ 85.00, ISBN: 978-0-471-77152-4

To say the publication of this book is timely is a gross understatement. Daily we hear reports of real and potential threats to the country that if carried out would result in the loss of life and property. Just recently, there was a major story on the potential sabotage of a New York airport fuel facility. And in my home city (Toledo, Ohio), the water plant announced plans for an expensive upgrade to their security.

The author notes in the Preface that: "This book could serve as an introductory text to a student new to homeland security, as well as [being] a valuable reference for the experienced security professional." Indeed, it could, as the book is a well written, comprehensive review of potential terrorist acts. More importantly, Bennett discusses how to (hopefully) prevent those attacks. Advice is provided for virtually all potential response personnel and all types of target facilities.

The book has 11 chapters titled as follows:

- (1) The terrorist threat.
- (2) Critical infrastructure.
- (3) Types of terrorist attacks.
- (4) Weapons of mass destruction.
- (5) The terrorist's preparation for an attack.
- (6) Risk and threat assessment.
- Protecting critical infrastructure, key resources, and key assets.
- (8) Principles of protective security.
- (9) Effective security countermeasures.
- (10) General emergency response considerations.
- (11) Emergency response to a weapon of mass destruction attack.

Concerns for terrorism in the United States was thrust upon the nation, indeed upon the world, by the events of 11 September 2001. These attacks were the first major assault on US targets. As a result, our lifestyle has been irreversibly changed by the new and potential threats to our life and safety of an almost infinite list of target possibilities. Consequently, "This book was written to assist organizations, both private or public, in identifying what is critical to them and protecting them from hazards." "The premise of this book is that our assets should be protected from all hazards and all risks, not just terrorism. The principles

covered are designed for all threats from minor criminal activity through the use of a weapon of mass destruction by a terrorist."

While much concern is directed at foreign perpetrators of terrorism, domestic terrorism exists and has so for more than a century. Examples of domestic terrorism groups in the United States include: American Coalition of Life Activists, Animal Liberation Front, Aryan Nation, Earth First, Earth Liberation Front, Ku Klux Klan, Michigan Militia, National Alliance, The Order, Stop Huntington Animal Cruelty, and Texas Militia.

In Chapter 3, "Types of Terrorist Attacks," Bennett notes: "Terrorism is a tactic in which an adversary uses random or premeditated violence to coerce and manipulate the target audience. In order to accomplish his/her goals, an adversary looks for low-risk, high-visibility, and high-impact targets against which to execute their attack." Types of terrorist attacks include: arson, assassination, cyber, damage/destruction of critical infrastructure or key resources, economic, environmental, explosives, highjacking, hoaxes or threats, hostage taking, kidnapping, murder, raids/attacks, sabotage, seizure and weapons of mass destruction.

The good news is that security forces have foiled numerous plots such as the 2004 UK urban target plot that involved using explosives against a variety of urban targets.

Weapons of mass destruction are the topic of Chapter 4. Bennett notes: "An attack involving the use of a WMD will certainly result in a high-profile, high-impact event. Although the use of a WMD has the potential to cause great harm, its use as a terrorist tactic remains in its infancy as groups work toward obtaining the necessary knowledge and materials needed for a successful attack. The selection of an agent for use as a weapon is more complex than just considering its toxicity. Other factors, such as availability of precursors, availability of production knowledge and equipment, stability in storage, persistence, delivery to the target area, and dissemination techniques must also be considered and addressed in order to achieve success."

Bennett provides an interesting history of weapons of mass destruction that were designed to inflict mass casualties and cause panic. The first entry was the use of the African San society that used venom tipped arrows to kill their prey in the year 10,000 BC. The next entry was from 1000 BC in which Chinese armies used arsenical smoke in battle. Other weapons use subsequently include the use of plague-infected corpses, chlorine gas in WWI, cholera-laced fruit, mustard gas, phosgene, hydrogen sulfide and nerve gas.

The book's back cover contains an excellent summary of its contents as follows:

244 Book review

• Easily customized templates for the vulnerability analysis, security procedures, emergency response procedures, and training programs.

- Vulnerability assessment methodologies and formulas for prioritizing targets.
- Coverage of critical infrastructure sectors, hard targets, and soft targets, such as hotels, places of worship, and commercial districts.
- Countermeasures for terrorist attacks suing weapons of mass destruction with coverage of chemical, biological, radiological/nuclear, and explosive materials.
- A seven-step Security Vulnerability Analysis (SVA) process to identify and categorize critical infrastructure, key resources, and key assets.
- Information on the National Incident Management System (NIMS) that enables all public, private, and non-governmental organizations to work together effectively to prepare for, prevent, respond to, and recover from domestic incidents.

• Numerous case studies and examples.

In conclusion, I will note the obvious; this is an exceedingly important and timely topic. The book is comprehensive and well written. It should be read by all security personnel, both public and private, as it contains valuable insights into potential terrorist activities and protective measures to be taken against them.

Gary F. Bennett\*

Department of Chemical and Environmental Engineering, The University of Toledo, Mail Stop 305, Toledo, OH 43606-3390, United States

> \*Tel.: +1 419 531 1322; fax: +1 419 530 8086. *E-mail address:* gbennett@eng.utoledo.edu

> > 5 July 2007

Available online 17 July 2007