CENTER for STRATEGIC LEADERSHIP CSL

Issue Paper

Center for Strategic Leadership,
U.S. Army War College

October 2004
Volume 12-04

RESPONDING TO THE UNTHINKABLE:
A RADIOLOGICAL DETONATION DEVICE EXPLODES IN THE HOMELAND

By LTC John Tanzi and Prof Michael Pasquarett

"We have disrupted an unfolding terrorist plot to attack the United States by exploding a radioactive dirty bomb" –June, 2002

INTRODUCTION

The leadership of the United States has emphatically stated "it's not a matter of if, but rather when another terrorist attack will occur." Therefore, in the future, maybe distant or not so distant, the United States' political and military leadership may have to face actually responding to "the unthinkable": a successful radiological attack by terrorists within the borders of the Nation. A terror event of this magnitude makes the already challenging security environment even more daunting. This new style of attack is indeed different from past threats characterized by force-on-force conflict across borders with enemies and friends that were known and open warfare that now seems so straightforward and in comparison simple. The new security challenge is different and very complex and grows from the proliferation of chemical, biological, radiological, nuclear, and high-yield explosive (CBRNE) capabilities throughout the world. These can create weapons in the form of clandestine devices, to be delivered by a state, or more than likely by non-state terrorist networks. This new and growing threat greatly complicates the defense of the homeland. With this changing security environment in mind, the United States Army War College conducted a focused workshop to explore the Army's potential roles associated with the possibility of the "unthinkable" happening in the very near future. Over 100 participants from local, regional, state, and federal agencies and departments, as well as players from throughout the U.S. military came together at the Center for Strategic Leadership on Carlisle Barracks to review present plans, policies, procedures, and developing programs to respond to a hypothetical CBRNE attack within the borders of the United States. Three different attack scenarios were presented – one biological, one radiological and one nuclear. This paper addresses the workshop's findings related to response to a radiological attack.

THE RADIOLOGICAL DETONATION DEVICE (RDD) SCENARIO

The scenario portrays a terrorist detonation of a large-scale RDD or "dirty bomb" at a prominent central Pennsylvania Travel Assistance Center (truck stop) between Harrisburg and Carlisle. The location, for exercise play, is near the entrance to the Pennsylvania Turnpike (Interstate Highway 76) and approximately one mile from Interstate Highway 81. This particular assistance center is a major commercial transportation nexus for the northeastern United States servicing an estimated 20,000 tractor-trailers weekly, with several large commercial freight company distribution terminals and other major transportation warehousing and support facilities nearby. Overall, the potentially affected area also has approximately a half million residents living in Cumberland, Perry and Dauphin counties, many of whom still recall the 1979 Three Mile Island (TMI) nuclear reactor incident.

The workshop scenario began with an electronic (cell phone initiated) detonation of 100 kilograms of C-4 plastic explosive that dispersed 50 grams of cesium Cs-137, a highly radioactive beta emitter, and a small element of the even more hazardous plutonium Pu-239 alpha radiator. The RDD was concealed in a rental truck strategically parked amongst tanker trucks carrying chemicals and fuel. The explosion and fire left a crater over thirty feet wide within a larger 200-foot com-

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
OCT 2004	**N/A**	**-**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Center for Strategic Leadership Issue Paper: Responding to the Unthinkable: A Radiological Detonation Device Explodes in the Homeland	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **U.S. ARMY WAR COLLEGE Center for Strategic Leadership 650 Wright Avenue Carlisle, PA 17103-5049**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited

13. SUPPLEMENTARY NOTES
The original document contains color images.

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			
unclassified	**unclassified**	**unclassified**	**UU**	**4**	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

bined RDD/tanker blast radius, and gave an initial impression that the destruction was caused by a tanker accident. Hazardous radioactive fallout, carried by eight mile per hour winds, eventually forced the closure of sections of U.S. Highway 11, Interstate Highways 76 and 81 and key transport-related enterprises within the immediate area. Radioactive contamination covered an area approximately three miles by one mile. Over two hundred people were either in the building closest to the blast, which included a fast-food restaurant, or were in the parking lot when the blast occurred, which was early Wednesday afternoon, the busiest day of the week.

WORKING GROUP PRELIMINARY FINDINGS

The State of Pennsylvania is a Commonwealth where the initial Incident Commander is from the lowest level first responder organization, in this case, a Township Volunteer Fire Chief. The expectation is that the Fire Chief would be at the scene of the detonation within twenty minutes to take charge. The Cumberland County 911 Center would have dispatched fire fighters, EMS, local police, and a county liaison officer (LNO). State police monitoring county dispatches would also have responded. A county HAZMAT team or the Pennsylvania State University Bomb Squad would be requested and could be on the detonation site within an hour. Unfortunately, it is expected that it would take a couple hours to determine that they were dealing with an RDD. Local responders agreed that the Pennsylvania Emergency Management Agency (PEMA), notified earlier by the Cumberland County Emergency Operations Center and State Police, would be requested to bring in state resources to assist. The FBI would be notified and a request may quickly escalate from the Governor to the President for additional federal aid due to the scope of consequence management needed, the potential for long-term economic impact and assistance, and because of other implications associated with this type of terrorist event, even though, initially, there would be relatively few casualties. A large number of local, county, state, and federal agencies were identified as likely to be involved in a matter of hours.

Seven major issues across the response spectrum were identified:

1. Timely Determination of a Radiological Event. First responder detection capability is limited, release of funding to obtain additional capabilities is dependent upon federal determination of approved detection devices, and increased index of suspicion were contributing factors. In any case, since there was insufficient pre-event indication that an RDD was involved, fire fighters probably would not test for possible radiation unless current training practices are modified.
2. Command and Control (C2). The on-site Incident Commander (IC) can transfer command as the incident develops. The IC may lack experience and be challenged as more outside players are engaged.
3. Contamination Control. Aspects discussed included initial MEDVAC/hospitals affected, contamination of C2 cell, first responder personnel, and containment.
4. Effective and controlled interoperability of communication systems among all levels of government, agencies, and public services. This was more a communications systems issue than C2.
5. Requirement for technical planning guides for RDD incidents. Local responders have a need for recognized screening limits and for coordination and synchronization of screening plans and procedures.
6. Requirement for coordinated public information. This community was sensitized to the importance of this issue by the TMI experience. It affects initial public announcements/notifications; implies a single credible source of timely, accurate information (Joint Information Control); the need for a common message and or key messages; and education of the public.
7. Long-term considerations. These included the need for longitudinal studies and attention to epidemiological, agricultural, and economic implications.

Participants felt that most of the military support in this scenario would be handled by State Active Duty National Guard personnel. Some of the examples of support provided would be security/traffic/crowd control; aviation support; decontamination (personnel, equipment, contaminated area); medical support; evacuation; transportation; logistical support; and facilities. The Pennsylvania Army National Guard Weapons of Mass Destruction Civil Support Team (WMD-CST) would be engaged for detection of CBRNE at the incident site in Title 32 status. Although federal Title 10 military response missions were possible, they were limited to: immediate actions to save lives and property by elements in the area; providing a De-

fense Coordination Officer (DCO), Defense Coordinating Element (DCE), Emergency Planning Liaison Officers (EPLO), and (Joint Regional Medical Planning System (JRMPS) after a Presidential Declaration and request from the Department of Homeland Security/FEMA; medical and decontamination support; Installations; Army Corps of Engineer support; and radiological monitoring.

A major shortfall identified is that the Incident Command System (ICS) is not mandated within the local responder community. This could be mitigated by the implementation of the National Incident Management System (NIMS). The group offered a NIMS recommended C2 structure headed by the ICS commander that provided for all required functions and interfaces and could be easily migrated to a Unified Command (UC) structure, also illustrated, as the response expanded.

STRATEGIC ISSUES FOR FURTHER EXPLORATION

Of the many strategic issues acknowledged at the workshop, the following are those the participants felt most deserving of further study.

a. Strategically, our enemies are challenging our military dominance in a number of areas other than on the battlefield. One way is by attacking our belief in our safety and security on the home front. Therefore, funding, training and maintaining appropriate military reinforcement for our civilian first responders may in the near future become as important as it is to our deployed warfighters overseas.

b. The U.S. military is an important player in the defense of the homeland, but the effectiveness of this response depends upon close coordination and interaction with multiple responders at the local and state level. All organizations need a more clearly defined command and control relationship with the Department of Homeland Security and much better access and utilization of the national intelligence and warning systems.

c. Some participants felt that the WMD-CST, which is currently a National Guard military unit, may need to be made a civilian component of state government response to ensure more efficient personnel stability and thus higher operational readiness.

d. RDD material is readily available and rather easy to obtain by terrorist groups. A serious national-level program providing better and more effective controls on these materials is required now; any potential military roles in such a program need to be determined.

e. Consequence management will remain a potentially significant military requirement until and unless private enterprise and business communities become more involved in protecting their customers and workers from terrorist attacks. The U.S. Chamber of Commerce and other similar groups need to increase their collaboration with local and state safety and security agencies, becoming more proactive in the development of comprehensive plans to protect and then care for the general public in the event of terrorist attacks.

f. Any RDD attack has the possibility of becoming a political, economic and psychological nightmare for the Nation. Military and civil authorities, including commercial leaders, need to consider and develop coordinated public information plans and processes to limit the possible long-term damage that can occur from misinformation, distrust, and panic.

BLUE RIBBON PANEL INSIGHTS

The Blue Ribbon Panel offered additional insights to the group's findings.

- In the event of an RDD explosion, the public fear will need to be dealt with through numerous media sources. It is absolutely essential that a "credible source" person be identified early to "be seen" and heard by the public. This will go a long way in helping to alleviate fears and get the message out as quickly as possible. The credible source may not be the normal public affairs person routinely used for daily events, but rather, someone well known and respected by the community for their expertise with the type of issues these incidents involve or, as importantly, simply for their integrity.
- Soldiers, regardless of status, have to have the right training and equipment to do both the mission and be protected.
- A key learning point for state and federal players was that they are in support of the local authorities, who may or may not want or know how to use a formal ICS/UC approach for C2.

CONCLUSIONS

The threat of a CBRNE weapon covertly delivered into or built within and then exploded within the borders of the United States requires our political leaders to rethink all aspects of defending the homeland. A terrorist attack with a radiological weapon -- even though it may not produce an extensive blast and radiation signature -- can lead to devastating political, economic and psychological damage. The U. S. military needs the capabilities and training to support local and state officials in protecting the Nation's citizens. With this challenge confronting both present and future civilian and military leaders, it is imperative that both private and government Senior Leader Education Programs include both academic and experiential learning opportunities in this topic area. Only if today's and tomorrow's leaders are educated and trained on this new reality, and public and private sector vigilance and preparation enhanced, will our Nation be safe and secure for future generations.

****

This publication and other CSL publications can be found online at http://www.carlisle.army.mil/usacsl/index.asp

****

The views expressed in this report are those of the participants and do not necessarily reflect official policy or position of the United States Army War College, the Department of the Army, the Department of Defense, or any other Department or Agency within the U.S. Government. Further, these views do not reflect uniform agreement among exercise participants. This report is cleared for public release; distribution is unlimited.

U.S. ARMY WAR COLLEGE
Center for Strategic Leadership
650 Wright Avenue
Carlisle, PA 17103-5049

OFFICIAL BUSINESS

RESPONDING TO THE
UNTHINKABLE: A RADIOLOGICAL
DETONATION DEVICE EXPLODES
IN THE HOMELAND