

## Lessons Learned from TOPOFF 4 - 9385

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### ABSTRACT

The Top Officials (TOPOFF) National Domestic Counterterrorism Exercise Series mandated by Public Law 106-553 established through the Department of Homeland Security National Exercise Program (NEP) conducted the fourth nationwide exercise, TOPOFF 4, October 15-20, 2007. The exercise simulated a terrorist attack using radiological dispersion devices (RDD) in multiple locations in US cities and a US territory. Roughly 15,000 individuals participated in the exercise with the goal of determining the readiness of our emergency responders to implement the National Response Plan, Incident Command Systems, and National Incident Management Systems to handle a terrorist attack using unconventional weapons.

This paper will address the publicly available “lessons learned” from the latest of the nationwide exercises through a review of the “after action reports” prepared by participating agencies and related documentation.

### INTRODUCTION

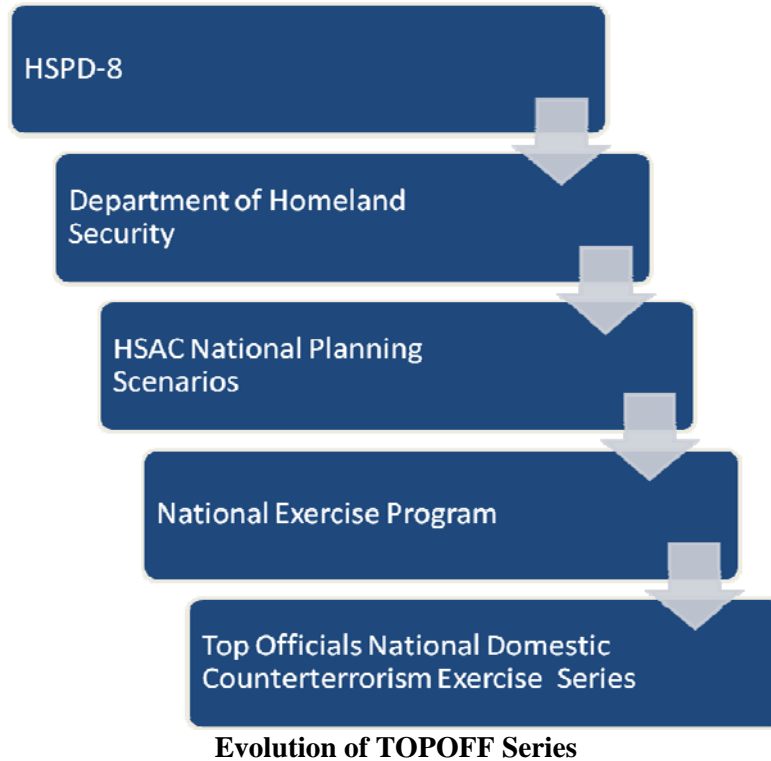


TOPOFF is the largest and one of the most important congressionally mandated terrorist preparedness exercise programs. TOPOFF 4 involved thousands of federal, state, local, international, tribal, non-government agencies and private sector responders and officials. Preparation for the exercise involved two years of planning for the full scale event that took place in Guam, Arizona and Oregon. Planning objectives focused on the following:

- Testing the handling and flow of operational and time-critical intelligence between agencies to prevent the attack;
- Testing the handling and flow of operational and time-critical intelligence between agencies prior to, and response to, a linked terrorist incident
- Testing the existing procedures for domestic incident management of a terrorist event;
- Testing the ability to coordinate with the media and provide information through public information channels.

The exercise tested the implementation of National Response Plan (NRP) and the accompanying Nuclear/Radiological Incident Response Annex.

Homeland Security Presidential Directive 8 (HSDP-8) (*National Preparedness*) was issued to “establish policies to strengthen the preparedness of the United States to prevent and respond to threatened or actual domestic terrorist attacks, major disasters and other emergencies by requiring a national domestic all-hazards preparedness goal, establishing mechanisms for improved delivery of Federal preparedness assistance to State and local governments, and outlining actions to strengthen preparedness capabilities of Federal, State and local entities.” The Homeland Security Advisory Committee (HSAC) recommended the development of the National Planning Scenario that are to be used by the Department of Homeland Security Office of Domestic Preparedness in its National Exercise Program.



The TOPOFF 4 Full Scale Exercise (FSE) provided an excellent opportunity to exercise, train, and educate top officials participating from federal, state, local, tribal, territory, international, private sector and non-government entities in responding to a WMD event involving a radiological dispersion device.

In addition to the planning objectives listed above, TOPOFF 4 also tested a) the role of the private sector in response during a WMD domestic event, b) the ability to manage victims with special needs, and c) test and evaluate mental health issues that may arise from the anxiety associated with WMD events.

### **THE FULL SCALE EXERCISE<sup>1</sup>**

TOPOFF 4 (T4) used the National Planning Scenario 11 as its basis for the exercise. The purpose of Scenario 11 is to:

- Provide a credible adversary that emulates a current threat while maintaining enough flexibility to accommodate a broad range of participant objectives and allow for inherent exercise artificialities;
- Create a low risk environment in which senior officials at all levels of government can exercise their responsibilities under the National Response Plan (NRP);
- Set conditions to assess DHS Target Capabilities;
- Stimulate participant play and afford the opportunity to evaluate performance of critical preparedness tasks associated with DHS Prevent, Protect, Respond, and Recover missions;
- Provide context for the validation of operational plans and examination of emerging policy issues in a dynamic and time-critical exercise environment.

This scenario simulated a radiological dispersion device (RDD) released at each of the three locations (Portland, OR, Phoenix, AZ, and Guam) using stolen Cesium-137 (<sup>137</sup>Cs) sources in the form of cesium

chloride (CsCl). In the scenario the  $^{137}\text{Cs}$  shielded source is hypothetically collected in enough quantity and embedded in a conventional explosive material to contaminate 36 city blocks that include a business district, residential houses, crowded shopping centers, and a high school.



**Radiological Dispersion Device Simulated in Portland, Oregon**

The entire scenario scene is contaminated with  $^{137}\text{Cs}$ , though not at levels causing immediate concern to first responders. Due to the size of the explosion, the radioactive contamination is blown widely such that the ground zero area is not as radioactive as might have been expected. Radioactive contamination in the affected area is 5-50  $\mu\text{Ci}/\text{m}^2$  with hot spots measuring 100-500  $\mu\text{Ci}/\text{m}^2$ . Air intakes contaminate interior of large buildings, and negative indoor pressure draws contaminated aerosols into buildings. Subway air intakes contaminate the subway system.

The initial blast results in 180 fatalities, 270 injuries requiring medical care and up to 20,000 individuals in the deposition zone.

T4 employed a Virtual News Network (VNN) as a mock news media that broadcasted live through a satellite feed that simulated an actual media perspective on events. An Extranet Secure Portal (ESP) was made available to provide secure on-line collaboration. The computer based Homeland Security Information System (HSIS) was utilized to connect to all federal, state and local agencies.



### THE PARTICIPANTS (A Partial List)

- Department of Homeland Security, National Exercise Division, National Preparedness Directorate, Federal Emergency Management Administration
- Department of Homeland Security, Office of Intelligence and Analysis (DHS I&A)
- Department of Homeland Security, Situational Awareness Teams (DSATs)
- National Guard WMD Civil Support Teams (CST)
- Federal Bureau of Investigation (FBI)
- Multnomah County Health Department, Oregon
- City of Portland, Fire and Rescue Bureau
- US Health & Human Services, Center for Disease Control (CDC)



- University of Portland
- State of Arizona, Arizona Division of Emergency Management

### T4 First Responders

- United Kingdom
- Interagency Modeling and Atmospheric Assessment Center (IMAAC)
- US Army Corps of Engineers, Rapid Response Group;
- Department of Energy, Federal Radiological Monitoring and Awareness Center (FRMAC)
- American Red Cross, Oregon Trail Chapter, Portland, OR;
- Guam Homeland Security, Office of Civil Defense
- Environmental Protection Agency (EPA)
- Nuclear Regulatory Commission (NRC)
- Australia
- Mexico
- Canada



#### Apra Harbor, Guam

- Guam Memorial Hospital
- US Coast Guard

## LESSONS LEARNED<sup>2</sup>

The nation benefits from the mandated exercises only if the lessons learned from the experience are shared throughout the emergency response network and information is shared. The primary method of sharing the lessons learned is through “After Action Reports”. Some of the information is somewhat sensitive and does not benefit the process by making said information accessible to terrorists. Therefore, the lessons learned presented below are only those lessons learned that are publicly available.

### OPERATIONAL AND TIME CRITICAL FLOW OF INFORMATION

1. DHS I&A and DHS DSATs facilitated secure communications and information sharing;
2. Federal law enforcement agencies shared information with state and local personnel in Arizona through the fusion center;
3. Time critical information was shared between the United States and the United Kingdom that allowed for coordination of investigative activities;
4. Participants reported delays in receiving condition reports;



5. Participants reported delays in receiving classified “Request for Information” (RFIs);

### **Triage at Guam memorial Hospital**

#### INCIDENT COMMAND

1. The response to the immediate explosions were coordinated and timely;
2. Local HAZMAT teams effectively integrated into the Unified Command structure and demonstrated their ability to gross and mass decontamination;
3. National Guard WMD Civil Support Teams provided rapid and on-scene capabilities;



#### **AZ Incident Command**

4. The National Incident Management System (NIMS) was not always followed;
5. There was difficulty conducting and coordinating multiple missions at the incident sites;

#### EMERGENCY OPERATIONS CENTER MANAGEMENT

1. Planning helped guide the national response;
2. New entities and tools improved coordination, information sharing and real-time planning as compared to prior TOPOFF exercises;
3. Private sector involvement helped drive realistic decision-making;
4. Actions were taken to address victims with special needs;
5. IMAAC successfully provided consequence predictions;
6. Senior leadership group meetings created a high demand for updates;
7. Decisions and tasking were not always formally disseminated
8. Department and agencies at all levels at times lacked critical information
9. The purpose, definition and consequence of the Homeland Security Advisory System threat levels lacked clarity;
10. Decisionmakers had trouble interpreting plum and consequence prediction models;
11. FRMAC had difficulty coordinating its activities in Oregon;
12. Unfamiliarity with the process for requesting federal support caused delays;

#### EMERGENCY PUBLIC INFORMATION AND WARNING

1. Public Information Officers (PIOs) at all levels had difficulty obtaining substantive information on response activities;
2. Departments and Agencies had difficulty communicating the reasoning behind initial protective action recommendations;

#### ECONOMIC AND COMMUNITY RECOVERY

1. Recovery Planning was established early at all three event sites;

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2. Issues related to debris management, decontamination and cleanup, insurance, and long-term health monitoring are not currently addressed in recovery plans;

## CONCLUSIONS

The TOPOFF series of FSE are valuable in preparing the nation for potential terrorist events and the T4 exercise was specifically valuable in preparing the nation for an RDD event.

Extensive preparation and training by and of government agencies paid off in that for the most part, top officials knew their respective roles. Lessons learned from prior TOPOFF exercises were incorporate in the preparation and training for T4. Figure 1 below displays the cycle of the TOPOFF series whereby the planning and training for the FSE and the AAR from the exercise help the preparation and training for a potential terrorist event using WMDs.



**Figure 1- TOPOFF FSE Cycle**

***Practice, Practice Practice.*** The more frequently we as a nation practice the response to a potential disaster, the better we will be at responding, the more lives we will potentially save, the less the potential economic impact will be from the event, and some of the intended consequence of the attack will be mitigated.



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