

# **WEAPON OF MASS DESTRUCTION RADIOLOGICAL EVENTS**

## **WHAT IS A WEAPON OF MASS DESTRUCTION?**

As defined by the Department of Defense -- A WMD includes any weapon or device that are intended, or have the capability, to cause death or serious bodily injury to a significant number of people through the release of toxic or poisonous chemicals or their precursors, a disease organism, or radiation or radioactivity.

The detonation of a nuclear weapon meets this definition, but so does the dispersal of radioactive material, a chemical agent, or biological agent via explosion, spraying, water supply contamination, or other vectors.

## **WHAT DOES A WEAPON OF MASS DESTRUCTION LOOK LIKE?**

It can be anything from a simple child's balloon filled with a deadly toxin or disease organism which can be burst over a crowd, to a 55-gallon drum filled with high explosives wrapped with radioactive material, a fully functional nuclear weapon, or anything in between. In short, it is impossible to predict what a WMD will look like. It may be almost impossible to detect a WMD device unless a responder has proper training, proper equipment, and some forewarning.

## **WHAT IS A 'DIRTY BOMB' OR RADIOLOGICAL DISPERSAL DEVICE (RDD)?**

A 'Dirty Bomb' is a slang term, originated by the news media, and given to an explosive package wrapped with radioactive material. The correct term is a Radiological Dispersal Device (RDD). The idea of a RDD is to spread the radioactive material contaminating a relatively large area. Although few deaths would be expected from radiological exposure, this can deny the use of contaminated facilities and areas and have a significant psychological impact on the exposed population. In fact, the greatest affect of this device is psychological. It sends a message from the terrorist that they can do this again, at any place and at any time.

It should be noted that the older (cold war) definition of a 'Dirty Bomb' was used for nuclear weapons that created an excessive amount of fallout. However, the term currently used in the news media is the slang term defined above.

## **WHAT IS A 'IMPROVISED NUCLEAR DEVICE' (IND)?**

An Improvised Nuclear Device (IND) is a device incorporating radioactive materials designed to result in the dispersal of radioactive material or in the formation of a nuclear-yield reaction. Such a device may be fabricated in a completely improvised manner or may be an improvised modification to a U.S. or foreign nuclear weapon. Due to the security associated with protection of U.S. and foreign nuclear weapons this type of device is less likely to be encountered than is the RDD.

## **WHAT CAN THE 1<sup>ST</sup> RESPONDERS, FIREMEN AND POLICE, DO AT A WMD EVENT?**

An incident will present itself to the first responder in one of two scenarios, response to a detected but unused device, or response to a device that has already "gone off."

### **Devices found prior to activation:**

The suggested answer to this scenario is to evacuate the immediate area and prepare to evacuate or shelter populations the area immediately downwind. Maintain all responders at a safe distance and initiate procedures for obtaining local, state and federal assistance to the WMD event. The response elements can be in the form of local police bomb squads and fire hazmat teams, state National Guard Civil Support Teams (NGCST), the Department of Energy (DOE) Radiological Assistance Program (RAP) Teams, the DOE Joint Technical Operations Team (JTOT), and the Federal Bureau of Investigation (FBI) Hazardous Material Response Units (HMRU).

The safe distance for responders is difficult to recommend. That distance is dependent on the type and amount of explosives, and a variety of other factors.

First responders should **never** attempt to deactivate these devices. Local bomb squads or military Explosive Ordnance Disposal (EOD) teams must be contacted to determine the proper handling and disposal of these devices.

### **Post Detonation or Dispersion:**

Without advanced knowledge that the event was initiated by a WMD device, without proper detection equipment, and without proper protection of initial responders, the first responders themselves may become victims. Initial victims may become contaminated and subsequently contaminate first responders and hospital personnel.

Like any HAZMAT event, if you suspect a WMD; (1) control the scene, (2) evaluate the situation, 3) request local bomb squad and/or fire hazmat support.

The best WMD response comes through training, drills, and communication with the additional assistance resources listed above. A large amount of effort and money has been spent providing 1<sup>st</sup> responders with proper training, proper equipment, and proper procedures to use in response to a WMD event. There are also a lot of state and federal resources available to respond to a WMD event in a relatively short period of time. Take advantage of what training and assets that are available to you, and be familiar with the response assets that you can call on for help in your area.

## WHO TO CALL?

- **CITY POLICE BOMB SQUADS and/or FIRE HAZARDOUS MATERIALS UNITS**
- **STATE POLICE and/or EMERGENCY RESPONSE DIVISIONS, NATIONAL GUARD CIVIL SUPPORT TEAMS**
- **LOCAL FBI FIELD OFFICE**
- **NNSA/DOE RADIOLOGICAL ASSISTANCE PROGRAM OR NNSA/DOE HEADQUARTERS**

**U.S. Department of Energy**  
**Radiological Assistance Program (RAP)**

**24-Hour Regional Emergency Number**

1 Brookhaven Area Office	- (631) 344-2200
2 Oak Ridge Operations Office	- (865) 576-1005
3 Savannah River Operations Office	- (803) 725-3333
4 Albuquerque Operations Office	- (505) 845-4667
5 Chicago Operations Office	- (630) 252-5731
6 Idaho Operations Office	- (208) 526-1515
7 Oakland Operations Office	- (925) 422-8951
8 Richland Operations Office	- (509) 376-2900
HQ Washington, DC	- (202) 586-8100