



The “Dirty Bomb” Attack

**First Responder’s Planning
and Response Considerations**

A Dirty Bomb is a bomb that contains both explosives and radioactive materials. When the bomb explodes it spreads radioactive material.

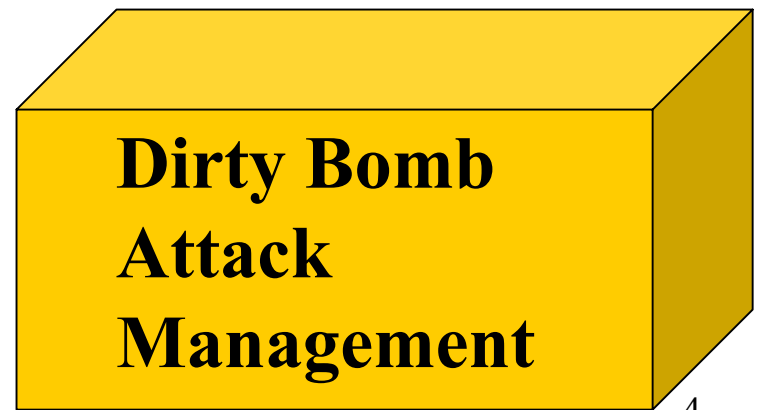
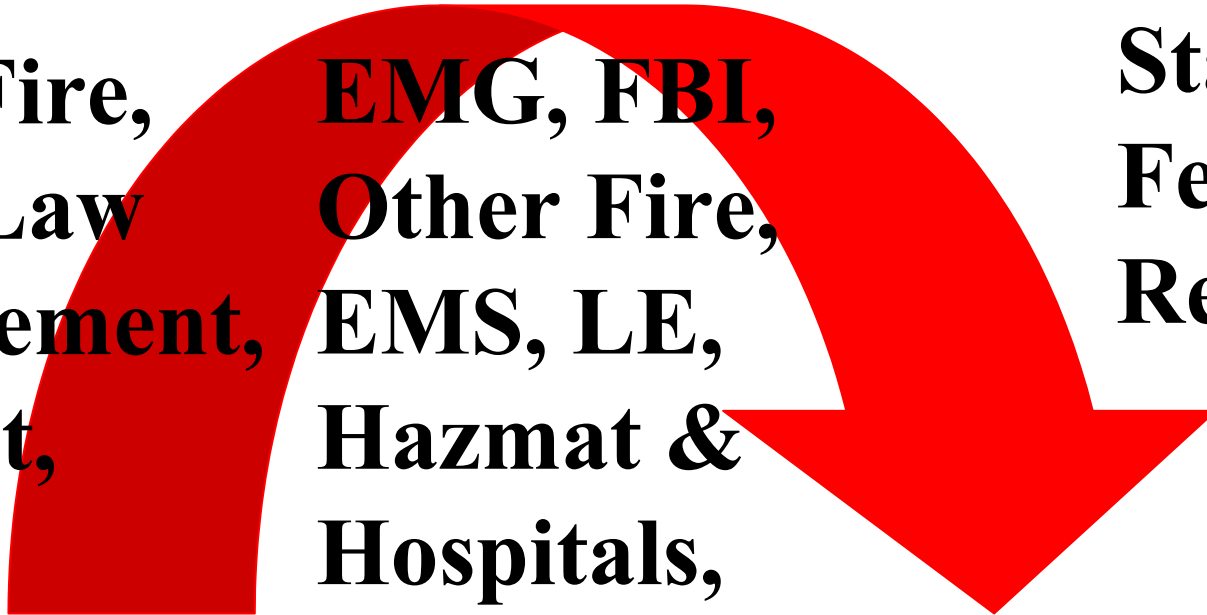
If you respond to a
reported explosion of
unknown origin, think
DIRTY BOMB!

Emergency Response Resources

**ECC, Fire,
EMS, Law
Enforcement,
Hazmat,
Public
Health,
Hospitals**

**EMG, FBI,
Other Fire,
EMS, LE,
Hazmat &
Hospitals,
Public
Health,
Private
Sector**

**State &
Federal
Response**



Dirty Bomb

“Destruction and Disruption” Factors

- Type and quantity of explosives
- Type, quantity and physical form of the radioactive material(s)
- Weather conditions
- Location, date, time of release

Dirty Bomb Explosion Potential “Harm Factors”

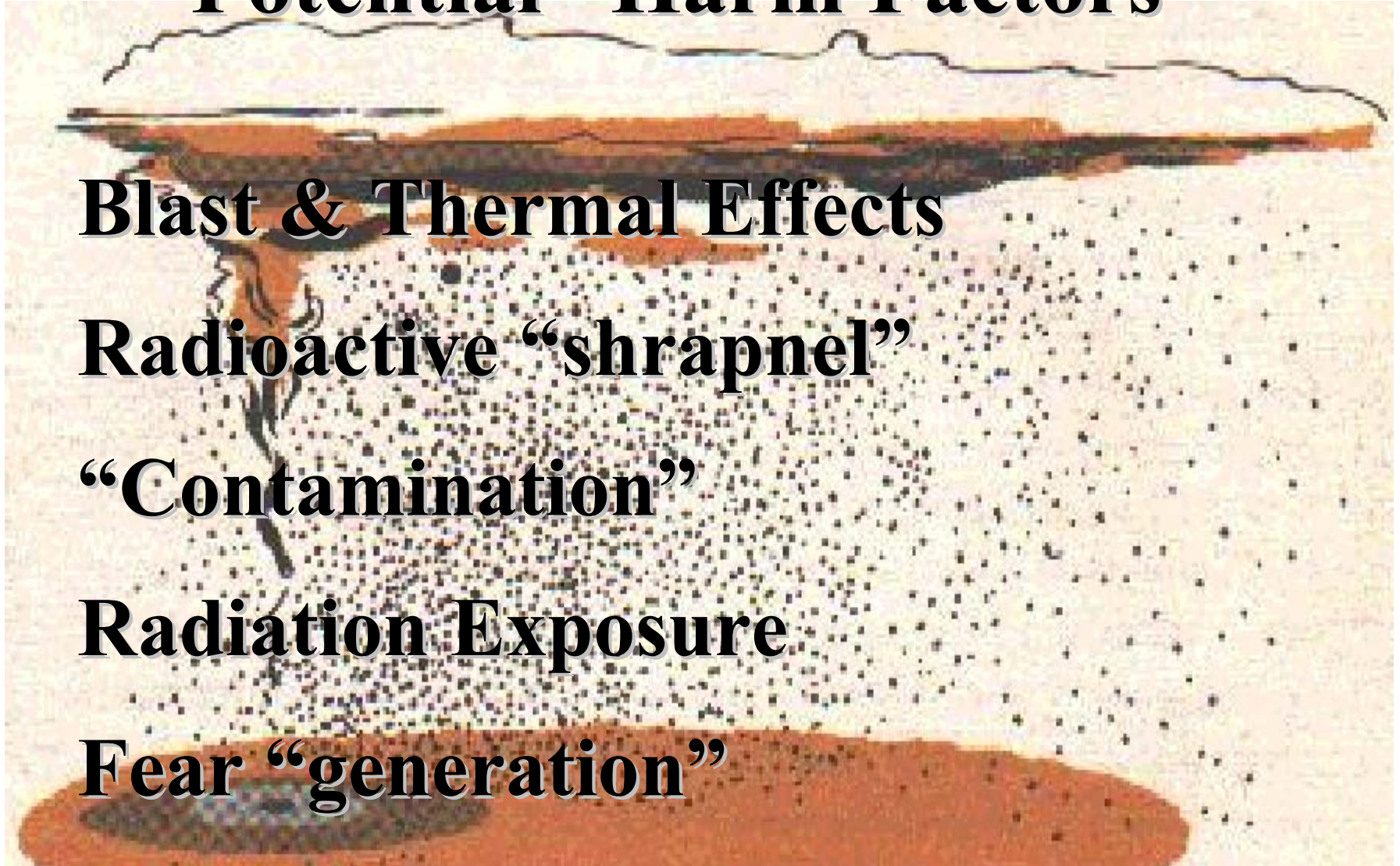
Blast & Thermal Effects

Radioactive “shrapnel”

“Contamination”

Radiation Exposure

Fear “generation”



Some of the

^ Dirty Bomb Issues

- Safety of emergency responders and the public.
- Rescue and emergency care of victims.
- Need for common operation guidelines among emergency responders (e.g., use of ppe, including SCBA, radiation exposure limits for different operations, etc.)

Some of the ^ **Dirty Bomb Issues**

- Potential for multiple events and devices.
- Contamination of streets, building, structures, etc.
- Mass casualties (traumatic, psychogenic, etc.)
- “Fear” (public & responders).

Some of the ^ **Dirty Bomb Issues**

- Resource Management “Overload.”
- Community “protective actions”
(e.g., shelter in place or evacuation).
- Decontamination of victims, personnel,
emergency vehicles and equipment

Some of the

^Dirty Bomb Issues

- Spread of contamination to vehicles, homes, hospitals and other locations by people fleeing scene.
- Traffic management and gridlock.
- Community Information accuracy, timeliness and coordination.

Some of the

^Dirty Bomb Issues

- Interaction and coordination among agencies at local, state and federal levels, and private sector.
- Environmental issues, including clean up.
- Hospital Emergency Department management of contaminated casualties.

Radiation Emergency Incident Planning

- Provide *must-know* training to local emergency responders (e.g., fire, EMS, law enforcement, public health, hospitals), Emergency Operations Center (EOC), Emergency Communications Center (ECC), etc.

Radiation Emergency Incident Planning

- Conduct “smart” tabletop and functional exercises. Invite neighboring jurisdictions, state and federal emergency response organizations, and other agencies.

Involvement of Experts

- Armed Forces Radiobiology Research Institute (AFRRI)
- Department of Homeland Security (DHS)
- Environmental Protection Agency (EPA)
- Department of Energy (DOE)
- National Institute of Standards and Technology (NIST)
- Health Physics Society (HPS)
- Nuclear Regulatory Commission (NRC)

Develop Reference Library

**EOC
HAZMAT
Public Health
Hospital**

NCRP REPORT No. 138

MANAGEMENT OF TERRORIST EVENTS INVOLVING RADIOACTIVE MATERIAL

|N|C|R|P|

National Council on Radiation Protection and Measurements

2000 EMERGENCY RESPONSE GUIDEBOOK



A GUIDEBOOK FOR FIRST RESPONDERS
DURING THE INITIAL PHASE OF A
DANGEROUS GOODS/HAZARDOUS MATERIALS INCIDENT

Second Edition
First Edition

MEDICAL MANAGEMENT OF RADIOLOGICAL CASUALTIES



HANDBOOK

Military Medical Operations Office
Armed Forces Radiobiology Research Institute
Bethesda, Maryland 20889-5603
<http://www.afrrri.usuhs.mil>

December 1999
April 2003



Guidance for
**Protecting Building Environments
from Airborne Chemical, Biological,
or Radiological Attacks**

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health



Radiation Emergency Incident Planning

Develop (and exercise) an ***Action Plan*** for scene management and extended rescue operations.

REMEMBER

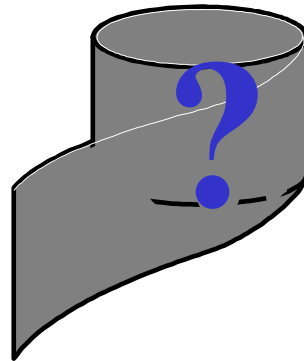
ALARA

Keep Radiation Exposure

As Low As Reasonably Achievable

Radiation Emergency Incident Response Considerations

Wear Personal Protective Equipment (including SCBA)



Use Hazmat and Mass Casualty Incident Management Guidelines

**Do not delay rescue of
(alive) victims from a
contaminated area.**

**Keep the public
informed and protected.**

Remember, if first responders are en route to a terrorist **Dirty Bomb incident, they won't have the opportunity to practice what they must do after they arrive on the scene.**

Preparedness is
the **Key** to
Readiness.

**Always
Remember**



9-11-01

**Always
be Ready**

The End.