

## **DEPARTMENT GENERAL ORDER 06-19**

OFFICE of the CHIEF OF POLICE  
REPLACES/AMENDS: None

DATE: October 31, 2006

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### **CBRN, EXPLOSIVE, AND HAZMAT AWARENESS GUIDE**

#### **I. PURPOSE**

To provide first responders basic awareness level knowledge in how to recognize a CBRN, explosive or Hazmat incident so as to immediately implement personal protective measures, while concurrently requesting technical assistance.

#### **II. DEFINITIONS**

Biological Agent – Living organisms or the materials derived from them that cause disease or harm to humans, animals or plants, or cause deterioration of material.

Chemical Agent – A chemical substance that is intended to kill, seriously injure or incapacitate people through physiological effects.

Decontamination – The reduction or removal of toxic material/substances from a structure, area, object, or person.

Evacuation – A temporary mass movement of people as a protective measure in coping with a threat to mass safety, community disruption, or an impending threat.

Hazmat Incident – Any occurrence resulting in the uncontrolled release of hazardous materials such as explosives, flammable and non-flammable gases, combustible liquids and solids, oxidizers and corrosives, poisons, radioactive materials, and etiological agents capable of posing a risk to health, safety, and property.

Personal Protective Equipment – Protective suits and breathing gear which offer varying degrees of isolation from environmental threats or contaminants.

Radiological Agent – Radioactive particles released via detonation of a nuclear device or through the dispersal of radioactive materials that are intended to cause mass death or serious physical injury.

Shelter-in-Place – A mass protective measure whereby people remain in their homes or other enclosed place to avoid contamination or exposure to a hazardous material.

### **III. GENERAL INFORMATION**

Threats of violence involving Weapons of Mass Destruction grow ever more severe as terrorist groups seek the use of these weapons to further their political agenda or make a statement in regard to their grievances. Due to the unique characteristics associated with the materials used in these weapons, the potential for mass casualties is greatly magnified. WMD agents can be super-toxic chemicals, virulent biological cultures, radioactive materials, or even nuclear or regular explosive devices. In all cases, an orderly approach is critical to dealing with a WMD incident.

First responders must be able to quickly and correctly identify a WMD incident for what it is while protecting themselves from its effects. They need to report the essential data necessary to trigger a multi-level governmental response while taking into consideration the special factors associated with the use of such weapons:

- Self-preservation of first responders and equipment.
- The scene is a crime scene.
- The situation may not be readily apparent. A scene with mass casualties and little damage may indicate a non-conventional attack.
- There may be secondary devices or multiple events.
- Critical facilities/equipment may be contaminated.
- The scope of the incident may expand contingent upon weather.
- The event may precipitate public panic.
- Establishment of hot, warm, and cold operational zones.
- Establishment of command post, ingress routes, staging areas, etc.
- The need for protective clothing and respiratory assistance.
- The need to request technical assistance, such as DECON units.
- Do not walk into or touch spilled material, or breathe vapors.
- Evaluate if situation requires evacuation or shelter-in-place. Evacuation should always be upwind and/or to higher ground.
- Control of pedestrian movement in and out of the incident zone.
- The need to approach incident site from upwind.
- Observe and report any low lying vapor clouds, dead animals, etc.

- Observe and identify visible placards, signs, or papers.
- The requirement to conduct operations using ICS.

#### **IV. TYPES OF MASS DESTRUCTION WEAPONS**

##### **A. Chemical Weapons**

Chemical agents include poisonous vapors, aerosols, liquids, and/or solids that have toxic effects on people, animals, plants or the environment. They can be delivered in a variety of ways, but are difficult to produce and deliver in lethal concentrations. When deployed outdoors they are at the mercy of the prevailing weather and often dissipate rapidly. Chemical weapons include nerve agents (e.g. Tabun, Sarin), blister agents (e.g. Mustard Gas), blood agents (e.g. Hydrogen Cyanide), choking agents (e.g. Chlorine, Phosgene), or irritants (e.g. Tear Gas)

Signs of a chemical attack may include people having difficulty breathing, eye irritation, loss of coordination, nausea, burning of nose, throat and lungs, and/or the presence of dead insects or animals.

##### **B. Biological Weapons**

Biological agents include bacteria (e.g. Anthrax, Plague), viruses (e.g. smallpox, Hemorrhagic Fevers), or toxins (e.g. Ricin, Botulinum) that can kill or incapacitate people, livestock, and crops. They can be delivered as aerosols, by contaminating food or water, or by physical transmission via insect bites or person to person contact. Biological weapons are difficult to grow and maintain as many break down quickly when exposed to sunlight and other environmental factors. However some, such as Anthrax spores, are very long-lived. Yet, irrespective of the environmental factors, biological agents are known to have been extremely deadly in past eras.

Signs of a biological attack may be delayed until the advent of physical symptoms. There may be an unusual number of sick or dying people or animals. Casualty distribution may be aligned with wind direction or connected to a specific area or event.

##### **C. Radiological Weapons**

A radiological device will generally be a combination of a conventional explosive device coupled with a quantity of radioactive material. The design is intended for the blast of the explosive to disperse lethal and/or dangerous amounts of radioactive material over a limited geographical area. In addition to causing human and animal casualties, such devices are also intended to cause economic disruption by forcing the affected area to be quarantined.

The affected area should be evacuated as soon as practical.

#### **D. Nuclear Weapons**

A nuclear device can range in size from a suitcase bomb to a multiple warhead emplaced on a intercontinental missile. The power of the weapon may range from kilotons to megatons and be designed for either tactical or strategic use. The detonation of a nuclear weapon will cause a cascade of deadly effects that will spread outward from ground zero much like a wave. These will include a blinding light, intense heat, a blast/shock wave, followed by deadly radiation. Fires and a myriad of other secondary disasters will occur as a result of the detonation.

There are three protective factors when dealing with a nuclear explosion: distance, shielding, and time.

#### **E. Explosives**

Explosive devices may take many forms and be concealed in a variety of ways. The power of such devices may range from a pipe bomb to a truck bomb or IED capable of producing massive damage. Explosive devices may also be used in combination with similar devices or other types of agents. Blast and shrapnel are the primary means of inflicting death or injury.

As with the preceding type of weapon - distance, shielding, and time are the three primary protective factors.

### **V. HAZARDOUS MATERIALS**

Hazardous materials incidents may involve one or more substances that are used to create the above types of weapons. Department personnel will respond and cope with HAZMAT incidents in accordance with procedural guidelines set forth in the City's Emergency Operations Plan (EOP) and elements of this order. Response and recovery activities will also adhere to the Incident Command System and be conducted in conjunction with other city departments and outside agencies. Technical assistance will be utilized as necessary.

### **VI. PROTECTIVE EQUIPMENT**

All specialized first responder equipment utilized by the Clayton Police Department to deal with WMD or HAZMAT incidents will meet the standards established by the Missouri State Emergency Management Agency, and the U.S. Department of Homeland Security's Science and Technology Division.

Current issued equipment includes:

Level C, Personal Protective Suit with Gas Mask and Boots.  
Three types of gloves  
Germ-X Hand Sanitizer  
Cloth Medical Face Mask.

#### **A. Reference Books**

Each sworn officer and patrol vehicle will be provided with the following reference books:

*WMD Response Guide Book*, U.S. Department of Justice, 2000.

*2004 Emergency Response Guidebook*, U.S. Department of Transportation, 2004.

### **VII. WEAPONS OF MASS DESTRUCTION PLAN**

The guidelines provided in the body of this directive shall be used in conjunction with the Weapons of Mass Destruction Plan included as an Addendum to the City of Clayton Emergency Operations Plan.

BY ORDER OF:

THOMAS J. BYRNE  
Chief of Police

TJB:dld

CALEA Reference: 46.3.4 - 5<sup>th</sup> Edition