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FEBRUARY NEWSLETTER- TERRORIST'S BOMB EXPLOSIONS

A fire truck, responding to an alarm during a street riot in upper Manhattan is firebombed; two FDNY firefighters are badly burned. A North Caldwell, N. J. executive opens a mailed package bomb in the kitchen of his home and is killed by exploding shrapnel. On February 26, 1993, a foreign terrorist bomb explodes in the basement of the World Trade Center, killing six people, injuring another 1,000 and destroying a half-billion dollars' worth of property. A domestic terrorist city kills 168 men women and children with a bomb in Oklahoma City.

Firefighters were first on the scene at these terroristÕs deadly bombings. Firefighters are required to take lifesaving action before, during, and after a bomb explodes.. Firefighter throughout the nation evacuate buildings during suspected reports of bomb placement, they provide first aid after the blast and we must stand-by and prepare for a fire and collapse, the deadly after-effects of an explosion A 10-year study by the Federal Bureau of Investigation

reveals an increase in bomb incidents throughout the United States. In 1992 alone, 2,989 reported bomb incidents killed 26 people, injured 375 and caused $12.5 million in damage.

There are three situations

There are three situations in which firefighters find themselves operating at bomb incidents and each one requires us to react differently. One is when we respond to an explosion, fire and collapse and during the operation we discover it is the result of a bomb. This was the case in the World Trade Center explosion and the Oklahoma City blast. The second situation is when we discover an unexploded bomb, grenade or storage of explosives after a fire has been extinguished. The third situation is when the fire service is called by police to prepare for a possible fire or collapse caused by an explosion.:

Situation 1. When firefighters at the scene of an explosion, collapse and fire, discover it has been caused by a bomb, they should evacuate injured to a safe area, protect the exposures, and notify the police department.

Situation 2. When discovering an unexploded bomb after a fire, firefighters must not disturb the bomb. They should evacuate the area, and prepare for a possible explosion collapse and fire and notify the police.

Situation 3. When called to a bomb incident by the police department firefighters must report to the police officer in charge; assist as requested.

Firefighters may be asked to assist police in evacuating buildings near a bomb. When requested to do this, firefighters must understand the hazards and procedures.When a bomb explodes, one of the greatest causes of death and injury is flying glass. All windows will blow

out to the street. Jagged, sharp glass pieces will fly through the air with hurricane force. All protective clothing should be worn, with eye shield down. Evacuating people from a building containing a suspected hidden bomb is different from evacuating people from a burning building. First, people being asked to leave a building in which a bomb is reported hidden should be told to take all belongings with them so there will be fewer items to search for the hidden explosives. Also, people should be directed to leave unlocked, their desks, offices, and lockers; this too will assist the bomb search and reduce damage to locks and doors. Lights should be left on, and computers and/or any humming office machinery should be shut off so searchers can hear mechanical or electrical timers.

A specific stair should be designated for evacuation. People leaving the building should be requested to leave by way of this exit. A prior search of the access leading to the stair, the entire stairway and lobby into which the stair discharges should have been conducted, looking for the hidden bomb package first, before people are allowed to leave.

Firefighters generally are not requested by police to search for bombs; police do this. However, if there are insufficient police in the community and the fire department has personnel available on the scene, the fireground commander may be asked to have firefighters assist a bomb search. Like evacuating a building, bomb searching is also different from searching for fire spread. A bomb search begins outside the building. First, vehicles parked in the street around the building are searched, or removed, then the outside around the perimeter of the building is examined for the bomb. Window sills on the first floor are often the site of a package bomb. Next, the building's interior is searched. The public spaces where a bomber could have access are examined such as lobby, stairs, bathrooms, supply closets, refuse storage areas and the roof. Then the search may start in the cellar and work upward.

Types of Bombs

Police or firefighters who search for bombs must be able to identify a bomb. Terrorists, criminals and deranged people who use bombs to kill or destroy use several common types of explosive devices.

Pipe Bomb

A pipe bomb is a fragment bomb; it kills and injures by exploding pieces of flying metal. This type of bomb can be identified by a section of pipe capped at both ends. A fuse may extend from one end. Do not touch a pipe bomb discovered at a fire.

Bottle Bomb

A bottle bomb is also called a Molotov cocktail, named after a Russian government official. It was a World War 11 anti-tank weapon (in 1993, FDNY firefighters George Kreuscher of Engine 93 and Tom Brannigan of Engine 67 were badly burned when a Molotov cocktail was thrown and exploded inside the cab of their fire apparatus). A bottle filled with gasoline and sulfuric acid is capped and wrapped in a sock soaked with potassium chlorate and sugar. When thrown, the bottle breaks and the mixing of the sulfuric acid and potassium chlorate causes the explosion and resulting fire.

Car Bomb

A car bomb is a canister usually placed inside the motor compartment of an auto. The lid of the canister is closed and sealed. A spark plug is installed through this sealed canister lid. The wire of spark plug 1 is removed from the engine spark plug and attached to the bomb spark plug. When the car is started, the bomb explodes. This type of bomb is sometimes used by organized crime.

Bag Bomb

Several sticks of dynamite placed in a shoulder-strap bag with one or two small liquid propane cylinders can create a tremendous explosion and fire. This type of bomb could be found hanging on a hook inside a restroom stall or inside a locker in a train or bus station.

Mail Bomb

A package or letter bomb sent through the mail often kills or injures the wrong person. The spouse or a relative or co-worker of the intended victim may open the mail bomb. A mail bomb can sometimes be identified by excessive weight, oil stains, lopsided or uneven packaging, excessive postage or foreign mail, airmail or special delivery indicators or the return address may be missing.

Classifications of Explosives

Three types of explosives are used in bombs: dynamite, black powder, and blasting agents. Any one of these explosives can kill firefighters. Dynamite is considered a high explosive, black powder is considered a low explosive. The only difference between them is the degree of heat or shock it takes to detonate each one. The destructive potential is the same. A blasting agent is just as powerful as a high explosive when detonated. Six Kansas City, MO, firefighters were killed when a truck carrying blasting agents exploded during a fire.

The National Fire Protection Association classifies all three Ð high explosives, low explosives, blasting agents- as "explosive materials." And the NFPA also states "No attempt should be made to fight a fire involving explosive materials." The area should be evacuated to a distance of at least 2,000 feet (610 meters).

Picric Acid

A common response to a potential explosion in New York City involves picric acid. An old, forgotten bottle of dried-out crystallized picric acid is often discovered by a teacher in a

school or the owner of a factory calling the fire department and the bomb squad to the scene for advice. Picric acid is a mixture of nitric acid and phenol. After mixture, it is highly unstable. However, the addition of water over 10 percent by content renders the mixture stable. When the water evaporates and picric acid returns to its dry state and crystallizes, it becomes a high explosive. A bottle of picric acid with dry powder inside can explode by the shock of dropping or heat of a fire.

I responded to an emergency alarm in a luxury high rise apartment house in a wealthy neighborhood in Manhattan. A bottle collector was showing several colored bottles to a friend who happened to be a chemistry teacher. The teacher noticed a picric acid bottle partially filled with crystals. He told the collector of the danger and they called the fire department. The first responding fire officer arriving in the apartment was shown the bottle. He did not disturb it, but explained the danger and asked the people to leave. He ordered the response of the bomb squad and the evacuation of four floors above and two floors below the apartment in the 42-story residence. A protective hoseline was stretched from a standpipe and all firefighters withdrew to a safe distance. The bomb squad responded and took away the bottle and its deadly contents

Lessons learned

Bomb Prevention Crime prevention and bomb prevention are synonymous. Security measures that prevent theft in a building prevent the placement of a bomb. No building can be 100 percent protected from crime or a bomb, but good security measures make a building an unappealing target.

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Questions

1. Which one is not a situation in which firefighters may find themselves operating at a bomb incident?

   A. Firefighters respond to a fire and explosion and discover it was caused by a bomb

   B. Firefighters extinguish a fire and discover an unexploded bomb

   C. Firefighters respond to assist the police searching for a bomb

   D. Firefighters overhauling after a bomb is discovered and diffused by firefighters

   Answer_____

2. What will be the greatest cause of death and injury when a bomb explodes in or around a building?

   A. The shock waves of the blast

   B. The fire resulting from the blast

   C. Flying glass

   D. The heat of the blast

   Answer_____

3. Match the following:

A. Pipe bomb	_____Lockers of airports
B. Bottle bomb	_____Fragment bomb
C. Car bomb	_____Kills wrong person
D. Bag bomb	_____Organized crime
E. Mail bomb	_____Anti-tank weapon

True or False

4. The only difference between high and low explosive is the degree of shock or heat it takes to detonate each one.

A. Tell them to take coats and packages
B. Tell them to lock desks and lockers
C. Leave windows and doors open
D. Designate a specific stair for occupants to leave the building

Answer_____

5. Which one of the following is an incorrect answer regarding evacuating people during a bomb threat?

Answer_____

Answers

1.D;2.C;3.D,A,E,C,B;4;True;5.B

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