

DOMESTIC TERRORISM AND ITS AFFECT ON THE FIRE SERVICE

STRATEGIC MANAGEMENT OF CHANGE

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ABSTRACT

Over the years, the fire service has become expert at mitigating major emergencies caused by accidental and intentional fire setting, and by acts of nature. Today, fire service agencies in the United States are faced with a new, more difficult challenge. This new challenge is that of domestic terrorism.

The problem is that most fire service agencies in the United States have done little to prepare for acts of domestic terrorism.

The purpose of this research was to gather and present information on Weapons of Mass Destruction (WMD) currently being used to perpetrate terrorist acts in world today, and to provide information that will assist fire service agencies prepare for these terrorist incidents when they occur in their communities. An action research method was used to address the following questions:

1. What is domestic terrorism?
2. What are weapons of mass destruction?
3. What should a local fire service agency do to prepare for a domestic terrorist act?

The procedures used to complete this research included a review of literature describing recent international and domestic acts of terrorism, and of operating guidelines developed by government agencies to be used during acts of domestic terrorism.

The results of this research clearly identified the need for the Portland Bureau of Fire, Rescue and Emergency Services (BFRES) to develop a plan to coordinate local, State, Federal and private sector resources to respond effectively to terrorist acts.

Recommendations included improvements in the area of response by the Portland Bureau of Fire, Rescue and Emergency Services, the medical community, other City Bureaus, and State and Local government agencies.

The need for hazard-specific procedures was also identified during the research. The research also identified the need to train first responders on routes of exposure, means of protection, health effects, and treatment and monitoring, and decontamination methods

Finally, it is recommended that multi-jurisdictional exercises be conducted to assure operational preparedness. These exercises should be conducted regularly to develop inter-agency cooperation.

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INTRODUCTION

Over the years, the fire service has become expert at mitigating major emergencies caused by accidental and intentional fire setting, and by acts of nature. Today, fire service agencies in the United States are faced with a new, more difficult challenge. This new challenge is that of domestic terrorism. The United States is no longer immune from the acts of terrorism that have been common in many parts of the world for decades.

Historically, chemical and biological agents were things to be used to study diseases, to develop vaccines, therapies, and cures, and to relieve pain and suffering. Now we must accept the fact that they can be used to inflict pain and suffering on innocent men, women, and children. We must be aware too that, based on their innate characteristics, they can be used virtually anywhere at any time. Now, when individuals have disagreements with other individuals, institutions, or society at large, they resort to much more dramatic and destructive means.

While the international terrorist threat to United States (U.S.) persons and property is the continuing concern of U.S. defense and law enforcement organizations, domestic terrorism must now receive at least as much attention. The recent increase in domestic violence is said to be associated with the rise of anti-government sentiment and the proliferation of self-styled militia and paramilitary groups; some of which take extremist positions on race, religion, federal authority, gun control, or taxation (Fischer, 1996).

The problem is that most local fire service agencies and the communities that they serve have done little to prepare for acts of domestic terrorism.

The purpose of this research was to gather and present information on the weapons of mass destruction currently being used to perpetrate acts of domestic terrorism in U.S. today, and to

provide information that will assist communities better prepare to operate at these terrorist incidents. An action research method was used to address the following questions:

1. What is domestic terrorism?
2. What are weapons of mass destruction?
3. What should a local fire service agency do to prepare for a domestic terrorist act?

BACKGROUND AND SIGNIFICANCE

On Monday, March 20, 1995, Japan was unexpectedly assailed by a serious manmade disaster. Plastic bags containing the nerve gas called sarin, which was discovered by German chemists in seeking for effective insecticides in 1930, were placed simultaneously in five subway cars in the morning rush in Tokyo. Twelve people were killed and more than 5,500 were then treated for toxic symptoms (DHHS, 1996).

On April 19, 1995, a truck bomb exploded in the front of the Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma. The bomb was made from a potent mixture of fertilizer and fuel oil and packed in the back of a Ryder truck. The blast blew off the front side of the nine-story building, collapsing floors and burying victims under masses of concrete and steel. When the smoke cleared, 168 people were dead in the worst terrorist attack on U.S. soil (FEMA, 1997).

Listed above are examples of how two separate terrorist groups chose to use weapons of mass destruction to communicate their message to the world. While terrorism has been a common occurrence for decades in some middle east countries, terrorist acts occurring in the United States is relatively new.

The Federal Bureau of Investigations (FBI) categorizes terrorism as either domestic terrorism or international terrorism. Domestic terrorism is those groups or those individuals who are indigenous to the United States and who are not controlled in any way by a foreign power. International terrorism is defined as those groups or organizations or individuals who are controlled by a foreign power or who come from a foreign land to affect us through acts domestically or internationally (PFRES, 1997).

Because terrorist acts are just now becoming a reality here in the United States, many fire service agencies have yet to recognize that the risk of a terrorist act might be a reality in the communities that they serve. In July 1995, President Bill Clinton, speaking in San Francisco to the United Nations about the challenges that the United Nations (UN) and this country will face in the next 50 years, he said the following:

New technologies and greater openness make borders more vulnerable to terrorists and to dangerous weapons. Newly independent nations offer ripe targets for international criminals and nuclear smugglers. Today, to be sure, we face no Hitler, no Stalin, but we do have enemies; enemies who share their contempt for human life and human dignity and the rule of law. Enemies who put lethal technology to lethal use. Our generation's enemies are the terrorists and their outlaw nation sponsors. People who kill children or turn them into orphans. Their reach is increased by technology. Today the threat to our security is not from enemy's missile silo but from a briefcase or a car bomb in the hands of a terrorist. The bombing in Oklahoma City, the deadly gas attack in Tokyo, all of these things remind us that we must stand against terror and support those who move away from it. The recent discoveries of laboratories working to produce biological weapons for

terrorists demonstrate the dangerous link between terrorism and weapons of mass destruction (DHHS, 1996).

The terrorism threat in the Portland area remains at a relatively low level in spite of several exceedingly high profile events that have occurred elsewhere in the United States during the recent past (PBFRES, 1997). The catastrophic attacks on the World Trade Center building in New York City and the Alfred P. Murrah Federal Building in Oklahoma City shocked the nation into the reality that there are no domestic safe havens from acts of terrorism. These two unrelated events punctuate our nation's vulnerability, and particularly highlight Portland regional area's risk of similar attack against its public officials, private and multi-national corporations and their executives, public infrastructure, and government facilities.

Historically, domestic terrorist groups have been largely issues oriented, while the few known internationally based incidents have mostly targeted the state emigrant communities and have been related to foreign disputes. Today, however, both groups are more likely to be aligned nationally and/or internationally through electronic networking. Such groups have been involved in purely criminal acts such as bank robbery, kidnapping, assassinations, and other violent acts. The issues and politics of these groups remain essentially unchanged but now include an unprecedented expression of hatred for existing forms of government.

Some militia groups and anti-tax protesters view government, and all its employees and officials, as part of a wide based conspiracy to take away their individual rights and liberties. The emergence of such groups in all parts of the country poses a serious threat to government at all levels.

A terrorist acting alone or in concert with any of the known national or international groups could readily commit acts of terrorism in the Portland regional area. The availability of

basic shelf-type chemicals and mail order biological research materials, coupled with an access to even the crudest laboratory facilities, could enable the individual extremist or an organized terrorist faction to manufacture proven highly lethal substances or to fashion less sophisticated weapons of mass destruction. The use of such weapons could result in mass casualties, long term contamination, and could wreak havoc to the city, state and national economies.

Defining Domestic Terrorism

Some find it difficult to define terrorism. Back in 1982, President Ronald Reagan designated the Federal Bureau of Investigation (FBI) as the lead agency within the Federal Government to deal with terrorism in the United States (DHHS, 1996).

The FBI defines terrorism as “the unlawful use of force against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in the furtherance of political or social objectives.” This definition includes three elements:

1. Terrorist activities are illegal and involve the use of force.
2. The actions intend to intimidate or coerce.
3. The actions are committed in support of political or social objectives (FEMA, 1997).

The FBI further categorizes terrorism as either domestic terrorism or international terrorism. Domestic terrorism is those groups or those individuals who are indigenous to the United States and who are not controlled in any way by a foreign power. International terrorism is defined as those groups or organizations or individuals who are controlled by a foreign power or who come from a foreign land to affect us through terrorist acts domestically or internationally (FEMA, 1997).

This paper has been produced to satisfy the applied research project requirement for the Strategic Management of Change course at the National Fire Academy. The project relates to

the course work by outlining the need to coordinate resources from multiple areas of state, local and federal governments when developing complex plans to deal with the increasing threat of domestic terrorism.

With respect to preparing for domestic terrorism, the research recognizes the need to address all four phases of the Change Management Model presented in the NFA course Strategic Management of Change. The four phases of the model are (1) Analysis, (2) Planning, (3) Implementation, and (4) Evaluation/Institutionalism.

Finally, this research will be used to develop an operational plan for the Portland Bureau of Fire, Rescue and Emergency Services as the department prepares for a domestic terrorist incident in the City of Portland.

LITERATURE REVIEW

A literature review was initiated at the National Fire Academy's Learning Resource Center (LRC) during June of 1999. Additional literature reviews were conducted at the Portland Bureau of Fire, Rescue and Emergency Services (BFRES) Emergency Management Section and Training Division's resource libraries in Portland, Oregon. Extensive searches were also conducted online through Internet search engines to identify published documents, Web sites, organizations, and newsletters with content relative to terrorism, both domestic and international.

The literature review targeted trade journals, magazines, textbooks, operational plans, and Internet sites that contained information on terrorism and Weapons of Mass Destruction (WMD). Applicable sources were summarized and included in this report.

Weapons of Mass Destruction

Experts generally agree that the weapons of mass destruction used by terrorist can be categorized into five terrorist incidents. These five incidents are 1) nuclear; 2) biological; 3) chemical; 4) incendiary, and 5) explosive (FEMA, 1997).

Nuclear Incidents

The most likely scenario facing public safety agencies would be an accident involving the transportation of nuclear materials within their jurisdictions. While a nuclear power plant may not be next door, materials used to operate that plant are transported throughout the United States. For the most part, such incidents would be considered a HAZMAT issue and dealt with on that basis by first responders.

The problem with radiation is that it is an invisible hazard. Unless the responding public safety agency has radiological detection equipment, or the nuclear material at issue is clearly marked and identified, there is a strong chance that the initial identification of a radiobiological or nuclear hazard will go unnoticed. An additional concern would be the availability of protective clothing and breathing gear, in sufficient quantities, to protect first responders.

Radiological incidents can be divided into three categories:

1. Radiological dispersal devices – detonation of a conventional explosive which incorporated radioactive materials as a component of the device.
2. Detonation of a large explosive device (truck/vehicle bomb) near a nuclear power plant, research nuclear reactor or a passing radiological cargo transport, with the intent of disrupting the containment and shielding of the radioactive materials.
3. Nuclear bomb.

Biological Agents

Biological agents are more deadly than chemical agents and occur in nature as well as being developed. Large numbers of naturally occurring poisons have also been examined to determine their value as chemical warfare agents; these include Caspian (an extract of cayenne pepper and paprika), Rican (a toxic substance found in the castor bean), and saxitoxin (a toxic substance secreted by certain shellfish).

Of nuclear, biological and chemical agents, biological agents are by far the cheapest to produce.

The most practical method of initiating infection using biological agents is through the dispersal of agents as minute, airborne particles (aerosols) where finely divided particles of liquid or solid suspended in a gas are sprayed over a target where the particles may be inhaled.

An aerosol may be effective for some time after delivery, since it will be deposited on clothing, equipment and soil. When the clothing is used later, or dust is stirred up, responding personnel may be subject to a secondary dispersal.

Biological agents may be able to use portals of entry into the body other than the respiratory tract. Individuals may be infected by ingestion of contaminated food and water or even by direct contact with the skin or mucous membranes through abraded or broken skin. This makes the use of protective clothing a must, along with protection of the respiratory tract through the use of a mask with biological filters or SCBA.

In the United States, biological warfare agents are classified into three categories; (1) pathogens (microorganisms); (2) toxins and, (3) bio-regulators/modulators (City of Beaverton, 1998).

1. Pathogens: Out of the hundreds of thousands of microorganisms known, only a few hundred can produce disease in humans. There are four types of pathogens:
 - (a) Bacteria occur nearly everywhere and are the most common. They are present in soil, water, air, food and most surfaces. Many serious human diseases including; meningitis, gonorrhea, tuberculosis, anthrax, dysentery's, and salmonella come from bacteria.
 - (b) Rickettsiae is a smaller parasite transmitted to humans by ticks, lice, fleas and mosquitoes. It is harder for it to produce since it needs a host to replicate. Primary rickettsial disease affecting humans are; typhus fever, spotted fever, Q fever and scrub typhus.
 - (c) Fungi are indicative of the plant family and include; molds, mildew, rusts, mushrooms and yeast. Fungi are more destructive to plant matter than it is to humans.
 - (d) Viruses are the smallest living agents. Like rickettsiae, they require a living host for replication. Inhalation and ingestion are common to contracting a virus as it can pass through most filters that normally stop bacteria. Diseases include; rabies, polio, small pox, chicken pox, influenza and the common cold.
- (2) Toxins: Toxins are toxic substances (poisons) of natural origin produced by an animal, plant, or microbe. They differ from chemical agents in that they are not manmade and typically they are much more complex materials.
 - (a) Several types are easily extracted for use as a terrorist weapon and, by weight, are usually more toxic than many chemical agents.
 - (b) The two main types of toxins are cytotoxins and neurotoxins.

1. Cytotoxins interfere with metabolic processes like digestion, respiration, and circulation.
2. Neurotoxins induce nerve agent type symptoms like convulsions and pinpointed pupils.

(c) There are four common toxins thought of as potential biological agents:

1. Botulism, considered the most effective toxin. Death occurs within six hours and contaminates the surrounding area.
2. Ricin, derived from the castor bean and available worldwide.
3. T-2 (tricothecene mycotoxins) from molds.
4. SEB (staphylococcus enterotoxin type B) from rotting foods.

(3) Bio-regulators/modulators is a kind of catchall category for toxins. All other agents of biological origin that can be found in the human body that can potentially cause severe or harmful effects are put into this class.

Exposure to biological agents, unlike chemical agents, may not be immediately apparent. Casualties may occur minutes or hours to days or weeks after an incident has occurred. There are currently no effective monitoring devices available for first responders for use in determining whether they are involved in an incident involving biological agents (FEMA, 1997).

Some clues may be present that could be indicators that a biological incident involving biological agents has taken place.

- Unusual numbers of sick or dying people and animals are present.
- Reported illness reflects an unusual or impossible agent for the geographic area or there is an unusual distribution of the disease.

- Biological attacks will be different from natural outbreaks of disease. Medical centers may experience a steady stream of patients instead of the more random entry of patients to the emergency rooms.

Chemical Agents

Chemical agents are compounds that, through their chemical properties, produce lethal or damaging effects on man.

Chemical warfare agents designed to incapacitate by entry through the skin are probably best exemplified by the well-known mustard gas and lewisite (chlorovinyl dichloroarsine). These agents severely burn or blister the skin and may cause permanent damage to the lungs, if inhaled. Mustard gas was especially feared during World War I, and large stocks are still held by some countries, including the United States. Harassing agents, such as tear gas, have been developed to produce a less severe effect.

Chemical agents are defined as any chemical substance intended for use in military operations to kill, seriously injure, or incapacitate humans because of its physiological effects (City of Beaverton, 1998).

Unlike biological agents, the onset of medical symptoms is measured in minutes to hours instead of days. Additionally, easily observed signatures such as colored residue and dead foliage, insects, and animals are present. Listed below is a general overview of chemical agents.

- (1) Nerve agents – Chemical agents that affect the transmission of nerve impulses by reacting with the enzyme cholinesterase, permitting an accumulation of acetylcholine and continuous muscle stimulation. The muscles tire due to over stimulation and begin to contract. Nerve agents are colorless to light-brown liquids, some of which are volatile.

Toxic liquids are tasteless. Nerve agents may be absorbed through the skin, respiratory tract, gastrointestinal tract, and the eyes.

(a) Similar in nature to some pesticides, but with a higher degree of toxicity. All are toxic in small concentrations; a small drop could be fatal.

(b) Nerve agents resemble water or light oil in pure form and possess no odor.

(2) Choking agents – Chemical agents that irritate the alveoli in the lungs. This irritation causes the alveoli to constantly secrete fluid into the lungs. The lungs slowly fill with this fluid (called pulmonary edema), and the victim dies from lack of oxygen.

(a) Chlorine and phosgene, which are common industrial chemicals, are choking agents.

(b) Most people will recognize the odor of chlorine; phosgene has the odor of newly cut hay.

(c) Both agents are gases and must be stored in bottles or cylinders.

(3) Blood agents – Chemical agents that act upon the enzyme cytochrome oxidase. This allows the red blood cells to acquire oxygen, but does not allow them to transfer oxygen to other cells. Body tissue decays rapidly due to lack of oxygen and retention of carbon dioxide (first the heart and then the brain are affected).

(a) Common blood agents include hydrogen cyanide and cyanogen chloride. Cyanide and cyanide compounds are common industrial chemicals that emergency responders deal with at times.

(b) All blood agents are toxic at high concentrations and lead to rapid death.

(c) In pure form, they are gases, but under pressure they become liquids.

(d) The aromas of bitter almonds or peach blossoms are potential warning signs of a blood agent.

- (4) Blistering agents – Chemical agents that affect the eyes, respiratory tract, and skin, first as a cell irritant and then as a cell poison. Blister agents initially cause irritation of the eyes, reddening of the skin, then blistering or ulceration, followed by systemic poisoning.
- (a) Similar in nature to other corrosive materials first responders may encounter. These agents readily penetrate layers of clothing and are quickly absorbed into the skin.
 - (b) All blistering agents are very toxic, but not as toxic as nerve agents. A few drops on the skin can cause severe injury, and three grams absorbed through the skin can be fatal.
 - (c) Blister agents are heavy, oily liquids, and in a pure state they are nearly colorless and odorless. Slight impurities in the agent give them a dark color and an odor suggesting mustard, garlic, or onions.
- (5) Irritant or tear agents – Compounds that cause a large flow of tears and intense eye pain and irritation. The effects are immediate but transient.
- (a) Are also known as Riot Control Agents and tear gas.
 - (b) Generally they are non-lethal; however they can result in asphyxiation under certain circumstances.
 - (c) Common irritating agents include chloropicrin, MACE (CN), Tear Gas (CS), capsaicin/pepper spray, and dibenzoxazepine (CR).
 - (d) Several types of irritation agents are available for purchase over the counter at local stores.

Incendiary Agents

Multiple fires may indicate the use of accelerants such as gasoline, rags, or other incendiary devices. While fire can be a devastating weapon of choice for domestic terrorists,

most communities are prepared to respond to and operate at the scene of major fires. Incendiary devices are commonly used by domestic terrorist in personal or family disputes, they are rarely used as a weapon of mass destruction.

Explosive Devices

The U.S. Department of Transportation (DOT) defines an explosive as a substance or article, including a device, designed to function by explosion. An explosion is defined as an extremely rapid release of gas and heat (FEMA, 1997).

It is estimated that 70 percent of all terrorist attacks worldwide involve explosives. It is apparent that bombs are the current weapon of choice amongst terrorist groups. The FBI reports that of 3,163 bombing incidents in the U.S. in 1994, 77 percent were due to explosives. In these situations 78 percent of all bombs detonated or ignited. Another 22 percent failed to function as designed; a warning or threat preceded only 4 percent. (FEMA, 1997).

Explosions rapidly release gas and heat, affecting both structures and people. Bombings are the types of terrorist attacks most likely to be encountered by fire first responders. Bombs nearly always work as designed. An important point to remember is that explosions can cause fires, and fires can cause explosions.

Not all bombings in this country fall under the category of domestic terrorism, but most of the violence associated with anti-government attacks takes this form. According to a report from the Federal Bureau of Alcohol, Tobacco and Firearms (ATF), bombings or attempted bombings increased from 2,098 in 1990 to 3,199 in 1994, a 52 percent increase. Property damage from bombings rose to \$7.5 million, with 308 people injured and 31 killed (Fisher, 1996).

Preparing for Terrorist Acts

Domestic terrorism is becoming a very serious problem in the United States. Recently, the City of Portland has become more concerned about domestic terrorism. Portland, Oregon is a major metropolitan port city with a population base of over 560,000 people. As the largest city in the State of Oregon, Portland is host to the State's only International Airport, and most Federal agencies have offices in the downtown core area of the city.

In the last few years, civilian experience with Weapons of Mass Destruction events has demonstrated that an effective response requires timely, appropriate, and well-coordinated community actions. Recognizing this fact, the City of Portland applied for and was granted a \$400,000 Federal grant to help establish a Metropolitan Medical Strike Team (MMST). Part of Portland's MMST system will be a new professional/technical strike team that will train, obtain needed equipment, and prepare to work safely in nuclear, biological, and chemical environments.

This professional/technical strike team will be made up of the City Bureaus of Fire, Police, and Emergency Communications. It will also include County Public Health, private ambulance companies, and local hospitals. Many of these agencies have begun to train and drill together in preparation for a coordinated, multi-agency response to terrorist incidents.

Terrorist incidents create a unique environment in which to manage emergency response. Local responders will be the first on-scene during an actual incident and local government continues to have primary responsibility for protecting public health and safety. The local responders will manage the incident until the FBI assumes command of the incident by virtue of its legal authority. The Federal Response Plan (FRP) establishes a process and structure for the systematic, coordinated, and effective delivery of Federal assistance to address the consequences

of any major disaster or emergency declared under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (FRP, 1999).

In June of 1995, the White House issued Presidential Decision Directive 39 (PDD-39), “United States Policy on Terrorism.” PDD-39 validates and reaffirms existing lead agency responsibilities for all facets of U.S. counterterrorism efforts. The Department of Justice is designated as the lead agency for threats or acts of terrorism within U.S. territory. The Department of Justice assigns the lead responsibility for operational response to the FBI (FRP, 1999).

The response time window for minimizing loss of life and property during an incident involving a weapon of mass destruction is significantly smaller than typical emergency responses. Failure to identify a potential weapon of mass destruction incident will put first responders at risk of exposure to the agent and/or secondary contamination (PBFRES, 1997).

There may be circumstances when no action is the appropriate action to take. As with industrial hazardous material incidents, if the first responders at the scene are not equipped to enter into a contaminated environment, search and rescue of victims will have to wait for the arrival of specially trained and equipped teams.

A declaration of local emergency should be considered to expedite the availability of state and federal resources. Realistically, in cases of weapons of mass destruction, the Governor may make the declaration on behalf of the city before the process is completed. If a WMD incident were to occur in Portland, the National Guard would provide the State of Oregon with ready available assets to augment the first responders. Normally, within 12 hours, National Guard Units can be mobilized to their armory and prepare to deploy to the incident site (DOD, 1997).

Relevance to the NFA course Strategic Management of Change

Today, emergency responders and others in emergency services who support them face new challenges that seriously imperil not only the public but also those very persons whose job it is to protect and help the public. The risks faced in today's world pose threats for which the average emergency responder may not be prepared. It is critical that emergency responders understand the implications of these modern threats and know proper response procedures and the limits of safe and prudent response. It is critical that leaders in the fire service recognize that the risk of domestic terrorism is real, and that they must help the communities that they serve prepare for the possibility of a terrorist act.

With respect to preparing for domestic terrorism, the research recognizes the need to address all four phases of the Change Management Model presented in the NFA course Strategic Management of Change. The four phases of the model are (1) Analysis, (2) Planning, (3) Implementation, and (4) Evaluation/Institutionalism.

PROCEDURES

The action research procedure used in this study began with a literature review conducted at the Learning Resource Center (LRC) at the National Fire Academy in Emmittsburg, MD in June of 1999. Additional literature reviews were conducted at the Portland Bureau of Fire, Rescue and Emergency Services (BFRES) Emergency Management Section and Training Division's resource libraries in Portland, Oregon. Extensive searches were also conducted online through Internet search engines to identify published documents related to terrorism, both domestic and international.

The literature review focused on three areas: (1) a comprehensive definition of domestic terrorism; (2) identification of the types of Weapons of Mass Destruction; and (3) information on what local fire service agencies could do to prepare of a terrorist incident in their community. This study attempts to explore the interrelationship between the unpredictability of terrorist incidents coupled with the need for fire agencies to prepare for the possibility of an event occurring community.

A personal interview was also conducted with Battalion Chief Steve Muir. Chief Muir is Emergency Manager for the Portland Bureau of Fire, Rescue and Emergency Services. In this role he serves as the Emergency Manager of the City of Portland, Oregon. Chief Muir assisted the research by supplying the author with much of the reference material used in the literature review.

Assumptions

The procedures used to complete this research project were based on two basic assumptions. First, it was assumed that all authors cited in the literature review performed objective and unbiased research. Second, it was assumed that all of the documents cited were accurate and current.

Limitations

The literature research was limited by the fact that few fire service agencies have well-developed domestic terrorist response plans that could be researched. The research was further limited by the fact that there have been relatively few acts of terrorism conducted in the U.S. to gain experience from.

The six-month time limit imposed by the National Fire Academy for the completion of the Executive Fire Officer applied research project, and the fact that the City of Portland is still

in the process of developing an operational plan for domestic terrorism, made it difficult to evaluate the recommendations outlined in this project.

RESULTS

The procedures used to complete this project to satisfy the requirements of the National Fire Academy's Strategic Management of Change course used the action research method. A literature review was conducted to answer the following three questions.

Question No. 1. What is domestic terrorism?

The Federal Bureau of Investigations (FBI) categorizes terrorism as either domestic terrorism or international terrorism. Domestic terrorism is those groups or those individuals who are indigenous to the United States and who are not controlled in any way by a foreign power. International terrorism is defined as those groups or organizations or individuals who are controlled by a foreign power or who come from a foreign land to affect us through acts domestically or internationally (PFRES, 1997).

Terrorism is the unlawful use or threatened use of force or violence by a person or an organized group against people or property with the intention of intimidating or coercing societies or governments, often for ideological or political reasons (City of Beaverton, 1998).

Question No. 2. What are Weapons of Mass Destruction (WMD)?

Experts generally agree that the weapons of mass destruction used by terrorist can be categorized into five terrorist incidents. These five incidents are 1) nuclear; 2) biological; 3) chemical; 4) incendiary, and 5) explosive (FEMA, 1995).

Question No. 3. What should local fire service agencies do to prepare for a terrorist act in their community?

Currently in the U.S., communities have minimal capabilities for identifying and responding to incidents involving WMD. As more equipment and training is available for handling these types of terrorist incidents, more detailed plans and procedures will evolve.

Even though Portland Battalion Chief Steve Muir confirmed that the threat of a chemical, biological or radiological materials being used in a domestic terrorist act is low, he stressed the need for all responders to be made aware of the potential. Chief Muir impressed the importance of having all first responders include the probability of such attacks during their situation assessment, when approaching/arriving at the scene of a possible terrorist attack.

The research identified the need to coordinate the resources of the National Guard, state police, local hospitals, county health agencies, and additional fire and emergency medical personnel from outlying municipalities. The research pointed out the benefit of having mutual aid agreements in place with neighboring fire and medical service providers.

The results of the research identified that the Portland Bureau of Fire, Rescue and Emergency Services, and the City of Portland needs to improve their ability to respond to acts of domestic terrorism. The City of Portland began to take steps to prepare by requesting a grant from the Federal Government to establish a Metropolitan Medical Strike Team (MMST); similar to the plan developed by the Seattle Fire Department. Portland was successful in obtaining grant approval, and is now just beginning the process of developing their MMST.

Because of the six-month time limit placed on the applied research project by the National Fire Academy, full development and implementation of Portland's MMST operational plan could not be outlined in this research.

Preparation to respond to domestic terrorist events was identified as a critical need in Portland. While awaiting full completion of Portland's MMST operational plan, a brief operational plan was distributed to the fire first responders in Portland. Attached in appendix A is a copy of this operational guideline titled Terrorist/WMD Incident.

DISCUSSION

This research was a preliminary attempt to identify the types of terrorist acts occurring in the U.S. today. It was hoped that by identifying the types of domestic terrorist acts occurring in the U.S., that the Portland Bureau of Fire, Rescue and Emergency Services could better prepare to mitigate a domestic terrorist incident.

Those of us working for local fire service agencies in the U.S. need to realize that terrorism has become not just a special concern for those who travel or live overseas. In very recent years terrorism has become a subject of special interest for all of us, no matter how far from the border or remotely located we are. In fact several of the more terrorist-related events have occurred in places where we would have least expected it. The April, 1995 destruction of the Alfred P. Murrah Federal Building in Oklahoma was a terrorist act which few of us would have ever thought possible.

Chemicals and biological agents were once things to be used to study diseases, to develop vaccines, therapies, and cures, and to relieve pain and suffering. Now we must accept the fact that they can be used to inflict pain and suffering on innocent men, women, and children. This is a big concern/problem for the fire service and the communities that they serve because we are now dealing with weapons of mass destruction of remarkable potency. As little as one

gram of anthrax has the ability to kill millions of our citizens if deployed appropriately (DOHHS, 1995).

The weaponry is remarkably cheap technology as weapons of destruction go. Some 25 years ago United Nations scientists, attempting to quantify this, looked at the relative cost of killing people per square kilometer. The observation made was that conventional weaponry would effect lethality over a square kilometer measured in a fairly intricate way. These scientists priced conventional weaponry at some \$2,000 per killing in that range. In order of magnitude, nuclear weaponry at some \$800, chemical weaponry at \$600, biological weaponry at \$1. Biological weapons are potent, accessible and cheap (DOHHS, 1995).

While terrorist groups can produce certain WMD very cheaply, the cost to the U.S. is escalating dramatically as governments better prepare to combat domestic terrorism. The General Accounting Office of the United States finds it very difficult to estimate the amount of tax dollars being spent to combat terrorism in the U.S. According to a GOA report filed in December of 1997, while Department of Defense (DOD) and the Department of Energy (DOE) estimated spending accounted for 76 percent of the unclassified fiscal year 1997 terrorism-related funds, other agencies' resources dedicated to combating terrorism have significantly increased in recent years. For example, the FBI resources increased five-fold. The FBI nearly tripled the authorized staffing level dedicated to combating terrorism (GAO, 1997).

A thorough understanding of the types of Weapons of Mass Destruction (WMD) being used by today's domestic terrorist is essential to the fire first responder. Fire service personnel must realize that the initial actions taken by the first responders will affect the final outcome of the incident.

RECOMMENDATIONS

It is difficult for civil government agencies to prepare for WMD incidents. Most civil agencies now have some kind of Hazardous Materials (HAZMAT) response team availability. While these teams and their equipment can form the core of an element that responds to WMD incidents, they are likely to be challenged beyond their current capability in terms of knowledge, staffing and equipment. The numbers of potential casualties and the extent of the areas involved can very quickly overwhelm the capabilities of any response organization.

The research identified the need for local fire service agencies to develop or gain access to subject matter experts that could be available within the first few hours of a terrorist incident using WMD. These subject matter experts would provide advice and reference materials describing the hazards, the effects and recommended protective response actions.

Beyond technical experts, governments will need to secure the assistance of other agencies in the event of a domestic terrorist incident. The research identified the need to coordinate the resources of the National Guard, state police, local hospitals, county health agencies, and additional fire and emergency medical personnel from outlying municipalities. The research pointed out the benefit of having mutual aid agreements in place with neighboring fire and medical service providers.

The need for hazard-specific procedures was also identified during the research. First responders need awareness training specific to WMD hazards so that they can quickly recognize victim symptoms and other characteristics of such an incident, which may distinguish them from other hazardous materials incidents.

The research also identified the need to train first responders on routes of exposure, means of protection, health effects, and treatment and monitoring, and decontamination methods.

The emergency medical community should be provided training on the handling of mass casualties and on the requirements of triage.

The research also pointed out the need for multi-jurisdictional exercises to be conducted to assure operational preparedness. These exercises should be conducted regularly to develop inter-agency cooperation.

Finally, this research will be used to develop an operational plan for the Portland Bureau of Fire, Rescue and Emergency Services as the department prepares for a domestic terrorist incident in the City of Portland.

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Appendix A

TERRORIST / WMD INCIDENT OPERATIONAL GUIDELINES

I. PURPOSE

- A. To provide for the coordinated and safe response to possible terrorist incidents within the city of Portland.
- B. To provide general procedures for the timely, efficient and safe response by City personnel to terrorist incidents, to include bomb threats, mail bombs, and/or the discovery of suspicious object that could be an explosive device.
- C. This plan is intended to be used as a framework for the development of the Weapons of Mass Destruction (WMD) Threat Response Plans for City facilities.

II. SITUATIONS AND ASSUMPTIONS

A. SITUATION

1. Any government facility, including public schools, libraries, reservoirs and recreation facilities, are potential targets for domestic or international terrorist, militant groups or any other person desiring to plant or mail an explosive, incendiary, chemical or biological device.
2. Even though most of the bomb threats received are false, each situation has to be handled as if it were real, until it is determined otherwise.
3. Most bombs, including mail bombs, are homemade and are limited in their design only by the imagination of and resources available to the bomber. The only common denominator that exists among bombs is that they are designed or intended to explode.
4. Increased physical security measures in response to terrorist threats can generate inconveniences for the public and city employees.
5. There is an increasing possibility that a "Weapon of Mass Destruction" may be used within the city. Such weapons include chemical, biological agents, radioactive materials, and large conventional explosions such as truck/car bombs.
6. In the case of a found suspected explosive device, a mutual aid request will need to be made to the Portland Police Explosives Device Unit (EDU).

B. ASSUMPTIONS

1. Threats made against “government” in general should be viewed as a threat against the city.
2. If a terrorist incident occurs, proper planning will instill confidence in the leadership and reduce the potential for personal injury and property loss.
3. Proper planning can also reduce the threat of panic. Once a state of panic has been reached, the potential for injury and property damage is greatly increased. In the context of a bomb threat, panic is the ultimate achievement of the caller.
4. Even though the threat of chemical, biological or radiological materials being used in an attack is low, all responders need to include the probability of such attacks during their situation assessment, when approaching/arriving at the scene of a possible terrorist attack.

III. BACKGROUND – TERRORISM

A. DEFINITION

Terrorism – The unlawful use or threatened use of force or violence by a person or an organized group against people or property with the intention of intimidating or coercing societies or governments, often for ideological or political reasons.

B. POSSIBLE TYPES OF TERRORIST INCIDENTS

1. Assault and Battery.
2. Arson.
3. Homicide (Assassination).
4. Bombings or bomb threats.
5. Interruption of resources, utilities, and/or services.
6. Kidnapping and Extortion.
7. Threat to use or the use of chemical, biological or radiological agents.

C. POTENTIAL TARGETS

1. Government/Diplomatic facilities and events.
 - a. High profile court cases.

- b. Public and private schools, including universities and research centers.
 - c. Political fundraisers, campaigns and conventions.
 2. Religious establishments and events.
 3. Utilities.
 4. Transportation.
 5. International Businesses/Corporations.
 6. International sporting events.
- D. POTENTIAL CONSEQUENCES OF A TERRORIST INCIDENT
 1. Mass fatalities and morgue operations.
 2. Mass Casualties.
 3. Entrapment/Structural Collapse.
 4. Hazardous Materials Incident.
 5. Resource Shortage.
 6. Airborne Pathogens.
 7. Managing victims' families.
 8. Sheltering and Care of displaced people.
 9. Critical Incident Stress Debriefing/ Mental Health support for responders, victims and families of victims.
 10. Traffic Management.
 11. Crowd Control.
 12. Hostage Negotiations.
 13. Arrival of local, national and international media.
 14. Arrival of expedient volunteers, skilled and unskilled.
 15. Arrival of politicians and other dignitaries.

IV. ORGANIZATION AND RESPONSIBILITIES

A. ORGANIZATON

1. The Incident Command System will be used at the incident scene as the organizational structure for response activities. The structure will be expanded as needed by the Incident Commander.
2. When a suspected device is found the Portland Police Bureau will assume control of the incident.
3. If an explosive device detonates causing injuries, fatalities and or starts a fire, the Fire Bureau may assume command during the life safety and fire suppression operations or a unified command between police and fire could be established.

RESPONSIBILITIES

1. All
 - a. Conduct size-up of scene.
 - (1) Approximately how many casualties and fatalities.
 - (2) Was there a structural collapse or is there a potential for a structural collapse. Are there victims trapped in the collapse?
 - (3) Are there any indications that the explosion dispersed a chemical, biological or radiological agent?
 - (4) Did the explosion start a release of industrial hazardous materials?
 - b. Observe conduct of the crowd. Identify possible witness or suspicious looking individuals.
 - c. Scene security and preservation of evidence.
 - d. Check the immediate area to where you are working for a possible secondary device.
2. Fire
 - a. Fire suppression.
 - b. Command and Control, as needed.
 - c. Light and heavy rescue.

- d. Triage and treatment of victims.
 - e. Hazardous Materials Response (as needed).
 - (1) Detection/identification.
 - (2) Victim recovery/rescue.
 - (3) Scene stabilization.
 - (4) Decontamination of victims, response personnel and equipment.
3. EMS – Transport victims.
4. Police Bureau
- a. Command and Control.
 - b. Scene security.
 - (1) Establish and maintain perimeter.
 - (2) Coordinate with Portland Department of Transportation on detour route(s).
 - (3) Coordinate with Fire Bureau.
 - (4) Coordinate/establish access controls for entry into incident scene.
 - c. Conduct Criminal investigation.
 - (1) Scene documentation.
 - (2) Evidence collection (including from victims transported to hospitals) and preservation.
 - (3) Identify/interview possible witnesses.
5. Federal Bureau of Investigations (FBI)
- a. While the FBI would like to be notified of potential/confirmed bomb incidents, as a courtesy, their response will be limited to incidents involving federal buildings.
 - b. In cases where a found “bomb” has been defused they will provide assistance in investigations being conducted to determine the manufacturer.

6. Bureau of Alcohol, Tobacco and Firearms (ATF).
 - a. ATF does not need to be notified unless the incident is in/on federal property.
 - b. They will assist local law enforcement after a bomb has exploded or assisting in the identification of a “defused” explosive device.