

Miami-Dade Fire Rescue Department's Role in Improving Interagency Response  
to Terrorist Incidents

EXECUTIVE ANALYSIS OF FIRE SERVICE OPERATIONS  
IN EMERGENCY MANAGEMENT

BY: Carlos J. Castillo  
Assistant Fire Chief  
Miami-Dade Fire Rescue Department  
Miami, Florida

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## ABSTRACT

The problem was that the Miami-Dade Fire Rescue Department (MDFR) had not determined if their response plans to a major terrorist incident in Miami-Dade County needed to be revised in order for the department to function more effectively in a Unified Command structure.

The purpose of this research was to examine MDFR's Weapons of Mass Destruction (WMD) response procedures and identify what steps could be taken to improve the department's ability to carry out their mission in a multi-agency scenario.

The historical research method was used to identify (a) the fire department's role in a WMD incident, (b) other agencies that will respond to a local WMD incident and their roles and responsibilities, and (c) interagency coordination and Unified Command lessons learned from past WMD responses.

Terrorist incidents require a multidisciplinary response. In addition to the fire service, many agencies that do not customarily respond to emergencies are called to respond.

The initial step in this research project was to identify a problem statement. This was followed by the design of research questions to best address the problem.

The research questions developed from the identification of MDFR's local responsibilities compared to other fire-rescue departments, to an examination of outside agencies that will respond to a local WMD event, and finally, to the exploration of lessons learned from previous responses.

A review of professional journals, books, and after action reports of recent terrorist incidents and past disasters was conducted and supplemented by Internet searches. The results of this study showed that fire departments are responsible for establishing

an incident management structure that will enable outside agencies to become part of the decision-making process. Many agencies will respond to major WMD incidents. A Unified Command structure is nationally recognized and has proven effective in past multi-agency responses.

It is recommended that MDFR work toward accepting and implementing the ICS and Unified Command in Miami-Dade County and throughout the State of Florida. This can be achieved by MDFR improving working relationships with representatives from agencies that will respond to a WMD incident locally and by encouraging on-going review and revision of response plans, participation in working groups, and joint exercising to improve on-scene interagency coordination.

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## INTRODUCTION

The attacks of September 11, 2001 in New York and the Pentagon drew international attention to the role of first responders in mitigating the effects of terrorist incidents. After action reports, books, magazine and journal articles, and the Internet provide useful information to improve a department's capabilities to respond to incidents involving weapons of mass destruction (WMD) and to work effectively with the many entities that will respond.

In addition, local, state and federal agencies have assumed a more visible role in the preparation and response to WMD incidents to support local jurisdictions.

The problem was that the Miami-Dade Fire Rescue Department had not determined if the department's response plans needed to be revised to function more effectively in a Unified Command structure in response to a major terrorist incident in Miami-Dade County.

The purpose of this research is to examine Miami-Dade Fire Rescue's procedures for WMD response and determine what steps could be taken to improve its ability to carry out its mission in coordination with the various entities that will most likely respond. The first step in improving interagency coordination, for an effective response to a major incident, is to identify the likely responders and document their responsibilities and authority.

The historical research method was used to answer the following questions:

1. What is the fire department's role in response to a WMD incident?
2. What other agencies or departments can be expected to respond to a WMD incident within MDFR's jurisdiction and what are their roles and responsibilities?

3. What lessons have been learned regarding Unified Command and interagency coordination from past responses to terrorist incidents?

### **BACKGROUND AND SIGNIFICANCE**

The Miami-Dade Fire Rescue Department provides fire suppression, Emergency Medical Services, Hazardous Materials, Technical Rescue and other emergency services to unincorporated Miami-Dade County and the 26 municipalities that comprise the Miami-Dade Fire Service District. Miami-Dade County spans 2000 square miles and the fire district serves a resident population of 1.6 million people. In addition to the resident population, Miami-Dade plays host to more than 10 million tourists annually.

Miami-Dade County is a culturally and ethnically diverse community. From the violence of the “Cocaine Cowboys” in the early 1980’s to the vocal, primarily Anti-Castro Cuban-American community and the civil unrest following police-involved shootings, Miami has had its share of disruptions. Miami has also played host to the Pope, several Super Bowls and to a meeting of Heads of State for the Summit of the Americas.

Although it was an act of nature and not a human-generated disaster, Miami-Dade Fire Rescue (1993) reported that Hurricane Andrew in 1992 brought to light the difficulties that arise when a multitude of agencies and individuals descend on a community that had experienced the worst disaster in its history. Some of those who came were expected; most were not. The fire department implemented many Incident Command System (ICS) functions it had never before used. The lessons learned by the department were incorporated into an updated hurricane response plan.

The fire service role in managing major incidents has expanded over the years. The development of emergency medical services in the 1970s, hazardous materials

response in the 1980s, and technical rescue/urban search and rescue and disaster response in the 1990s clearly demonstrate this growth. Each of the aforementioned areas of responsibility incorporated lessons learned in the evolution that preceded it to improve the fire service efficiency and effectiveness.

Effective fire and emergency services response to WMD incidents must consider the lessons learned from previous programs and adapt to the increasing threat of terrorist attacks. Terrorist incidents have the potential to test every capability of the fire service. The 1995 Oklahoma City bombing and the 9/11 attacks resulted in explosions, fire, multiple casualties, hazardous materials concerns, and structural stabilization for search and rescue. Following the September 11, 2001 attacks, MDFR responded to hundreds of “suspicious package” calls in the community.

The potential for further attacks using weapons of mass destruction is increasing. Harris (2002) points out that a dozen countries are believed to have chemical weapons programs and at least 13 are said to be pursuing biological weapons. News reports following the Oklahoma City bombing demonstrated the ease of acquiring the technical information necessary to make explosive devices through the Internet.

The implementation and use of a nationally recognized incident management framework, with common terminology for all agencies that respond to major emergencies, is essential. All of the after action reports and related literature discussed interagency coordination issues.

The significance of this study to Miami-Dade Fire Rescue is fourfold:

1. The recommendations from this applied research project will be incorporated into the department’s strategic and training plans.

2. The information and recommendations in this research project will form the foundation for operating procedures that will enable Miami-Dade Fire Rescue to more effectively carry out its mission.
3. The information will serve as a model for future studies.
4. Finally, this research will be beneficial to other fire rescue departments in their preparation and management of major incidents within their jurisdictions.

This research relates to Unit 3 of the NFA Course Executive Analysis of Fire Service Operations in Emergency Management. Unit 3, Incident Command System, deals with ICS and, specifically, Unified Command. The unit describes the need for a Unified Command structure when more than one agency is responsible for decision-making within a single jurisdiction. Response to WMD incidents requires involvement of multiple agencies. ICS and Unified Command, as shown in Unit 3, provide a sound framework for the necessary interagency coordination.

Improving the fire service response to terrorist incidents will contribute to all four of the United States Fire Administration's operational objectives. A coordinated, multi-agency response to weapons of mass destruction incidents will enable the fire service to accomplish its main mission of saving lives. As experienced in past events, persons in all age groups, including firefighters have lost their lives to terrorists' actions. In addition, identifying ways for the many agencies that respond to these major emergencies to work together is an integral component of a comprehensive, multi-hazard risk-reduction plan led by the fire department.



## LITERATURE REVIEW

A common theme in the policies and plans for emergency response that have been effective and survived the test of time is that they have included first responders' input in the development process.

In an editorial, Staten (2001) describes how Georgia Congressman Chambliss, a former firefighter, seems to have a particularly clear focus on the greater issues involved in coordinating the WMD response at the local level. The Congressman clearly illustrates that the "first responders" in the local community are the first and probably most important line of defense, with federal response agencies acting in a mutual aid role and providing additional resources, personnel, and knowledge.

### Incident Command System/Unified Command

Christen and Maniscalco (2001) relate that the National Interagency Incident Management System – Incident Command System (NIIMS-ICS) was developed as a result of the problems with interagency communications, coordination, and resource allocation during California wildfires in the 1970s. In many instances turf battles ensued as there was no clear-cut leader or incident manager. Agencies competed for scarce resources.

Today, most fire departments, many law enforcement agencies, and other departments that may be called on to respond in a major emergency utilize ICS. FEMA has adopted ICS and the agency's National Emergency Training Center provides courses on the subject. One of the objectives of President Bush's Office of Homeland Security (2002) is to promote a national incident management system.

The Arlington County After Action Report of the 9/11 Pentagon response (2002) attributes the effectiveness of their ten-day operation to the understanding of and compliance with the provisions of ICS and Unified Command by the primary response participants.

In its after action report of the New York Fire Department (NYFD) response to the World Trade Center incident, McKinsey (2002) pointed out the need for NYFD to expand its use of the Incident Command System, including training of personnel most likely to use it.

Who's in charge? A concern that has been expressed by other agencies relates to the assurance that they won't cede responsibility for determining strategies for accomplishing their missions. A basic tenet of Unified Command is that there must be one overall Incident Commander that is determined based on the incident priorities.

Kane (2001) provides a triangular analogy to explain the Unified Command concept. He explains that the management of a terrorist incident is a co-operative arrangement between the three major players: the local fire department, local law enforcement, and the Federal Bureau of Investigation. Incident Commanders from each of the entities reside in the triangle. As the incident unfolds, the representative from the group responsible for managing that particular phase of the incident will move to the top of the triangle. The other members will provide input throughout the operation.

The Office of U. S. Foreign Disaster Assistance (OFDA) (1989) reports that in response to the 1988 Soviet Armenian earthquake, which resulted in more than 25,000 casualties, countries from around the globe sent assistance in every conceivable form. Reports of people trapped in rubble from collapsed buildings drew many international

urban search and rescue teams, including the United States team. Miami-Dade Fire Rescue personnel and Fairfax County Fire and Rescue, two emergency physicians, and four search and rescue canine with handlers comprised the United States search and rescue response.

The OFDA report further states that many countries voiced concerns about the lack of coordination, especially among search and rescue teams. In 1989, OFDA along with the United Nations Disaster Relief Office (UNDRO), held a workshop in Virginia and invited representatives from every country that had sent an urban search and rescue team to Armenia, including Russia.

The participants at this historic conference identified four issues that, if resolved, would improve disaster response coordination. The issues, which were termed Protocols by the United Nations were: Disaster-Affected Country Responsibilities, Assisting-Country Responsibilities, the need for an International Search and Rescue Database, and an On-Site Operations Coordination Center (OSOCC).

From the United Nations Office for the Coordination of Humanitarian Affairs website: The OSOCC is an On-Site Operations Coordination Centre with the purpose of assisting the local authorities of the affected country with the management of the disaster, in particular the coordination of international SAR teams. The OSOCC can be established by the first international SAR teams arriving in the affected country in cooperation with national authorities, or by resources mobilized by the INSARAG Secretariat in OCHA-Geneva and the United Nations Disaster Assessment and Coordination (UNDAC) team. The OSOCC will assess the need for and use of international resources, and provide support to the affected country in managing

operations and logistical support for international SAR teams and registering their operational capabilities.

Personnel with a U. S. Forest Service background who were familiar with ICS and Unified Command developed the OSOCC concept in coordination with the United Nations.

### **1. What is the fire department's role in response to a WMD incident?**

Much of the literature reviewed for this project stressed the inevitable fact that first responders must be prepared to function without outside assistance for up to 24 hours. The fire department must be adequately trained and equipped to recognize and manage WMD incidents to prevent the loss of life, especially of the first responders.

East (2002) stresses the fact that the actions of first responders, typically the fire-rescue department, will determine the success or failure of the response to a WMD incident.

Staten (2001) wrote:

Given consideration of recent events in New York City, Washington DC, in Boca Raton, Florida, and elsewhere in the world, it is our belief that serious consideration must be given at this time in regard to the actual capabilities of our nation's Fire, Police, EMS, Disaster and Medical services, as they relate to their ability to respond to terrorist acts.

Just as American Soldiers, Sailors, Airmen, and Marines, are on the front line in Afghanistan -- as we saw in New York City -- America's Fire, Police, EMS, Disaster and Medical responders are on the front lines in the battle against terrorism within the United States.

In response to the 1996 ValuJet crash in the Florida Everglades, MDFR dispatched more than 30 units to the scene. The department's role was clear. MDFR was the lead agency while the incident was considered to be in the rescue phase. Early in the incident, it was evident that there was no probability of survival for the 109 persons on board. Once the definitive determination was made that no one had survived, overall control of the incident was turned over to law enforcement and the National Transportation Safety Board (NTSB) for investigation. MDFR assumed a support role for the agencies that responded to the crash site and worked for 30 days in the field. Once they arrived, the NTSB assumed overall control of the incident and was responsible for determining the cause of the crash. The Miami-Dade Police Department and Medical Examiner's Office were responsible for determining the cause of death of the victims.

Miami-Dade Fire Rescue Department's ValuJet after action report (1996) describes how using what it had learned from responding to major disasters around the world, MDFR implemented and supported Unified Command. The department established a base of operations on-site and convinced the County Manager to direct the police department, which had established their command post several miles away, to co-locate with the fire department. MDFR coordinated daily briefings and distributed daily incident action plans that contributed to effective multi-agency communication and coordination.

Captain R. Sperry (personal communication, September 2, 2002) states that the dispatch for a known or suspected terrorism incident is composed of the Hazardous Materials Task Force and, based on the occupancy type, the suppression, EMS and command units that would be dispatched to a structure fire. Implementing standard

operating procedures, the department takes appropriate steps to mitigate the incident. Treating a WMD incident as a hazardous materials incident, the department's procedures call for: establishing command, isolating the area, and denying entry.

Captain Sperry also feels that the coordination among the three Haz Mat teams in Miami-Dade County is very effective. He attributes the positive working relationships among members to the ongoing training, communications and joint exercises the teams participate in throughout the year.

**2. What other agencies or departments can be expected to respond to a WMD incident within MDFR's jurisdiction and what are their roles and responsibilities?**

In response to the 9/11 attack on the Pentagon, the Arlington County Fire Department (ACFD) (2002) faced the challenge of managing search and rescue, fire suppression, and emergency medical operations in a secure military installation that houses the Department of Defense. In addition to representatives from agencies that had lost personnel in the building following the incident, the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) were two of the many agencies the fire department did not expect would respond; much less assume an active role in the operation. The agencies were concerned with the contents of the building, which was constructed 60 years earlier. ACFD utilized the Incident Command System and held twice-daily briefings.

Johnson (personal communication, September 5, 2002) relates that Miami-Dade County's Office of Emergency Management was transferred from the County Manager's Office to the fire department in 1995. He states that since that time, the office has taken

several steps to improve interagency coordination in major emergencies within the county, including the development of the Comprehensive Emergency Management Plan (CEMP). The CEMP lists the lead and assisting county departments and their roles and responsibilities in response to major emergencies. In addition, he explains that the Miami-Dade County Terrorism Warning Point is notified of suspected or known terrorist incidents.

Sears (2000) found that transferring the Miami-Dade County Office of Emergency Management to the fire department had improved its effectiveness in coordinating resources in emergency situations. She mentions the adoption of ICS as a contributing factor to the office's improvement by introducing an effective management structure that is utilized by the fire service, to some extent, on a daily basis.

#### Local Response

In addition to MDFR, there are five municipal fire departments in Miami-Dade County. A county mutual aid agreement includes all but the Village of Key Biscayne Fire Department. The City of Miami Fire Department and the Hialeah Fire Department maintain Haz Mat response teams. The Miami-Dade Fire Rescue Haz Mat Task Force participates in joint training and planning with both teams. Additionally, the teams respond jointly to Haz Mat emergencies 4-5 times a year.

The Haz Mat units are responsible for recognizing, isolating, and mitigating hazardous materials incidents.

The Miami-Dade County Office of Emergency Management, through the Emergency Operations Center (EOC), is responsible for resource coordination at the county level. Through a County Commission ordinance, the County Manager is designated as the

Incident Manager for emergencies and disasters in Miami-Dade County. The Miami-Dade CEMP (2001) lists areas of responsibility for county departments including: Miami-Dade Police, responsible for crisis management and the fire department, which is responsible for consequence management.

### Regional/State Response

Following the response to Hurricane Andrew in South Florida in August 1992, state agencies realized the need for greater coordination of state resources to respond to major emergencies. As a result, the Florida Fire Chiefs Association created the Statewide Emergency Response Plan (2002) to provide for the systematic mobilization, deployment, organization, and management of Fire-Rescue resources throughout the state and the nation, in assisting local agencies in mitigating the effects of a disaster.

The state plan (2002) calls for utilizing the Incident Management System as a model to manage actions during a disaster and it provides for central coordination of Fire-Rescue resources through Regional Management Teams in Emergency Support Functions (ESFs) 4 and 9, firefighting and search and rescue, respectively.

Prior to requesting state resources for local assistance, the affected area is expected to have exhausted all local resources through the County EOC. The County EOC requests additional assistance through the State Emergency Operations Center.

Shortly after the September 2001 terrorist attacks, Florida Governor Jeb Bush directed the Florida Department of Law Enforcement (FDLE), the state's lead agency for crisis management, and the Division of Emergency Management (DEM), responsible for consequence management, to assess the state's capability to prevent, mitigate, and respond to a terrorist attack.



The guiding principles of the State's Strengthening Domestic Security in Florida Strategic Plan (2002) were:

1. Validate and build on the existing State Comprehensive Emergency Management Plan.
2. Strengthen Florida's domestic security preparedness and prevention.
3. Maximize involvement of federal, state and local government, as well as appropriate private sector entities.
4. Implement recommendations for improvement using existing regional FDLE/DEM model. (p. 4)

The State's plan (2002) describes the implementation of seven Regional Domestic Security Task Forces that coincide with the Florida Department of Law Enforcement regions. These multi-agency task forces include representation from law enforcement, fire, EMS, emergency management, and healthcare.

Kane (2001) states that following the Oakland / Berkley Hills fire of 1991, California State Senator Nick Petris examined how the incident was managed. Specifically, he addressed police and fire operations and pointed out the differences in their approach to the emergency. His investigation and subsequent legislation led to the enactment of California's Standardized Emergency Management System (SEMS).

"SEMS regulations require local government emergency response agencies to use the Incident Command System (ICS) at the field level in order to be eligible for state reimbursement of response-related personnel costs." (p. A1).

### Federal Response

While describing the complexity of the response to the World Trade Center attacks, Hayden (2002) points out that all elements of the Incident Command System, including Planning and Finance/Administration, were implemented, something never before done by the New York Fire Department. He mentions that twice-daily interagency meetings were held that included as many as 60 different agencies, which included FEMA, FBI, EPA, OSHA, the Department of Health and Human Services and USDA/US Forest Service.

The CONPLAN (2001) states that the FBI, as the lead agency for crisis management, manages a crisis situation from an FBI command post or Joint Operations Center (JOC), bringing the necessary assets to respond and resolve the threat or incident. These activities primarily coordinate the law enforcement actions responding to the cause of the incident with state and local agencies.

Once a WMD incident has occurred, with or without a pre-release crisis period, the CONPLAN (2002) states that local government emergency response organizations will respond to the incident scene and make appropriate notifications to local, state, and federal authorities. Control of this incident scene will be established by local response authorities, likely a senior fire or law enforcement official. Command and control of the incident scene is vested with the Incident Commander/Unified Command.

The CONPLAN further states that:

Operational control of assets at the scene is retained by the designated officials representing the agency (local, state, or federal) providing the assets. These officials manage tactical operations at the scene in coordination with the UC as directed by

their agency counterparts at field-level operational centers, if used. As mutual aid partners, state and federal responders arrive to augment the local responders. The incident command structure that was initially established will likely transition into a Unified Command (UC). This UC structure will facilitate both crisis and consequence management activities. The UC structure used at the scene will expand as support units and agency representatives arrive to support crisis and consequence management operations. On-scene consequence management activities will be supported by the local and State EOC, which will be augmented by the ROC or Disaster Field Office, and the Emergency Support Team, as appropriate.

When federal resources arrive at the scene, they will operate as a Forward Coordinating Team (FCT). The senior FBI representative will join the Unified Command group while the senior FEMA representative will coordinate activity of Federal consequence management liaisons to the Unified Command. On-scene federal crisis management resources will be organized into a separate FBI Crisis Management Branch within the Operations Section, and an FBI representative will serve as Deputy to the Operations Section Chief

Throughout the incident, the actions and activities of the Unified Command at the incident scene and the Command Group of the JOC will be continuously and completely coordinated.

The California Office of Emergency Services (2002) lists four elements to consider when applying Unified Command. They are: (a) policies, objectives, strategies, (b) representatives, (c) resources, and (d) operations. In the operations element, OES states “Unified Command resources stay under the administrative and policy control of

their agencies; however, operationally, resources are deployed by a single Operations Section Chief based on the requirements of the consolidated action plan.” (p. 2).

The Arlington County Fire Department (2002) reports that, in addition to mutual aid from neighboring departments, the US military and various Federal agencies responded to the Pentagon incident. Early ICS implementation provided the necessary structure for Unified Command. They reported virtually no interagency coordination issues.

### **3. What lessons have been learned regarding Unified Command and interagency coordination from past responses to terrorist incidents?**

On April 20, 1999 two students armed with firearms and explosives wreaked havoc at Columbine High School in Littleton, Colorado. At the end of the day, 15 people were dead and 24 were transported to six area hospitals. Four were in critical condition; six were in serious condition. Injuries were the result of bullets and shrapnel from exploding bombs. Amazingly, all 24 injured survived. Among the dead were the two gunmen, with self-inflicted gunshot wounds.

Wallace and Brightmire (1999) report that nearly 500 law enforcement officers and 166 firefighters and EMS personnel from 10 jurisdictions had been on-scene, as were 10 apparatus, 48 EMS units, and 25 fire department staff officers. The authors point out that, among the lessons learned, interagency training among police, fire and EMS is necessary and would have made the fire department’s response to the incident safer and more effective.

Klaene and Sanders (2000) find that effective department SOP’s take the guesswork out of the first critical moments on the emergency scene. Further, they state that without SOP’s the incident commander is unable to collect the information necessary to

develop an action plan for control of the incident because he is so busy assigning companies.

The Arlington County Fire Department (2002) found that the pre-existing close working relationship with the FBI representative who would respond to a local WMD incident proved critical to the effective coordination between the fire department and the FBI. However, the after-action report also referred to minor interagency coordination issues when the FBI liaison was temporarily reassigned to the FBI command post.

The National League of Cities Working Group on Homeland Security (2002) recommends:

Rather than create different emergency response plans for every type of natural or manmade disaster, communities should develop one overriding plan applicable to most situations. Leaders of cities and counties must agree upon, achieve, and maintain a minimum level of preparedness with possible current resources, then build upon those capabilities. (p. 7).

Miami-Dade Fire Rescue Department's Hurricane Plan (2002) was completely redone following Hurricane Andrew. The plan details policies and procedures for preparing for and responding to a hurricane in the county. It is not a multi-hazard plan.

Much of the literature reviewed, including Kane (2002), FEMA (2002), and state and local plans stress the importance of training, drilling and joint exercises involving the likely responders to major incidents.

Chief M. T. Dunn (personal communication, August 3, 2002) stated that the training for first responders in South Florida prior to and since the 9/11 incidents has been mostly disjointed. He feels that county departments, especially Miami-Dade Police, have

received funding from different sources and have not coordinated their training or plans to work in a Unified Command structure. Further, he states that the lack of a joint exercise involving local, state and federal officials in South Florida has not allowed the department to adequately evaluate its response plans.

## **PROCEDURES**

### **Research Methodology**

This research project employed a historical research methodology to: (a) study the role other fire departments have assumed in response to WMD incidents and to understand the role of MDFR in these incidents, (b) to identify which agencies, in addition to the local fire department have responded to WMD incidents and can be expected to play a response role in a terrorist incident in Miami-Dade County, (c) study, describe, understand and explain steps taken or recommended by other agencies to improve interagency coordination in responding to the consequences of a terrorist incident.

The initial step in this research project was the development of a problem statement, describing the fact that the Miami-Dade Fire Rescue Department had not determined if its response plans needed to be revised to function more effectively in a Unified Command structure in response to a major terrorist incident in the County.

The research questions were chosen in order to form an analytical framework for the research project. The questions progressed from the identification of MDFR's local responsibilities compared to other fire-rescue departments, to a study of outside agencies that will respond to a local WMD event, and finally, to an identification of lessons learned from previous responses.

## **Literature Review**

The literature review began with a computer search of the card catalog of the Learning Resource Center at the National Fire Academy. Literature review was also conducted at the Miami-Dade County Public Library, the Miami-Dade Fire Rescue Department Library and extensive Internet searches.

The literature review consisted of textbooks, magazines, trade journals, technical reports, and EFO Papers that contained information related to emergency response to terrorism incidents. In addition, the researcher reviewed literature related to disaster response, specifically focusing on urban search and rescue response since recent terrorist events involved this specialized fire service discipline. Applicable sources were summarized and included in the Literature Review section of this report.

Also reviewed were Miami-Dade Fire Rescue Department's Policies and Procedures, Operations Standard Operating Procedures and the Office of Emergency Management Terrorism Response Plan. In addition, the researcher studied after action reports from 9/11 for NYFD and the Arlington County Fire Department, MDFR's after action reports for the ValuJet Airline crash and the Hurricane Andrew response and reports and articles that discussed the response of agencies other than Fire-Rescue to WMD incidents.

Internet searches returned more than 200 sites and articles related to fire service WMD response and Unified Command. Twenty-five of the 200 contained information that directly related or provided background information on the subject of this research project. The applicable sources were reviewed, summarized and included in the Literature Review section of this report.

## **Interviews and Personal Communications**

Interviews and personal communications were conducted with three Miami-Dade Fire Rescue personnel. Each was asked open-ended questions pertaining to their area of expertise. They were also asked to provide any suggestions for improving interagency coordination in response to major terrorist incidents.

Division Manager William Johnson manages Miami-Dade County's Office of Emergency Management (OEM). Since 1995 the OEM has been under the Miami-Dade Fire Rescue Department umbrella. Mr. Johnson provided insight into Miami-Dade County's efforts to prepare county departments for a major terrorist attack.

Training Division Chief Michael Dunn was interviewed August 3, 2002. A follow-up interview was conducted September 6, 2002. Chief Dunn is responsible for managing the MDFR training division and plans for and oversees in-service training for Miami-Dade Fire Rescue personnel. He has also made WMD training available to Miami-Dade Police Department Special Response Team personnel.

The Hazardous Materials Bureau Officer in Charge, Captain Ron Sperry was interviewed September 2, 2002. Captain Sperry supervises the training and preparedness activities of the HazMat Task Force. He is active in various HazMat committees on a local and national level. Captain Sperry provided insight on the specialized training provided to the department's HazMat technicians and explained how the Haz Mat task force is activated.

## **Assumptions**

Response to major terrorist events is necessarily complex and involves many people, agencies and their actions. It was assumed that issues or problems that occur



repeatedly on incidents could be a result of several factors such as inadequate skill levels, lack of training, lack of experience, and incomplete or inadequate guidelines. It was also assumed that these aforementioned factors could be present in the field as well as in supervisory and management level personnel.

### **Limitations**

The time limit for completing applied research projects for the NFA's Executive Fire Officer Program precluded more detailed literature review. This research project was limited to the study of factors that relate directly to the management and coordination component of major WMD response with a focus on Unified Command and ICS. It is understood that communications interoperability is a contributing factor to interagency coordination, however this facet was beyond the scope of this project.

#### **1. What is the fire department's role in response to a WMD incident?**

To explore this question, the researcher reviewed literature relating to the role of other fire-rescue departments in local disasters and response to WMD incidents in order to identify roles and responsibilities they assumed in mitigating and managing the response to a WMD event.

In addition, Miami-Dade Fire Rescue's Policies and Procedures and Operations Standard Operating Procedures were examined to define the department's stated roles and responsibilities in a WMD response.

In order to gain the perspective from specialized department areas, the researcher interviewed the Division Manager of the Emergency Management Office, and the Haz Mat Bureau Captain.

**2. What other agencies or departments can be expected to respond to a WMD incident within MDR's jurisdiction and what are their roles and responsibilities?**

In order to gain a comprehensive understanding of the variety of entities that could be expected to respond to a terrorist incident in Miami-Dade County, the researcher reviewed after action reports from fire departments faced with the challenge of a major disaster or terrorist event in their jurisdiction. After action reports reviewed included those produced for the Oklahoma City Fire Department, Arlington County Fire Department, and the Fire Department of New York. In addition, the report on the Columbine school shooting was reviewed.

The United States Government Interagency Domestic Terrorism Concept of Operations Plan (CONPLAN) was examined to gain a better understanding of the roles and responsibilities of the federal resources that can be expected to respond to assist local jurisdictions in mitigating incidents involving weapons of mass destruction.

The researcher also conducted literature reviews at the NETC Learning Resource Center and continued searches on the Internet.

After action reports for major incidents in Miami-Dade County were also reviewed to study the response of other agencies and identify coordination issues. Reports reviewed included the 1996 ValuJet Airline crash in the Florida Everglades and the response to Hurricane Andrew in 1992.

**3. What lessons have been learned regarding Unified Command and interagency coordination from past responses to terrorist incidents?**

To answer this research question, journal and magazine articles were reviewed to study suggestions provided by others agencies who had evaluated the local response to major incidents. In addition, after action reports from the Arlington County Fire Department, which responded to and maintained command responsibilities for the attack on the Pentagon, and the New York Fire Department, which responded to the World Trade Center incident were reviewed

In reviewing the after action reports, specific attention was paid to the documentation of coordination issues identified while these departments responded to major incidents that resulted in a multitude of outside agencies responding. Interagency coordination was identified and highlighted as an important issue that needed to be addressed in both the after action reports and in several of the journal articles reviewed.

### **Definition of Terms**

**Consequence Management.** Consequence management is predominantly an emergency management function and includes measures to protect public health and safety, restore essential government services, and provide emergency relief to governments, businesses, and individuals affected by the consequences of terrorism. In an actual or potential terrorist incident, a consequence management response will be managed by FEMA using structures and resources of the Federal Response Plan (FRP). These efforts will include support missions as described in other Federal operations plans, such as predictive modeling, protective action recommendations, and mass decontamination. (CONPLAN, 2002).

**Crisis Management.** Crisis management is predominantly a law enforcement function and includes measures to identify, acquire, and plan the use of resources needed to

anticipate, prevent, and/or resolve a threat or act of terrorism. In a terrorist incident, a crisis management response may include traditional law enforcement missions, such as intelligence, surveillance, tactical operations, negotiations, forensics, and investigations, as well as technical support missions, such as agent identification, search, render safe procedures, transfer and disposal, and limited decontamination. In addition to the traditional law enforcement missions, crisis management also includes assurance of public health and safety. (CONPLAN, 2002)

The desired outcome of this research was to identify recommendations to improve the department's effectiveness in responding to WMD incidents while working in conjunction with law enforcement and the various other entities that will, in all likelihood, respond to these incidents.

## **RESULTS**

### **1. What is the fire department's role in response to a WMD incident?**

Past incidents involving weapons of mass destruction have involved chemical and biological agents as well as incendiary and explosive devices. The consequences arising from these acts pose a significant challenge to all of the functions of a local fire department, including hazardous materials, EMS, technical rescue/USAR, and fire suppression.

Miami-Dade Fire Rescue units will be among the first on the scene of a WMD event and can expect to function as the Incident Commander in a Unified Command situation as long as the incident remains in a fire-rescue priority mode. In addition, local resources may have to function without significant federal assistance for the first 24 hours.

Performing an early, accurate size-up, implementing the Incident Command System upon arrival at the scene and encouraging other local agencies to participate in a Unified Command structure will improve the likelihood of a successful outcome. Further, it will facilitate a smooth transition when federal representatives arrive.

**2. What other agencies or departments can be expected to respond to a WMD incident within MDFR's jurisdiction and what are their roles and responsibilities?**

The U. S. Government's CONPLAN (2001) for domestic terrorism lists the major federal agencies that have responsibility for providing assistance to local jurisdictions. The plan clearly states that the Federal Bureau of Investigation is responsible for coordinating crisis management and the Federal Emergency Management Agency coordinates consequence management.

State of Florida resources are expected to be available through the Statewide Mutual Aid System. The role of the Miami-Dade County Office of Emergency Management is to ensure that County resources are available to support incident response and to request outside assistance if needed.

South Florida area fire departments and their Haz Mat teams will also respond to provide mutual aid within Miami-Dade's jurisdiction. Their role will be to provide support to MDFR in mitigating an incident.

The literature review and personal communications underscored the fact that the department can expect dozens of agencies to respond, and depending on the complexity of the incident, most of the agencies will expect to play a role in the response.

### **3. What lessons have been learned regarding Unified Command and interagency coordination from past responses to terrorist incidents?**

The research showed that other countries, as reported by the United Nations Office for Coordination of Human Affairs (UN-OCHA), have been addressing the coordination of emergency response groups. The issue is clearly a global one.

The Incident Command System, with its California origins in the 1970s, has gained national acceptance as the model for emergency response structure. Unified command has been used successfully in California to manage many large-scale emergencies. SEMS legislation resulted from the lessons learned following a major wildfire in Northern California.

The California Standardized Emergency Management System documentation reviewed describes Unified Command and provides guidance to enable state and local government agencies to manage emergency incidents collaboratively without compromising jurisdictional authorities.

The research for this project has demonstrated that the response to a WMD incident will consist of a multitude of local, state, and federal agencies. Although Miami-Dade County has experienced its share of disasters, other cities in Florida can also be potential targets of terrorism.

The need for interagency training and exercising prior to an incident was stressed in much of the literature reviewed, including the after action reports on the Columbine shooting and the responses to the 9/11 incidents in New York and the Pentagon.

## DISCUSSION

Essentially, managing major weapons of mass destruction incidents is very similar to managing the response to a wildfire, an earthquake or a major hurricane. Lessons learned from the responses to the 9/11 terrorist attacks contain many similarities to after action reports for natural disasters. Communication and coordination issues appear in most reports and articles reviewed.

The United Nations (2001) refers to interagency coordination in response to major incidents as a global issue. The UN does not endorse the NIIMS-ICS per se. However, it encourages member countries to adopt a consistent system for managing responses to disasters.

### **1. What is the fire department's role in response to a WMD incident?**

Historically, Miami-Dade Fire Rescue has been effective in responding to major emergencies and disasters locally, nationally and globally. An after-action debriefing and report are completed following every major response. Professor S. Porcelain (personal communication, October 20, 2002) from the University of Miami Field Epidemiology Survey Team states that the questionnaire she administers to task force members provides a systematic way to document interagency coordination issues. Lessons learned are incorporated into standard operating procedures. The experience gained by department personnel is shared with other departments.

East (2002) stresses the fact that the actions of first responders, typically the fire-rescue department, will determine the success or failure of the response to a WMD incident. This statement holds true for any major fire service response.

Miami-Dade Fire Rescue, like the New York and Arlington County fire departments will undoubtedly be among the initial responders to a terrorist incident in the County. Similarly, the department can expect to be inundated with local, state and federal agencies with a broad range of responsibilities. MDFR must ensure that establishing an early command presence and proactively encouraging a Unified Command structure are among its initial incident priorities. The MDFR (1996) response to the ValuJet crash was an example of how different agencies can work together in a Unified Command scenario without compromising their authority. The South Florida Haz Mat teams provide another example of how interagency coordination contributes to their effectiveness.

Early size-up and needs analysis are essential in any emergency response and must be conducted concurrently with life-saving activities.

The department must also consider the likelihood of an extended operation that probably won't receive significant outside assistance for the first 24 hours. With this in mind, notifications must be made early in the incident, as soon as it is determined that the incident's magnitude will require outside resources to mitigate.

**2. What other agencies or departments can be expected to respond to a WMD incident within MDFR's jurisdiction and what are their roles and responsibilities?**

Magazine and journal articles, as well as general literature accessed through Internet searches mention several of the outside agencies that can be expected to participate in a major terrorist incident. The U.S. Government's CONPLAN (2001) lists the federal resources that will respond and what their primary responsibilities are.



Based on the research and past experience, this researcher believes that it is unrealistic to expect that all fire service personnel, even those in supervisory positions, will be familiar with the seemingly ever-expanding group of agencies that will respond to a major terrorist incident. Instead, the department should ensure that field operations personnel understand and utilize ICS and the Unified Command concept.

Both W. Johnson (personal communication, September 5, 2002) and Sears (2000) feel that the Office of Emergency Management is the logical choice for ensuring that all County departments that will respond to a major emergency understand and adopt ICS/Unified Command. The research conducted for this project, substantiates their findings since their mission is to coordinate resource allocation for the county in major emergencies and disasters.

#### Local Response

South Florida area fire departments can be expected to provide mutual aid to MDRF, assuming there are no active major WMD incidents in their jurisdictions. In accordance with the CEMP (2002), coordination of these local fire department resources will most likely be handled at the Incident Commander level utilizing Unified Command. The Emergency Operations Center (EOC) will concurrently be activated. The EOC will also coordinate resource sharing among other County departments. In addition, requests for federal assistance will be funneled through the EOC.

#### Regional/State Response

Procedures outlined in the Florida Fire Chiefs Association (FFCA) Statewide Emergency Response Plan (2002) will be utilized for coordinating mutual aid from other State resources.

FFCA's (2002) state plan calls for utilizing the Incident Management System as a model to manage actions during a disaster. It provides a central coordination of Fire-Rescue resources through Regional Management Teams in Emergency Support Functions (ESFs) 4, firefighting, and 9, search and rescue. The County EOC requests additional assistance through the State Emergency Operations Center.

### Federal Response

Hayden (2002) points out the fact that a major terrorist incident will require all components of ICS and daily briefings involving the key players are essential for a coordinated response.

At the federal level, the CONPLAN (2001) designates the FBI as the lead federal agency for crisis management and that they will work from an FBI command post or a Joint Operations Center. The Arlington County Fire Department praised their pre-established working relationship with their FBI liaison. However, the after-action report (2002) also referred to interagency coordination issues that arose when the FBI liaison was reassigned to the FBI command post.

The CONPLAN also states that command and control of the incident scene is vested with the Incident Commander/Unified Command. Federal resources will work to support the local response. Operational control of assets at the scene is retained by the designated officials representing the agency (local, state, or federal) providing the assets.

The California OES (1994) document, however, states that although Unified Command resources stay under the administrative and policy control of their agencies,

operationally, they are deployed by a single Operations Section Chief based on the requirements of the consolidated action plan.

The differences mentioned above concerning who maintains operational control of assisting resources must be resolved prior to an incident in order to prevent onscene confusion. In any case, the issue should be discussed in the Unified Command setting with input from key agency personnel.

The research, especially the Arlington County Fire Department report (2002) reinforced the benefits of fostering close working relationships with local, state, and federal representatives who will respond to a terrorist event prior to an event occurring.

State of Florida states that (2002) resources will respond to the threat of or an actual terrorist incident in South Florida. The Florida Department of Law Enforcement is charged with crisis management at the State level. The Division of Emergency Management has responsibility for consequence management.

### **3. What lessons have been learned regarding Unified Command and interagency coordination from past responses to terrorist incidents?**

The US Government's CONPLAN (2001) spells out the roles and responsibilities of federal agencies in support of the local jurisdiction.

Wallace and Brightmire (1999) discuss serious interagency coordination and communication issues at the Columbine incident in Littleton, Colorado. The authors show that prior joint training and pre-established procedures for establishing Unified Command would have prevented most of the difficulties encountered by fire, EMS, and law enforcement.

A common theme between the McKinsey (2002) after action report of the World Trade Center incident and Arlington County Fire Department (2002) pertains to the use of ICS and Unified Command. Putting aside the magnitude of the WTC response, the number of high-ranking officials killed following the terrorist attacks, and the fact that the Pentagon attack occurred on a military installation, the main difference between the two is that the Arlington County Fire Department reported more effective interagency coordination, especially with the FBI. They attributed their effectiveness to pre-existing professional working relationships with federal officials and their use and practice with ICS. Conversely, NYFD responders reported on the difficulties they encountered in working with the number agencies that responded.

The McKinsey (2002) report also points out that the New York Fire Department has identified the need for ICS training at all levels as one of their priorities.

The United Nations Office for the Coordination of Humanitarian Affairs (2002) does not recommend one specific management structure over another for international teams. However, it has identified the need for international coordination in response to major disasters involving search and rescue teams.

As Christen and Maniscalco (2001) point out, the Incident Command System was designed to facilitate interagency coordination, communications, and the sharing of resources. Since its implementation, the fundamentals of ICS have largely remained unchanged, even though it is reviewed on a regular basis. This clearly demonstrates the forethought that went into the comprehensive development process.

The California Governor's Office of Emergency Services (2002) website provides complete documentation on the Standardized Emergency Management System

(SEMS), including a document that explains Unified Command and how it fits into the SEMS process. Through legislation, SEMS requires the use of ICS for incident management at the field level. Many states, including Florida, recommend using ICS at the local level; however, the California legislation that created SEMS actually requires the use of ICS for field-level emergency response in order to be reimbursed by the state for personnel costs following an emergency.

Kane's (2001) triangular analogy also helps to explain how the three major players in a terrorist response: fire, police, and the FBI assume lead and supporting roles as the incident evolves.

The National League of Cities (2002) recommends building upon the existing resources and to develop an overriding plan to handle most situations. This researcher believes that a terrorism response annex to its hurricane response plan will address the unique circumstances inherent in a WMD response.

The State of Florida is in the process of updating its response plans for terrorist incidents.

Miami-Dade Fire Rescue's response to the ValuJet Airline crash in the Everglades was an example of how various agencies, with different areas of responsibility, can work together for a common goal-whether it is a natural or human generated incident.

## **RECOMMENDATIONS**

Based on the results of this study, fire departments responding to terrorist incidents must expect that the response will involve many agencies on the local, state, and federal level. Effective interagency coordination is necessary to provide a safe and effective response.

The research showed that, in order to ensure effective working relationships with representatives from other agencies that would respond, the relationships must be fostered before an incident occurs

Based on this research, the following recommendations for MDFR should improve interagency coordination:

1. Update response plans

Review and revise response plans to ensure that they include effective procedures for establishing and maintaining Unified Command.

2. Establish relationships with key players

Identify the key players in a WMD response in Miami-Dade County and establish formal lines of communication. Include the local FBI contact in working groups and exercises.

3. Identify WMD procedures for Miami-Dade County departments

Encourage the Miami-Dade County Office of Emergency Management to form a working group to identify procedures and training to include all County departments with responsibility to respond to WMD incidents.

4. Implement interagency training and exercises

Encourage interagency training and exercises. Include other County departments in MDFR sponsored drills and exercises. Non-fire department personnel, especially local law enforcement and FBI can attend as observers at fire department drills.

5. Present ICS/Unified Command State legislation

Work at the state level to develop legislation that will require a statewide system similar to the Standardized Emergency Management System used in California. The

legislation should require the use of ICS and Unified Command for all agencies that respond at the field level to WMD incidents in order to be eligible for State reimbursement.

6. Develop a Terrorism Response Annex

Miami-Dade Fire Rescue has a comprehensive hurricane plan that has been exercised and tested in several weather-related incidents in Miami-Dade County and department personnel are familiar with the procedures. A terrorism response annex should be developed and become part of an all-hazards response plan for Miami-Dade Fire Rescue as suggested by the National League of Cities.

7. Provide opportunities for committee participation

Continued participation by MDFR personnel in local, state, national, and international committees and working groups will allow the department to provide input in forming policy and response strategies. In addition, networking with other response professionals will provide valuable insight in developing local response plans.

8. Address the conflicting statements

The conflicting statements found in the USG CONPLAN and California's SEMS literature regarding who maintains operational control of assisting resources must be resolved. MDFR should provide input to the Office of Emergency Management in order to address this issue prior to an incident.

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