



Nuclear Terrorism: Providing Medical Care and Meeting Basic Needs in the Aftermath – the Federal Response

Statement by Chief James H. Schwartz

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Good morning Chairman Lieberman, Ranking Member Collins, and distinguished Members of the Committee. I am James Schwartz, Fire Chief of Arlington County, Virginia. Today, I am testifying on behalf of the nearly 13,000 members of the International Association of Fire Chiefs (IAFC). The IAFC represents the leadership of America's fire, rescue, and emergency medical services (EMS) from large, metropolitan, career fire departments to small, rural, volunteer fire departments. I would like to thank the committee for their interest in the critical topic of nuclear terrorism response.

We have been fortunate never to have experienced a nuclear or radiological attack on American soil, although the probability of such an event continues to be debated by experts. Nevertheless, preparedness for a nuclear or radiological incident has long been a focus for emergency managers and first responders, and the fire service must stand ready to respond. This hearing will be a useful step in identifying remaining gaps in preparedness and response capabilities at all levels of government should a nuclear or radiological attack occur. The fire service recommends that capabilities should continue to be developed within an all-hazards risk management framework.

I have been asked to discuss the operational response at the local level to a scenario of a nuclear detonation with an explosive yield of 10-kilotons or less. The initial blast, ensuing fires and structural collapse, as well as the spread of radiation would entail significant casualties, but also would leave many surviving burn and trauma victims in need of care and individuals in need of radiological decontamination, as well as residents in need of guidance on whether to evacuate or shelter in place.

Preparedness

Preparedness and response go hand-in-hand. Adequate preparedness is a fundamental component of building an effective response capability. In order to adequately prepare to respond to a nuclear terrorism attack, a fire department needs the best possible threat information to assess the probability of a nuclear attack in its area, as well as information regarding the effect of an attack on its jurisdiction. In order to adequately respond to an incident of nuclear terrorism, a fire department must have the right equipment and training to respond to such an attack.

In Arlington County, the Metropolitan Medical Response System (MMRS) has facilitated close coordination between the local fire, law enforcement and public health departments, hospitals and the medical community, and neighboring jurisdictions, as well as state and federal entities. Federal assistance through programs such as the Urban Area Security Initiative (UASI) has enabled Arlington County and its partners in the National Capital Region (NCR) to purchase equipment, enhance training and communications infrastructure, and develop a better system to respond to a nuclear incident. It is also important to train our first responders and exercise the response system to test our planning, training, and equipment. The NCR recently conducted a small tabletop exercise on a nuclear attack. However, preparedness is an ongoing process, and America's first responders still have much work to do, in partnership with the federal government, to become fully prepared to respond to a terrorist nuclear attack.

Initial Response

In many ways, the response to a nuclear incident would resemble the response to any disaster or catastrophe. It is important to understand that the response to most incidents – whether wrought by man or nature – is strikingly similar. This is the underlying premise of the “all-hazards” perspective. Whether responding to a hurricane, a chemical spill, or a nuclear explosion, the fire service will rely upon the same scalable response framework, which includes the Incident Command System (ICS) and the National Incident Management System (NIMS). While first responders employ the same all-hazards incident management system to all disasters, the unprecedented and catastrophic scale of a nuclear incident would present considerable response challenges.

The fundamental cornerstone of every emergency event is that local government agencies are charged with leading the response. The initial response to a nuclear or radiological explosion is likely to resemble that of a conventional hazardous materials response. It may not be immediately clear to the first responders on the scene that nuclear or radiological material is involved in the incident. It should be noted that while responders in Arlington County are fortunate to have radiation detection equipment – purchased through UASI grant dollars – many first responders around the country lack even basic radiation detection equipment.

In Arlington County, chemical, radiological, nuclear, or explosive events (CRNE) are managed as hazardous materials incidents with mass casualty implications. In all situations, the greatest challenges are minimizing the potential for panic, minimizing additional exposure and secondary exposures, identifying the suspect substance, and providing prudent medical treatment.

The Arlington County response to a CRNE incident includes the combined and integrated capabilities of Arlington County’s existing fire, EMS, hazmat, hazardous device, and law enforcement units operating under a unified incident command. Additionally, the healthcare systems in Arlington County, our hospital and other private healthcare providers, are recognized as critical elements in the overall response.

The essential response functions for fire department personnel arriving on the scene will include:

- 1) Command and control, with the first emergency responder on the scene assuming the role of Incident Commander (IC);
- 2) Isolation of the impact area and initial establishment of hot, warm, and cold zones;
- 3) Preliminary agent identification based on environmental clues and victim symptoms, as well as the results of field detection instrumentation and testing;
- 4) Initial victim care; and
- 5) Gross mass decontamination.

Arlington County Fire Department (ACFD) plans include specific protocols for units responding to explosive devices, including procedures for agent detection, emergency medical treatment, and medical management of contaminated patients. At the scene of an explosive event, the presence of a chemical, radiological, or biological agent is always assumed until detection protocols rule it out.

Arlington County also has available the National Capital Region National Medical Response Team (NMRT-NCR), a federally-funded rapid response team for CRNE events that can be used as a local response entity.

Incorporating Additional Local, State, and Federal Resources into the Response

Arlington County is fortunate to benefit from a robust mutual aid system, which enables a regional response to any significant incident. The ACFD has automatic aid agreements, in which resources are shared on a daily basis without regard to jurisdictional boundaries, with neighboring jurisdictions including the City of Alexandria, Fairfax City, Fairfax County, Fort Belvoir, Fort Myer, and Reagan National Airport. This system has been in place for more than 30 years and has resulted in strong relationships that are built on mutual trust and shared learning. Mutual aid agreements also exist with other jurisdictions throughout the NCR through the Council of Governments. Voice communication systems are interoperable throughout the region, which facilitates a coordinated response.

As the magnitude of an incident such as the one being discussed today becomes more clear and the region's resources become taxed, Arlington would request additional assistance through our statewide mutual aid plan. Virginia also would make a request to the federal government for assistance. The Emergency Management Assistance Compact (EMAC) may be used to provide assistance from other states.

Should an event be determined to be a nuclear or radiological incident, the mutual aid system would be quickly activated, marshaling additional resources from the NCR and statewide. Rapid deployment of National Guard Civil Support Teams also would be critical to aid in rapid assessment, technical advice, and general support.

Any event involving a nuclear or radiological attack would quickly overwhelm local and state capabilities and require federal support under the National Response Framework. However, despite its proximity to the nation's capital and the national significance of such an event, Arlington County must still be prepared to operate under the assumption that most federal support would not arrive for 48-72 hours.

It cannot be emphasized enough that as regional and federal resources become available, they must be integrated into the existing incident command structure in order to maintain a unified response effort. In order to achieve the level of coordination needed to carry out an effective and efficient response, the command structure must be respected by responders at all levels of government.

Technical Assistance

The ACFD is equipped with alpha, beta, and gamma radiation detectors, as well as pocket detectors for measuring radioactivity. We also have established standard operating procedures for response to potential CRNE incidents that are built on guidelines prepared and adopted by the NCR partners. These procedures include radiation dose exposure limits designed to protect first responders. Such tools and procedures will be critical in identifying radiation at the scene. However, far more sophisticated technical assistance will be needed to conduct accurate assessments of the amount of radioactive material involved, plume modeling, and downwind projections. In a nuclear event, this information will be critical to making lifesaving decisions regarding which areas to evacuate.

In a nuclear or radiological event, rapid plume modeling and analysis will be the federal government resource most urgently needed. In Arlington County, our hazmat team has rudimentary plume modeling capabilities, and our close working relationship with the Pentagon Force Protection Agency enables us to access more sophisticated plume analysis within minutes of an incident. Our training and procedures also anticipate the early arrival of a Department of Energy Radiological Assistance Program (RAP) Team, with whom we have also trained. Analysis from the Federal Radiological Monitoring and Assessment Center (FRMAC) will also be needed. This assistance must rapidly be integrated into the incident command system.

Communication

In a nuclear or radiological event, effective communication to survivors in and around the affected area will be critical to preventing panic and providing lifesaving advice regarding whether to evacuate or shelter in place.

With the assistance of UASI grant dollars, Arlington County, and the broader NCR, has developed several state-of-the-art emergency communications functions to aid in providing information during an emergency. Residents in every jurisdiction throughout the NCR can sign up for free text messaging alert systems from local governments that provide real-time emergency alerts and notifications to cell phones, pagers, email accounts, and PDAs. In Arlington, this system is referred to as Arlington Alert, which has 16,000 subscribers so far. Local governments in the NCR also deliver warnings through Reverse 9-1-1, an automated, non-subscription system that calls landline and cellular telephones with voice alerts and warnings. The system can be targeted to phone numbers in individual areas by map. Arlington also has its own AM radio station for public messaging, AM 1700, which is designed to provide information within minutes of an incident.

Our Office of Emergency Management (OEM), in coordination with Incident Command, will disseminate information to the public and serve as a trusted voice. OEM will also establish a Joint Information Center (JIC) to ensure that the multitude of agencies

involved in the response coordinate public messaging. This coordination is imperative so as to avoid providing conflicting information to the public.

On Scene Medical Care, Decontamination, and Victim Transportation

Few jurisdictions are optimally equipped to handle an event with mass casualties and large numbers of individuals simultaneously requiring medical care. Despite the robust planning devoted to this issue in Arlington County and throughout the NCR, surge capacity and treatment for mass casualties remain a significant challenge.

Enabled through the MMRS and UASI grants, Northern Virginia has developed an integrated, coordinated regional approach to medical response planning and operations. The Northern Virginia Emergency Response System (NoVaERS) is designed to provide immediate and well-coordinated front-line emergency services for the first 24 to 48 hours of a major emergency event anywhere in the region before state, federal and other response resources mobilize. The NoVaERS establishes command systems and authority, coordinated resource deployment, and the ability to respond in an integrated way across disciplines and jurisdictions. Although this system is a model for other jurisdictions, and has greatly increased the region's response capabilities, the region may not be fully prepared to handle the consequences of a mass casualty event on the scale of a nuclear attack.

In the event of a nuclear attack, one of the key missions of the first responders with the ACFD will be to address initial victim care and mass decontamination. A nuclear incident will create a large number of burn victims and those who suffer traumatic injuries. It is important that these victims be extricated, given emergency medical treatment, decontaminated, and transported to medical facilities.

In the first hours after a nuclear incident, triage will be one of the crucial tasks for responders. Disaster triage rapidly evaluates victims and assigns relative priority for their care and transport. The NCR uses colored ribbons to code patients for immediate identification.

In a nuclear event, minimal medical treatment will be conducted on victims prior to extraction to a safe, dedicated treatment area. Treatment areas will be established in the "cold zone" of an incident and treatment will be directed by the EMS branch of the incident command system. This Branch will have direct communications with the Northern Virginia Regional Hospital Coordinating Center (RHCC) who will notify hospitals of victim incidents and coordinate the distribution of patients to hospitals throughout the region.

In a CRNE event, decontamination will be a priority, as it addresses minimizing exposure time to patients and helping to control potential secondary contamination of responders and others. To control the spread of contamination, a Rapid Mass Casualty Decon Corridor may be established by arriving units using basic fire equipment until field decon units can be established. The Arlington County Hazmat Unit's Decontamination Group

will then establish a Mass Casualty Decon Corridor based on standard operating procedures.

The goal of Arlington County is to ensure that all patients from the scene are decontaminated before being transported. Any contaminated first responders will become a priority for decontamination. Deceased victims will be decontaminated only after living victims are attended. The Virginia Hospital Center – Arlington, as well as other major health care systems in Northern Virginia, Maryland, and the District of Columbia also have decontamination capabilities for walk-in patients.

According to existing agreements, decontaminated victims will be transported to hospitals and other medical facilities throughout the Washington area. To transport victims, Arlington County will use ambulances, multiple occupancy vehicles such as buses, and air assets. In addition, we may depend on local military and National Guard resources to assist in the transportation of patients. All victims will be tracked through the triage tag system. All vehicles used for victim transportation also will be decontaminated.

The greatest challenge in response to a nuclear attack will be the number of victims and nature of their injuries. The number of patients with severe burns and trauma will overwhelm a healthcare system that is already challenged to deliver care on a daily basis. Planning assumptions and exercises for incidents involving the number of patients contemplated in a nuclear attack always prompt a discussion about standard of care; in short, healthcare providers are reluctant to consider altering standards of care, as would be necessary to treat more viable victims, without pre-established liability protection.

Information Sharing to Inform Risk Management

A detailed discussion of the remaining challenges in sharing intelligence information at all levels of government may be better reserved for another setting. However, it is important to note that although information sharing has improved in recent years, the Department of Homeland Security and others in the intelligence community must continue to work toward sharing meaningful threat information with those state and local officials who are best prepared to act on it. Such information is vital to effectively targeting resources.

First responders must continuously practice risk management, carefully prioritizing the greatest risks, in order to maximize limited resources. It is therefore imperative that the federal government provide state and local officials with accurate information regarding threats. Currently, the majority of the threat information received from the federal government has led first responders to focus terrorism preparedness on conventional explosives, including IEDs, or some type of crude “dirty bomb” with small amounts of radiological material.

On any given day, the average metropolitan fire chief might face threats as diverse as large structural fire, a plane crash, a major wildland fire, a tornado or earthquake, a

pandemic flu outbreak, an anthrax attack, or even a nuclear bomb. However, he or she has a limited number of resources – even with the addition of valuable homeland security and first responder grants, such as UASI and MMRS – with which to address these threats. The federal government plays a crucial role in providing information, intelligence, and clear guidance about how to prioritize these threats. For example, is Arlington County more likely to face terrorism in the form of a 10-kiloton nuclear bomb, a smaller radiological “dirty bomb,” or an anthrax attack? What are the projected casualty levels and other consequences associated with these threats?

Recommendations

Great strides have been made across all levels of government in boosting all-hazards preparedness and response capabilities in recent years. The IAFC is grateful to the contributions this committee has made toward this end. Yet, we also must acknowledge that few areas of the country have the full range of resources and capabilities to adequately respond to an event on the scale of a nuclear attack. The IAFC offers the following recommendations to guide the committee’s work in this area:

- **Maintain an all-hazards, risk management focus.** As the committee considers whether greater attention should be devoted to preparing for nuclear terrorism response, the IAFC believes that it is important to continue to maintain an all-hazards risk management perspective in allocating our emergency management resources. First responders must continue to devote resources and focus to those threats which are most probable, while also preparing to respond to any situation.
- **Share meaningful information regarding threats.** The Department of Homeland Security and the broader intelligence community must strive toward meaningful information sharing and collaboration with state and local officials and responders regarding threats, and make distinctions about the varying levels of risk posed by each threat. Such information is central to managing risk. Detailed guidance regarding likely threat scenarios and ensuing consequences also is needed in order to prepare for effective response.
- **Encourage greater cooperative engagement between the federal government and non-federal stakeholders.** The Department of Homeland Security has improved its attempts to reach out to state and local officials and responders. However, the federal government must devote greater focus to achieving a truly collaborative approach to addressing vital preparedness and response issues. To facilitate cooperative engagement, the Department of Homeland Security and other key federal agencies should consider hosting symposia for shared learning with local practitioners and experts to explore a variety of threat scenarios and develop response guidelines and best practices.

The IAFC is a member of the National Homeland Security Consortium, and supports the recommendations set forth in the recent white paper, *Protecting Americans in the 21st Century: Imperatives for the Homeland* which notes, “The

federal government has the opportunity to transition from top-down direction to meaningful cooperative engagement with all non-federal stakeholders. Doing so will enhance unity and allow us to achieve more rapid progress across the many challenges we confront.”

- **Develop best practices for enhancing medical surge capacity and responding to mass casualty events.** Adequate medical surge capacity is lacking in communities across the nation. The federal government should provide leadership in marshaling expertise to develop best practices and creative solutions for communities to address a host of issues related to incidents which may involve mass casualties, as well as the need for medical surge capacity, especially for hospitals. This guidance must be developed in full partnership with local practitioners, and should address the needs of communities of all sizes.
- **Federal predictive modeling capabilities will be vital in a nuclear incident.** In a nuclear or radiological event, reliable plume modeling and analysis will be the resource most urgently needed from the federal government to guide decision-making and save lives. This technical assistance must be rapidly accessible to local incident commanders.
- **Department of Defense Civil Support Mobile Response Forces (CSMRFs) can assist in meeting capability gaps.** The IAFC is encouraged by reports that the U.S. Northern Command (NORTHCOM) is developing plans to stand up several large regional mobile response units to provide rapid civil support in the event of a WMD attack. This DOD capability will be a welcome addition to aid incident commanders in addressing consequence management needs in the wake of a nuclear incident. The fire service stands ready to contribute to the dialogue about how this capability can best be implemented to complement response operations.

Finally, let me note that efforts to improve the preparedness of the fire service for terrorism response are a high priority for the IAFC. The IAFC Terrorism and Homeland Security Committee, of which I am a member, has been working to create a practitioner’s guide entitled, “Terrorism Response: A Checklist and Guide for Fire Chiefs.” This tool is currently being pilot-tested by forty fire departments throughout the country. The guide will be released this fall.

Conclusion

Thank you for the opportunity to address the committee this morning. On behalf of the nation’s fire and EMS chiefs, I would like to express our appreciation to this committee for its continued dedication to preparing the nation for future disasters, both natural and manmade.

JAMES H. SCHWARTZ

Fire Chief, Arlington County Fire Department

James Schwartz is the Chief of the Arlington County Fire Department in Arlington, Virginia. Chief Schwartz has been with Arlington Fire for 24 years and was appointed Fire Chief in June 2004. Prior to his appointment he served in a variety of fire department positions including Assistant Chief for Operations, responsible for all response-related activities, including fire, EMS, hazardous materials and technical rescue response, incident management and operational training. In April, 2003 he was assigned to the Office of the County Manager where he served as the Director of Emergency Management until his appointment to Fire Chief.

The Arlington County Fire Department consists of 320 personnel that provide fire, EMS, hazardous materials and technical rescue response to an urban community of 205,000 residents in an area of 26 square miles. The department was the lead agency for the response to the September 11, 2001 attack at the Pentagon. Chief Schwartz was the Incident Commander at the Pentagon during the response.

Chief Schwartz chairs the Washington Area Council of Governments Fire Chiefs Committee, the Northern Virginia Emergency Response System Steering Committee and the Sustainment Committee for Arlington County's Metropolitan Medical Response System.

Chief Schwartz is a member of the International Association of Fire Chiefs' Committee on Terrorism and Homeland Security; the InterAgency Board on Equipment Standardization; and serves on the Advisory Council for the Interagency Threat Assessment Coordinating Group.

Chief Schwartz serves on the Board of Regents for Leadership Arlington, an organization that develops and connects leaders in the public, private and non-profit sectors of Arlington.

Chief Schwartz graduated from the University of Maryland with a Bachelor's degree in Fire Administration.