



**Agents of Opportunity:
Responding to the Threat
of Chemical Terrorism**

Statement of

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Good morning, Chairman McSally, Representative Payne, and members of the subcommittee. I am Keith Bryant, fire chief of the Oklahoma City Fire Department, and president and chairman of the board of the International Association of Fire Chiefs (IAFC). The IAFC represents more than 11,000 leaders of the nation's fire, rescue and emergency medical services. I would like to thank you for the opportunity to discuss emergency response issues relating to the threat of chemical terrorism.

The Threat of a Terrorist Attack Using Chemicals

There is a real threat that violent extremists would like to use chemical weapons in terrorist attacks within the United States. Toxic industrial chemicals, such as chlorine, compounds containing cyanide, and anhydrous ammonia, are readily available and present in the nation's transportation system and at chemical facilities. While it may not be weaponized, industrial chemicals also require little expertise or preparation to use. Finally, while in many cases, the casualty count may not be high, there would be a psychological shock to a chemical terrorist attack on American soil. These characteristics might make a chemical attack particularly appealing to a lone wolf.

It is important to point out that industrial chemicals play an important role in daily life in America. For example, chlorine is used for water purification, and anhydrous ammonia is used in fertilizer. According to the U.S. Bureau of Transportation Statistics /U.S. Census Bureau's 2007 Commodity Flow Survey, 2.2 billion tons, corresponding to 323 billion ton-miles of hazardous materials, are shipped by air, road, rail and pipeline in the United States annually. While hazardous chemicals are vital to the American economy and quality of life, we must recognize that extremists can take advantage of weaknesses in the nation's transportation system or at chemical facilities to obtain toxic chemicals for nefarious purposes.

There have been recent examples of chemicals being used by violent extremists. Insurgents used a car bomb with numerous mortar shells and two 100-pound chlorine tanks in a 2006 attack in Ramadi. Recently, there have been reports about the Islamic State of Iraq and the Levant (ISIL) using roadside bombs with chlorine to try to panic Iraqi forces, along with pro-jihadist social media discussing the use of cyanide and sulfuric acid in terrorist attacks. We have seen the impact that these types of attacks can have on communities and know for what we need to prepare.

There also is clear evidence that extremist groups overseas are urging adherents to use chemicals in the United States. Other tweets by ISIL proponents have discussed using chemical weapons in the West. In the past five years, the U.S. Department of Justice and the Federal Bureau of Investigation (FBI) have sent warnings to local first response agencies about the threat of industrial chemicals being used in a terrorist attack. In addition, local first responders have been warned to be on the lookout for precursors and designs for devices using industrial chemicals and chlorine gases for attacks in enclosed public spaces, such as restaurants and theaters. In addition, the Global Islamic Media Front published a document known as "The Explosives Course," which teaches interested parties to use commercially-available chemicals to manufacture explosives.

The Response to a Terrorist Attack Using Chemical Weapons

The initial response to a terrorist attack will be similar to a hazardous materials incident. Once a hazardous chemical release is confirmed, the fire and emergency medical services (EMS) departments will isolate the area and establish control zones to stabilize the area and minimize civilian exposure. If the type of chemical being used is easily identifiable, resources, such as the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration's (PHMSA) Emergency Response Guidebook, can be used to determine the hazardous zones and decide if civilians should evacuate or shelter in place. Many cities, like Oklahoma City, will deploy their hazmat teams and mass decontamination units. Patients will be decontaminated, triaged, stabilized, and transported to the closest appropriate treatment centers. The hazmat team will be deployed to use chemical detection technology to ascertain the type of chemical released, along with personnel who are trained in the signs and symptoms of chemicals. The hazmat team and other hazardous materials contractors will be in charge of decontaminating the scene. Local law enforcement will play a role in scene security, and begin investigative activities once the incident is identified as a terrorist attack. During the response, the local Joint Terrorism Task Force (JTTF) and other state and federal authorities will be alerted.

Since the event is a terrorist attack, it would be important to prevent panic in the area near the attack. Emergency responders also would have to be vigilant about the threat of secondary devices. An important difference between a hazardous materials incident and a chemical terrorist attack is the necessity of working with the federal, state, and local law enforcement agencies to preserve evidence and maintain scene security for the criminal investigation. To prevent widespread panic, federal, state, and local authorities would have to provide accurate information to the public about what happened, what emergency steps must be taken, and the overall threat to the population.

Preparedness for a Chemical Terrorist Attack

While the initial response would primarily involve local first responders, the federal government has a large role to play in any successful response to a terrorist attack using chemicals. The most important role is in helping local agencies prepare for such an incident.

One major role for the federal government is providing important threat information to local first responders. Considering the myriad potential threats and the budgetary constraints of local governments, local first responders need to know for which threats they should prepare. If groups promoting violent extremism are publishing training materials on the internet or social media, the federal government should provide information to local governments about what tactics and techniques are being taught. In addition, local jurisdictions should be informed about specific or credible threats to their areas. The local JTTF, state or local intelligence fusion center, and strong working relationships with local law enforcement officials should help local fire and EMS departments obtain this information. The National Counterterrorism Center also hosts the

Joint Counterterrorism Assessment Team, which brings in local first responders to work with intelligence analysts to provide actionable information to local first response agencies.

The federal government also plays an important role in helping local agencies plan and exercise for a potential terrorist incident using chemical agents. During the early hours of the response to such an attack, it is important for federal, state, and local authorities to have a well-coordinated incident command system to provide clarity and leadership in an inherently confusing situation. The National Incident Management System (NIMS) is designed to provide the capability for federal, state and local partners across all of the fields (fire, EMS, law enforcement, emergency management, etc.) to work and operate together. Federal, state, and local agencies must adopt NIMS and exercise their cooperation before such a terrorist attack. Well-established pre-existing relationships between federal, state, and local partners was a key to previous successful responses, such as the 9/11 response at the Pentagon. In addition, fire and EMS personnel will have to know how to treat, decontaminate, and transport patients in a dynamic crime scene, while law enforcement will have to gather evidence in a hot zone or wait until the area is safe to enter. Federal initiatives, such as NIMS, and federally-funded exercises will help local emergency response agencies to train and prepare for the threat of a terrorist attack.

Related to this issue, local fire and EMS departments will have to plan for a terrorist attack using chemical agents. Many local fire departments do not have the hazardous materials response capability, including a mass decontamination unit, to respond to a large-scale chemical terrorist attack. They will have to pre-plan and develop mutual aid agreements with surrounding jurisdictions to bring in resources if an incident occurs. In some cases, a fire department in a small town may depend on the hazardous materials response capabilities of a neighboring metropolitan fire department, like Oklahoma City. In other parts of the country, a regional hazmat team covers a corner of a state, and can deploy to the scene within an agreed-upon timeframe. The local incident commanders will have to pre-plan, know when these specialized resources should arrive and be able to stabilize the situation until help arrives.

The private sector also plays an important role in ensuring preparedness for a potential chemical attack. Chemical facilities, rails, and pipelines are natural points for an extremist group to attack in order to cause a chemical incident. The railroads and pipeline companies should work with local first response agencies to ensure that the local fire and EMS chief knows what types of hazardous materials are being transported in their jurisdictions. The owners of chemical facilities are required to work with Local Emergency Planning Committees, so that local jurisdictions know what hazardous materials are produced and stored at their facilities. Close cooperation between the private sector and local governments will support preparedness for a potential chemical terrorist incident.

The federal government also plays an important role in helping local fire and EMS departments train for a terrorist incident involving chemical agents. The response to a dangerous hazardous materials incident requires special training that is both expensive

and time-consuming. For example, the National Fire Protection Association's 2011 *Third Needs Assessment of the U.S. Fire Service* found that approximately two-thirds of all fire departments that are responsible for hazmat response have not formally trained all of their personnel involved in hazmat response.

Many small and volunteer fire departments rely on federal assistance to get the training that they need. Classes provided by the National Fire Academy, the Rural Domestic Preparedness Consortium, and other courses funded by the U.S. Department of Homeland Security provide training on how to respond to a hazardous materials incident and lead the response to a major terrorist incident. PHMSA also provides training for responding to hazardous materials incidents in situations involving rails or other modes of transportation that will be critical in responding to a chemical terrorist incident. Finally, other organizations, like the IAFC, hold conferences and other educational opportunities that allow local first responders to learn in person from federal hazmat experts, like members of the FBI's Hazardous Materials Response Unit.

Finally, it's important to recognize the important role that federal funding plays in helping local fire departments prepare for the threat of a chemical terrorist incident. An effective hazmat team requires an expensive cache of protective equipment, detection devices, and other technology. Programs, such as the Urban Areas Security Initiative and the former Metropolitan Medical Response System, provide funding for the comprehensive planning and coordination required to respond to a major chemical terrorist incident and mass casualty event. Across the nation we have witnessed how federal funding has provided an incentive for federal, state, and local authorities across disciplines to come together and plan for potential acts of terrorism. In addition, the Assistance to Firefighters Grant program (including the SAFER grant program) can help fire departments obtain the training, equipment and staffing that they need to either develop a regional hazmat team or obtain resources for an effective initial response.

Conclusion

I thank the committee for the opportunity to testify about the response to an act of terrorism involving chemical agents. This is an active and realistic threat for which local first responders must be prepared. There may be confusion during the initial response about whether it is an actual terrorist attack or a hazmat incident, which requires that federal, state, and local authorities plan, train and exercise ahead of time. The federal government provides a number of critical resources to help state and local agencies, including planning resources, training opportunities, and material support through funding. As federal, state, and local governments address tightening budget capabilities, we must focus on remaining prepared to protect our citizens from this pernicious threat.