



Chemical Weapons Improved Response Program (CWIRP)



Playbook



Guidelines for Responding to and Managing a Chemical Weapons of Mass Destruction Terrorist Event



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Part I – Introduction

The Chemical Weapons Improved Response Program

Background

As a result of the growing concerns regarding chemical/biological (C/B) terrorism, Congress passed Public Law 104-201, the National Defense Authorization Act for Fiscal Year 1997. This legislation, through Title XIV “Defense Against Weapons of Mass Destruction,” tasked the Department of Defense (DoD) to assist federal, state, and local officials in deterrence of or response to threats or acts of weapons of mass destruction (WMD) terrorism. This effort is commonly referred to as the Nunn-Lugar-Domenici (NLD) Domestic Preparedness Program (DPP).

The NLD DPP called for the following:

- The establishment of a training and exercise program that targets selected cities.
- A national hotline/helpline program designed to receive and process inquiries from the responder community.
- A program designed to identify systematic deficiencies in response capabilities of the community as a whole.

In response to the latter of these objectives, the U.S. Army Soldier and Biological Chemical Command (SBCCOM) developed the Chemical Weapons Improved Response Program (CWIRP). The CWIRP partnered with federal, state, and local emergency response personnel to identify and resolve issues involving chemical terrorist events. A detailed listing of the agencies involved in the CWIRP process is contained in Part VI.



As the result of recent events, significant threats over the past few years, and the increased availability and proliferation of nuclear, biological, or chemical (NBC) materials, there is an increasing concern for the potential of terrorist incidents occurring in the United States involving weapons of mass destruction (WMD)."

(Congressional Record, February 26, 1997, "Report on Government Capabilities to Respond to Terrorist Incidents Involving Weapons of Mass Destruction" – Message from the President of the United States).

This Playbook, one of several products of the CWIRP process, serves to identify the key issues that the program studied and provides basic recommendations and guidelines for enhancing response and management of a chemical incident. This document, along with the referenced material in Part VII, provides a comprehensive collection of knowledge of the CWIRP. The Playbook and other referenced documents are designed to build upon the DPP WMD training program awareness and operations training.

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The partners in the CWIRP process formed four functional groups to address the concerns of responding to a chemical incident. These functional groups consist of federal, state, and local experts in the following areas:

- Emergency Response
- Law Enforcement
- Health and Safety
- Emergency Management

The CWIRP conducted a series of exercises called Baltimore Exercise (BALTEX) that consisted of tabletop, functional, and workshop formats to assist members of the functional groups in recognizing the magnitude of a chemical incident and to identify the key issues that needed resolution. Each functional group, through regularly scheduled meetings and workshops as well as the BALTEX exercises, focused on identifying recommended procedural guidelines to address each issue. Many

issues also required scientific studies that were conducted by SBCCOM. The Maryland response community supported these studies to ensure that the results were operationally effective.



The CWIRP partnered with the city of Baltimore to resolve issues of response to a chemical terrorist incident.

CWIRP Playbook Concept

The issues covered in the Playbook are intended to be applicable to the majority of jurisdictions across the country (large, small, metropolitan, rural). Jurisdictions and agencies using the Playbook to assist in preparation of plans, policies, and procedures for response to a chemical WMD incident are expected to adapt these recommendations to fit their current level of preparedness and staffing.

The Playbook is written to be as generic as possible. Any mention or reference to an organization or procedure specific to the Baltimore or Maryland area is strictly for clarification and conceptual simplicity.

CWIRP Playbook Outline

The CWIRP Playbook is divided into sections that focus on the sequence of response to a chemical incident. These sections are separated into the following areas:

- Pre-Incident Plans and Procedures
- Initial Response – The First Hour
- Follow-On Response – The First Day
- Long-Term Response and Recovery

Each section identifies the functional group issues and recommendations as they pertain to that stage of the response. The subject matter experts from each functional area supporting the CWIRP derived the list of issues; however, each jurisdiction has its own policies and

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ways of conducting business. While there are specific functional areas in each part of the playbook departments and agencies should take the time to scan the issues and recommendations from each area as certain recommendations in one functional area may reference response agencies/actions from another. Users of the Playbook should feel free to adapt the subject matter it contains based on their own experience and expertise.

“The Face of Terrorism”

Though the global incidents of terrorism have waned in recent years, a new and disturbing pattern has emerged. Attacks have come less often, but with far greater consequence. Tools of terror have transformed from guns and Molotov cocktails to nerve gas, massive ammonium nitrate bombs, and even biological weapon attacks. Long-held taboos have been broken. Coupled with this trend is the prospect of state-sponsored terrorism or terrorist activity financed by wealthy individuals. State sponsorship, access to significant financial resources, heightened scientific and technical prowess, and access to information available on pathways such as the Internet may all combine to breach the notion of a technological “glass ceiling” for terrorists. Today’s terrorist has the potential to be far more deadly than ever before.

Within the United States, the potential for the use of weapon(s) of mass destruction (WMD) by terrorists has become a major national security concern. The spread of international terrorism has long been a major threat, but law enforcement and intelligence officials are increasingly concerned about the rise of groups or persons within extremist movements in the United States. Fringe elements and various persons within these extremist movements in the United States are examples of this new threat. Bombings in Atlanta, GA, and Birmingham, AL, as well as a rash of biological agent hoaxes in 1998 and 1999, have amplified this concern. These events and concern about the potential for WMD terrorism warrant increasing vigilance and preparedness.

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Part II – Pre-Incident Plans and Procedures

The ability of an agency to respond to and effectively manage a chemical WMD incident begins with the development of departmental plans, procedures, and training. Preparation for responding to a chemical incident should begin with modifying existing plans and procedures to consider and include WMD-specific operations. A chemical terrorist incident is different from a routine HazMat incident in that the terrorist incident:

- Is deliberate in nature.
- Is a criminal act.
- Is designed to produce a large number of casualties.
- Is expected to result in a large number of fatalities.
- Will require mass numbers of people to be decontaminated.

This section outlines the issues and recommendations that departments should consider in advance of the actual occurrence of a chemical incident. These recommendations are based on the assumption that individuals have a basic knowledge of chemical agent awareness and emergency response operations. This information is provided as part of the NLD DPP city “Train-the-Trainer” program.

Throughout the Playbook, constant reference is made to the need for communications between the various responding agencies. This communication is extremely important to the fire, police, and medical agencies as they rely heavily on each other to successfully manage such an incident. For this communications flow to be effective in an actual response, it must be practiced in multiagency drills and exercises.



Multiagency communications pose a major challenge between local, state and federal responders.

It should be noted that agencies should only consider operating in a chemically hazardous environment after thorough training and with proper equipment. Several recommendations are made throughout the Playbook regarding roles, levels of operation, and personal protective equipment (PPE). Departments that do not have trained and equipped personnel to perform such operations should not enter a chemical incident scene. The importance of proper equipment and adherence to PPE safety standards, including respirator fit-test requirements, cannot be overemphasized.

If we have a free path, we go forward.
If we meet an obstacle, we go around it.
If the object cannot be overcome, we retreat.
When the enemy is unprepared, we surprise him.
If he is alert, we leave him alone.
Quote from the German Terrorist Group Bader Meinhoff

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General

Issue: Funding for Chemical Protective Equipment

Other than knowledge and awareness of the hazards associated with responding to a chemical WMD incident, the major issue facing response organizations is the procurement and maintenance of protective equipment. Studies indicate that the respiratory protection most law enforcement agencies currently use for riot control are not suitable for chemical agents and in some cases are prohibited from use by federal safety standards. Other departments may not have any PPE at all (EMS).

Recommendation. Funding for equipment necessary to respond to a C/B event may be available through the federal grant process. The National Domestic Preparedness Office (NDPO) developed a Standardized Equipment List (SEL) to be considered by response agencies. Each jurisdiction should have a representative responsible for collecting and coordinating federal grant requests, and interfacing with state grant POCs. Agencies should contact their city or county emergency management office or Mayor or County Executive's office to identify their representative. Many grants are now being executed at the state level.

Issue: Terrorism Response Plans

Each department and level of law enforcement (local through state) should have a terrorism response plan that encompasses department-specific guidelines in preparing for and responding to acts of terrorism. These plans should also include information specific to WMD incidents.

Recommendation. Municipalities should develop WMD terrorism response plans after a thorough assessment is made of their vulnerabilities. This assessment should outline and identify key areas or events that present targets of opportunity for terrorists. Key historical dates and events, large public gatherings, and locations or meetings with political, social, or ethnic agendas are only a few of the targets likely to provide terrorists a means to present their message. Many states and jurisdictions are conducting these assessments as part of a DOJ grant process.

Plans should outline specific notifications that are to be made once an act of chemical terrorism occurs. These should include local, state, and federal law enforcement agencies as well as local notifications necessary to support the response. Typical types of local notifications may include medical treatment facilities, local health department, fire department, HazMat teams, city and county emergency management, and nearby military bases. Any act of suspected terrorism should be reported immediately to the nearest Federal Bureau of Investigation (FBI) field office. FBI field offices have appointed agents to perform as WMD coordinators for their region. Additionally, field offices supporting the larger metropolitan jurisdictions have trained and equipped these agents to perform limited HazMat operations in support of the local jurisdiction until the arrival of more specialized elements such as the FBI Hazardous Materials Response Unit (HMRU).

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Issue: Recall of Emergency Response Personnel

Private ambulance corporations, security agencies, and volunteer fire companies often have a population of part-time civil servant employees who hold full-time positions at other emergency agencies (e.g., police, fire, EMS). During a disaster, many of these people will be recalled to their primary job. This loss of manpower will hinder the ability of private companies to respond to the normal day-to-day operations and leave them unable to provide requested backup to the incident site. Additionally, many of these individuals also hold positions in their State National Guard. This is particularly true in the security, law enforcement, and medical areas.

Recommendation. Agencies should have an accurate count of their personnel who provide emergency service in other capacities. Having a solid understanding of their resource status during a crisis is paramount to supplying a service during a disaster.

Coordination should be made with the State National Guard Headquarters to determine what their recall procedures will be in the event of a local MCI. Several have already determined that they will not recall their personnel who fill emergency positions in the community. They would rather allow them to continue to provide support as part of the community's resources. This, however, should be verified within each jurisdiction and not assumed.

Law Enforcement

Issue: Pre-Incident Intelligence Sharing

Intelligence information is one of the most important aspects of law enforcement operations to prevent criminal and terrorist events. Information gathering and tracking of individuals suspected of possible criminal intent are key to providing a safer community for our citizens to live in. To provide a complete understanding of the threat, a close information-sharing network should be established between local and state law enforcement jurisdictions.

Recommendation. Law enforcement agencies should designate one or more investigators or officers within their intelligence unit to focus on threats of terrorism. One individual in this network should be responsible for disseminating information to other agencies that are affected. This person should be on the notification lists of private (including defense contractors and C/B research facilities) and public organizations (including fire departments, hospitals, public health, public alerting systems) who may obtain information concerning problems or suspicious circumstances that are relevant to law enforcement intelligence. It is further recommended that regular intelligence reports be disseminated to the field to keep personnel and commanders informed of trends, symbols, and officer safety information.

A regional intelligence network on terrorism consisting of federal, state, and local law enforcement is recommended. This regional network will keep all levels of law enforcement informed of potential threats or trends that might cross jurisdictional boundaries. Neighboring states should establish an additional network for sharing similar

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information on trends or threats. In most cases, the likely point of contact (POC) should come from the state police intelligence unit who should act as the conduit between local, state, and federal agencies.

Law enforcement agencies must also consider what, if any, intelligence information can be shared outside of the law enforcement community. If intelligence indicates that an imminent threat exists, pre-notification to response units could aid in the overall response and safety of responders. The sharing of intelligence outside of law enforcement agencies is strictly at the discretion of law enforcement.

Issue: Personal Protective Equipment for Law Enforcement Officers

PPE for officers was a topic of much debate and discussion among the program's participants and organizations. Police officers have experience with respiratory protection through their use of gas masks for riot control. The threat of chemical terrorism however, clearly opens up previously unexplored protection requirements for law enforcement.



Mask fit requirements present a major challenge to departments; however compliance is essential to officer safety.

Occupational Safety and Health Administration (OSHA) respiratory requirements have been mostly overlooked when dealing with riot control masks. Results of this can lead to an improperly fitted mask or a poorly trained officer. In a riot control situation this may pose an inconvenience only to the responding officer; however, the same problem could result in death in a chemical incident response. OSHA Regulations (Standards–29 Code of Federal Regulations [CFR]) 1910.134 define requirements for respiratory protection; however, there are no OSHA standards for Chemical Warfare Agents for civilian respirators.

Many departments possess and use M17-style military surplus masks for their riot control protection primarily because they can be obtained at minimal or no cost. These masks are old, replacement parts are hard to find, and many are unserviceable. Testing a selection of masks used by several departments validated these points. The program conducted two tests on the M17 masks that several departments currently were using for riot control purposes.



The M17 series mask was phased out of military use beginning in 1991.

The first test focused on the serviceability of the masks according to military serviceability standards for chemical warfare agent (CWA) protection. Test findings indicated that masks did not have CWA filters in them (two of the three filters developed for these masks were for riot control agents only), were dry rotted, and/or had unserviceable components. Even after the masks were rebuilt with serviceable components, one-third of them failed to achieve a seal on the test and evaluation machine.

The second test involved evaluating the fit of the mask to the officers based on the OSHA 1910.134 fit test requirements. Officers were issued masks according to department procedure and donned them based on their current level of training. Even after assistance

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in properly donning the masks, almost half of the participants were unable to achieve a proper seal to National Institute of Occupational Safety and Health (NIOSH) standards.

The Law Enforcement Functional Group started their investigation of overall officer PPE with two factors in mind:

1. Recommending levels of protection based on the expected role of the officer in responding to a WMD incident.
2. Identifying protective equipment that is affordable, easy to maintain, and capable of withstanding the rigors placed on it by the officers.

Recommendation. PPE was recommended based on the following:

1. The roles of law enforcement in the chemical incident response.
2. The likelihood of contamination in each of these roles.

The basic patrol officer is expected to operate primarily on the outer perimeter of the contaminated area and should encounter little or no contamination. However, because cross-contamination from victims, wind shifts, and secondary agent releases could further spread the contaminant, protection is essential. Patrol officers may also be called upon to perform limited duties in support of decontamination operations on the outer limits of the warm zone.



Testing was conducted using five protective suits and one officer in standard duty uniform. The ensembles also consisted of a negative-pressure respirator (MCU2P), butyl rubber gloves, and butyl rubber boots. Officers performed motions and functions that they would expect to conduct while operating on the perimeter of a chemical incident (directing traffic and crowd control). Protection afforded from the suits ranged from 17 to 42 times that of an unprotected test subject.

Operations in areas of increased agent concentration require better protective equipment and rely on increased awareness and safe operating procedures to ensure protection of officers. Because of this, specially trained teams are recommended for these missions. The primary recommendation was for Special Weapons and Tactics (SWAT) teams and other specialized teams to fulfill this role since they are already familiar with enhanced training, equipment, and tactics.

Affordable, quality protection was the goal of the CWIRP law enforcement PPE study.

SBCCOM, with the cooperation of Maryland State Police Special Tactical Assault Team Element (STATE), conducted a series of tests on several protective ensembles for the basic patrol officer. The results of these tests and a more detailed discussion of PPE issues for law enforcement are documented in a report entitled *Personal Protective Equipment Guidelines for Use by Law Enforcement Officers at a Terrorist Chemical Agent Incident*. This report when finalized will be available on the SBCCOM Web site www2.sbccom.army.mil/hld.

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Issue: SWAT Tactics and Protective Equipment

Exercises conducted by the IRP and the 120-city training program have brought attention to issues that may require the conduct of tactical law enforcement operations inside of a contaminated area. Such operations may consist of operating in an area where chemical agents have already been released, or where the potential for release is high, i.e. suspected production laboratory (cookhouse) or dignitary protection.

Clothing worn by tactical officers must meet the needs of the mission and be compatible with specialized equipment and tactics. Tactical operations require stealth, a high degree of dexterity, and unencumbered movement. Additionally, the specialized tactical equipment and techniques used by officers can easily tear clothing that is not designed to withstand the rigors of such operations.

Inherently all chemical protective ensembles are cumbersome and hinder communications, dexterity and vision. Many commercial types of protective ensembles however clearly do not lend themselves to tactical operations due to their visibility (bright colors), noisiness of the fabric, and short duration of operation from limited bottled air supplies.

Recommendation. Operating in a contaminated environment requires specific training and knowledge on protective equipment and procedures. As such, it is recommended that departments train members of each of their tactical teams to the HazMat technician level. This is similar to training team members to be “tactical medics”. This training would give each team the ability to perform operations such as detection and sampling in conjunction with their tactical mission as the situation and time permits. This can aid in reducing the time necessary to determine the specific agent involved and the extent of contamination. This would also give each team a more definitive understanding of the decontamination process as it pertains to chemical contamination.



Charcoal impregnated or lined protective suits or chemical protective undergarments are best suited to the tactical officer and their operations. The types of chemical protective ensembles depicted include left-Level C charcoal impregnated overgarment, center-Level A, and right-Level B

In order to meet the challenges of tactical operations the CWIRP chose to evaluate several styles and types of charcoal lined/impregnated protective suits and chemical protective undergarments for tactical officers. These types of suits are highly durable, provide very good chemical protection and meet the needs of the tactical officer well. They include chemical protective suits currently in use by the U.S. military and similar types. Unlike suits recommended for patrol officers, the charcoal style suits afford a greater degree of durability to tactical operations such as crouching, repelling, and climbing.

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Basic OSHA safety requirements indicate that Level A protection (fully encapsulated suit with self-contained breathing apparatus) is required when an unknown agent or concentration is present. If there are any threats of suspects or additional explosive/chemical devices being in the incident area, HazMat teams are expected to refuse to enter the area until it is cleared by law enforcement. Therefore it is expected that the agent and concentration will not be known and that victim signs and symptoms will be the only indicator of the hazards.

Level A and Level B protection (both requiring SCBA respiratory protection) do not support tactical law enforcement operations. Suits used with Level A and B protection are noisy and generally bright in color, also not lending to stealth operations. While these types of suits can be special ordered from most manufacturers in any color specified, this would not eliminate the noise issue. In addition, the fabric of these suits tear easily and is not expected to withstand even the simplest of tactical maneuvers. SCBA provides for a limited operation based on the air supply whereby officers may be required to disengage from their mission against standard procedures. This is particularly true during stealth operations or when confronting a suspect. Level A protection also does not lend to firing shoulder fired weapons.

SBCCOM, in conjunction with the Maryland State Police, is conducting testing on protective ensembles (equivalent to Level C protection) for SWAT teams. This testing is similar to the procedures done for ensembles for patrol officers on the perimeter of an incident. The ensembles being testing include a negative-pressure respirator, butyl rubber gloves and either a charcoal lined/impregnated suit or chemical protective undergarments. The chemical undergarments are worn under the SWAT officers' uniform. Chemical suits are of the military style and include those currently in use by the military as well as others that have been developed for several law enforcement agencies. These style suits provide a better fit with the tactical mission and equipment.

The tests evaluate the ensembles based on the chemical agent protection provided as well as compatibility with the teams equipment and tactics. Results of the testing will be published in an overall law enforcement PPE report and be available on the SBCCOM Web site at www2.sbccom.army.mil/hld when testing is completed.

Issue: Bomb Squad Tactics and Protective Equipment

Bomb technicians face critical challenges of both agent and explosive hazards when confronted with conventional improvised explosive devices (IED) inside of a contaminated area or with chemical IEDs. The requirement to search for and possibly dispose of chemical and/or conventional IEDs is expected to accompany any chemical WMD incident. Most bomb technicians are not trained or equipped to operate in a chemically contaminated environment. Standard bomb suits do not provide for any form of chemical protection and already present the wearer with high danger of heat related injury.

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Recommendation: As with the recommendation for tactical teams, it is recommended that bomb technicians be trained to the HazMat technician level

There are few chemical/biological (C/B) bomb suits available on the market. These suits are relatively expensive and while providing chemical agent protection in the form of wearing a chemical protective suit and respirator under the suit, afford only approximately 70 percent of the standard blast protection of a standard suit. Recommendations from the manufacturers of these suits also indicate that the filters of a negative-pressure respirator used in conjunction with a C/B bomb suit are subject to damage from a detonation that can render the filters unserviceable. As such, SCBA is their recommendation for respiratory protection.

This type of ensemble presents various limitations for the technician. SCBA limits the time on target for conducting evaluations and render safe procedures to the limits of the air supply. This can call for a rotation of technicians in dealing with a device. Additionally, the suit, with chemical protection worn underneath presents an elevated level of heat buildup above that normally associated with the standard bomb suit.

Technicians should be well trained and experienced in the wear, use and additional restrictions of a C/B bomb suit and operating in a contaminated environment.

Issue: Enhanced WMD Training

Throughout the discussions of the Law Enforcement Functional Group, it became evident that additional training above the basic DPP awareness and operations level training is important to overall officer safety. A list of the performance requirements associated with the DPP training is included in Part VIII of this document. A basic part of any training should also be the awareness of the roles and responsibilities of the other department disciplines.

Recommendation. The functional group considered the types of missions that officers may be required to perform in response to a chemical WMD incident and recommended additional training areas that should be considered. These recommendations are designed to build on the training of the basic WMD Awareness and Operations courses of the DPP Train-the-Trainer course. Jurisdictions that are not scheduled to receive this training should make every effort to obtain the materials from the nearest city that has been trained or state Emergency Management Agency.

Training officers on the proper use and maintenance of any equipment issued for a WMD response is vital. If officers are not properly trained in their protective equipment or it is poorly maintained, they could have a false sense of security in the protection afforded them. Poor training or improperly maintained equipment can lead to serious injury and/or the loss of lives.

The list of additional training recommendations is included in Part VIII of the Playbook. The group based their recommendations solely on the enhanced training necessary to perform the perceived missions. Time, resources, and funds were not used as limiting

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factors in the development of the list. Departments must evaluate the recommendations and their available training time and funds when determining what training to conduct for their officers; however, officers who are not properly equipped and trained should not attempt to perform such missions. They should prioritize training according to their current level of awareness. Additionally, elements within a department should be prioritized for training based on the likelihood of being involved in the response.

Issue: Use of Aviation Assets

Operation of aviation equipment by any agency is expected to be prohibited in or near a contaminated area. Medevac helicopters will probably not even fly decontaminated patients because of the potential threat of contaminating the aircraft or pilot. However, aviation assets are a valuable resource to the rapid response during an incident and the program addressed several issues on how they could be more appropriately used during a chemical terrorist event.

Recommendation. Police aviation assets provide ideal rapid transportation means to move specialized teams (e.g., bomb squad and SWAT) and/or equipment to the vicinity of the incident site. Ground transportation will be necessary to deliver equipment from the aviation landing zone to the actual site, but aviation provides a quicker means of supplying needed assets close to the incident. Medical facilities closest to the incident site will most likely be rapidly overwhelmed and will quickly run out of necessary medical resources (e.g., ventilators). Strategic movement of key medical personnel, equipment, and antidotes to a location close to the incident site or medical treatment facilities can be best accomplished by using aviation assets.



Aviation assets provide a means of rapidly delivering critical response teams and equipment to a region involved in a chemical terrorist incident.

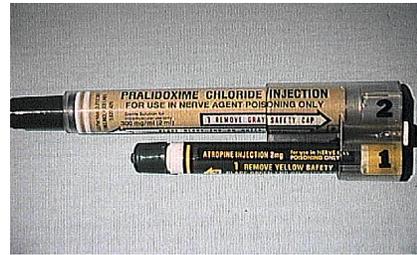
The need to provide rapid analysis of a known or suspected agent provides another avenue for aviation support. This is particularly true where the agent has not yet been disseminated and containers of the suspected agent are taken into custody. Coordination to analyze the agent should be done in conjunction with the FBI; however, local aviation may be asked to transport the substance. Law enforcement agencies should check with their local FBI office and state police departments to ascertain how movement of known or suspected chemical agents can be accomplished. Clearance to use local aviation assets should be outlined in a memorandum of understanding (MOU). Local jurisdictions should also check with their aviation insurance agency prior to signing an MOU.

Issue: Antidote Kits

The only military chemical warfare agents with a specific antidote kit are the nerve agent series. Autoinjectors of atropine and 2-PAM chloride make up the components of the MARK I Nerve Agent Antidote Kit. These kits are a controlled medical item, have a limited shelf life and strict security and storage requirements, and can only be administered by certain levels of medical personnel. To be useful to anyone exposed to a lethal dose of nerve agent, they must be administered within seconds to minutes after exposure.

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Recommendation. The stringent requirements of the MARK I antidote kits make them improbable to be issued to each police officer on a permanent basis. The best protection officers have is rapid identification of the hazard through visual observation, distance from the source of contamination, and appropriate protective equipment. Officers who receive a nonlethal dose of agent should be removed from the source of contamination and be attended by medical personnel as soon as possible.



Mark I Nerve Agent Antidote Kit

Police departments may consider stocking antidote for specialized teams such as SWAT teams through agreements with local medical organizations that are maintaining these items for a community medical response. These specialized teams can then be outfitted with antidote prior to a mission where nerve agents have been released or are suspected. Departments should also check into the possibility of gaining a waiver for such operations that would allow officers to administer antidotes.

In any situation where antidotes are or may be provided to law enforcement officers, proper training and precautions must be conducted.

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Part III – Initial Response: The First Hour

Rapid response to a chemical terrorist incident is essential to save lives and prevent further casualties. The initial stages of response are also the most dangerous to the first responder. Responders rushing to the scene of a chemical attack who are not well informed, prepared, or properly equipped will most likely become part of the problem and not the solution. **The ability of a jurisdiction to contain and control the extent of damage done by a chemical terrorist event will be decided within the first hour of the incident.**

Lessons learned from the response to the bombing of the Alfred P. Murrah Federal Building in Oklahoma City indicate the need for rapid control over the response to a catastrophic event. Control over the response to this event and accountability of the responders on scene were not gained until the threat of additional explosive devices caused evacuation of the area. The impulse to hurriedly rush into an event to save lives without proper precautions can be deadly to responders. This danger is magnified in the presence of an invisible, super-toxic, chemical warfare agent.

This section outlines key issues and recommendations that are of immediate concern to a jurisdiction faced with responding to this type of event. It includes issues relating to the rescue of victims, responder safety, and operational procedures to prevent contamination of personnel and facilities involved in the management of the response effort.

“Keep in mind, the same technological advances that have shrunk cell phones to fit in the palms of our hands can also make weapons of terror easier to conceal and easier to use.”

(President Clinton’s State of the Union Address, January 2000)

General

Issue: Dispatch

Dispatch and 9-1-1 operators are the eyes and ears of the responders until they arrive at an incident scene. The best-trained and equipped responders can still easily become casualties during their initial response if they do not have advance warning of the situation. Standard HazMat situations preclude knowledge of a known hazardous substance and involve a limited number of immediate casualties. A chemical terrorist incident is expected to be different in that the agent release will be a deliberate attempt to injure or kill large numbers of victims and the actual dissemination may go completely unnoticed.



Dispatchers need to be trained to identify potential chemical incidents and provide direction to responders to keep them from becoming casualties.

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Operators need to be trained to recognize information that indicates a chemical mass-casualty event and should be knowledgeable of pertinent information to ask once a chemical event is suspected.

The dispatch process is not much different for a CW incident than any other request for service. It starts with the initial caller telephoning the 9-1-1 operator and requesting emergency help. The caller can be an invaluable resource of information for the emergency responder handling any emergency incident. It becomes imperative for the 9-1-1 operator to ask a standard set of questions, such as the following:

- What type of emergency you have (e.g., fire, EMS, police).
- Caller's name.
- Caller's location.
- Caller's telephone number.
- Location of the emergency.
- What type complex is involved (e.g., house, building, school).
- Is there a fire or was there an explosion?
- What type of vehicle, container or device is involved?
- What type materials or chemicals are involved.
- Has anything spilled?
- Do you see smoke or a vapor cloud?
- Do you hear a bursting or hissing sound?
- Has anyone complained about an unusual odor?
- If there are victims and how many.
- What victims' complaints are.
- Weather conditions at the scene.

Although dispatchers gather valuable information and update responders, they are generally not decision makers. The dispatch center often takes a supportive reactive role by responding to the requests of the IC during disaster events, versus disseminating information into intelligence, which is left to the IC. Thus, initial command and control of a CW incident should start with the dispatch center, but often are left to those who respond to the scene. The role of the dispatch center during a CW incident will become more prominent as the incident escalates. Like all disasters, the dispatcher will need to maintain control of multiple radio transmissions over multiple channels. At this point the dispatch center takes a position of interpreting information from multiple POCs and relaying that information to the IC.



9-1-1 Operators provide the communication link between victims on the scene and emergency responders.

One major concern is that quite often no standard requirements for emergency dispatch centers exist. This lack of standardization will affect how a jurisdiction handles a CW incident and what role the dispatch center will play during a disaster. Many jurisdictions may not have modernized equipment to support their present operation. It is anticipated that even a modern dispatch center would be overtaxed during a CW incident.

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Law enforcement officers may become casualties either from being on scene at the time of agent release (e.g., sporting event) or by rushing into a scene without proper precautions. In these cases it is likely that a report of an “officer down” would be placed. Dispatch operators are essential to linking the information on a chemical incident with the cause of the officers’ problem to keep other responders from rushing into the scene and becoming additional casualties.

Recommendation. Effective communications is the number one priority needed for the successful command and control of any incident. The functional group suggests that all emergency agencies do at least an annual test, evaluation, and update to all 9-1-1 and dispatch centers. Some additional resources that may be needed to effectively handle a CW incident include the following:

- Additional 9-1-1 operators and dispatchers.
- Additional 9-1-1 and telephone trunk lines in and out.
- Additional dispatch radio channels.
- Additional on-scene/fire ground channels.
- Updated 9-1-1 and dispatch consoles.
- Updated computers and programs.
- Updated computer-aided dispatch (CAD).
- Building security to include public access, weather, bombs, and terrorist factors.
- Adequate commercial power.
- Adequate automatic backup generator power supplies.
- Upgraded telephone system to automatic number identification (ANI).
- Alert protocol that addresses terrorist events specific to a CW incident.

Most jurisdictions should already have some form of 9-1-1 operators’ checklist for notification of a HazMat incident. This should be an appropriate starting point for collecting information for a chemical incident. It is critical that information on the victims symptoms, type of release, safe response routes, and other pertinent information be provided to all responding personnel (e.g., police, fire, EMS).

Operators also normally have notification lists for various scenarios (e.g., bomb threats and homicide). A similar list should be developed for a chemical terrorist event. A starting point for the development of such a list would be from existing HazMat and terrorism notification lists. It is imperative that rapid notification of this type of incident be made to all agencies that may be affected to control and manage the incident and casualties. This list should be developed with input from various organizations that will play a role in the response to and management of a CW incident (e.g., hospital, fire, EMS, health department, state and federal law enforcement). This list should reference all local, state, and federal notifications. The development of this list may best be orchestrated through the emergency management office for each jurisdiction.

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Issue: Multiple Agency Communications

Very few jurisdictions can expect to respond to and manage a chemical WMD incident alone. All jurisdictions must be prepared to receive state and federal agencies responding to the incident. Communications overload and the inability to link multiple agencies communications systems are key restrictions that must be overcome.

Recommendation. Communications between all responding agencies (e.g., fire, police, emergency management, health, medical, mutual aid) and levels (local, state, and federal) are key to a coordinated response effort. It is highly unlikely that jurisdictions will have communications systems or assets to provide interagency communications between even their local agencies.

From the outset of the incident response a Joint Operations Center should be established to manage the response. This will most likely begin as a fire and police command post and expand as other agencies arrive on scene. Liaisons to the JOC have the ability to communicate with their own response agencies and across agencies through the other liaisons at the JOC.

Law Enforcement

Issue: Incident Command

It is imperative that once a CW incident is identified, the first officer on scene acts as the law enforcement IC until relieved by a senior official. Controlled response to a CW incident is essential for officer safety. Allowing officers to respond to a scene as individuals until a supervisory officer arrives will most likely result in the majority of first responding officers becoming casualties. Responders will rely heavily on the dispatch center to collect and relay pertinent information regarding the situation as it unfolds at the incident site.

Since the response to a CW incident is going to involve multiple agencies, a joint command center is necessary to coordinate the response. Throughout the rescue of victims, the senior fire official on scene is most likely to perform the duties of the IC. As the incident progresses from emergency response to criminal investigation, so will the transition take place from the fire department to law enforcement command and control of the scene. Any CW incident will most likely be declared an act of terrorism, and the FBI will lead the overall investigation.

Recommendation. It is essential that the first arriving officer takes control of the situation from a law enforcement perspective and not become too involved in the response. A rapid assessment of the situation and identification of hazards must be made and relayed to follow-on units to save lives and prevent casualties. Regardless of the rank of the first responding officer, he or she must assume the role of law enforcement IC and that of liaison with the fire department IC. All on-scene law enforcement activity should be coordinated through this law enforcement IC/liaison officer since this person is responsible for reporting the police activity to the overall IC. This procedure is essential for the safety and accountability of all responders to the incident.

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Close operations with the fire department IC will ease the transition from a fire to a law enforcement command structure at a point to be determined by commanders. State or federal law enforcement agencies may be on the scene by the time this transition occurs. Local law enforcement agencies are expected to provide a liaison and to support the senior level of law enforcement conducting the investigation.

Since police are expected to provide a liaison to the fire department during the rescue operation, a fire department liaison should be made available to the law enforcement IC during the investigative operation. Law enforcement will require fire department support to provide decontamination and agent monitoring unless a self-sustaining team such as the FBI HMRU is performing the on-scene investigation.

Issue: Perimeter Security

Perimeter security for a chemical incident will differ from a standard crime scene in several ways. The airborne vapor contamination will require that the initial perimeter be much larger than the actual crime scene and, therefore, require a larger number of officers to control. While the outer perimeter will be established in the Cold Zone, officers will still be threatened by cross-contamination from victims, shifting winds and/or additional chemical releases.

The fact that victims are alive inside the perimeter without protective equipment will provide a false sense of safety to those outside the area. The threat of cross-contamination from victims' clothing will not be visible. High-ranking officials visiting the scene as well as relatives and news crews may attempt to enter the outer perimeter. In addition to keeping unprotected persons out of the secured area, it is necessary to keep those who are still contaminated from leaving.



Level C PPE is recommended for officers on the incident scene perimeter to mitigate the threat of cross-contamination.

Recommendation. Some form of initial control over the flow of personnel into and out of the incident scene is critical. It is expected that by the time a sufficient number of responders are on scene to provide an effective means of control, those who are intent on leaving the scene will have done so already. The remaining victims will probably be more cooperative in remaining on site, or are unable to leave and unless they become restless, the majority of effort will be placed on keeping people out of the area. The external perimeter, traffic control points, etc. should be reduced in size as quickly as possible based on chemical monitoring of the area and advice of the HazMat team to reduce the impact on the police department's manpower.

Level C PPE is recommended for officers manning the perimeter. This level affords the key protection necessary based on the contamination threat; however, wearing a respirator severely limits the ability to communicate with the general public.

The Law Enforcement Functional Group investigated the legality of detaining someone intent on leaving the site that

Level C PPE consists of a chemical protective overgarment, negative-pressure respirator and chemical protective gloves and boots.

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had not yet processed through decontamination. Not all agents produce immediate casualties or fatalities. Initial concerns were that an individual could unknowingly pose a possible threat to the community through cross-contamination. Basic information concerning the civil rights of these individuals leads to the following conclusions:

- The individual could be forcibly detained if there was reasonable cause to suspect that he or she were involved in carrying out the attack.
- The threat of contaminating an area or person(s) outside the perimeter does not justify the use of force.
- In some jurisdictions, declaration of the incident as a public health emergency may provide additional authority to law enforcement. This needs to be verified between law enforcement and health officials as part of their planning and preparation for response to a chemical incident.
- All attempts within legal limits should be used to convince individuals to undergo decontamination prior to departure from the incident scene.

Issue: Crowd Control within the Incident Scene

In all likelihood, an incident of chemical WMD terrorism will be directed at a large gathering of people to cause enormous casualties and fatalities. Mass confusion and hysteria will follow such an attack. Law enforcement will play a major role in assisting and controlling the affected population inside the hazard area. A calm and orderly response from uniformed responders (police and fire) is essential in controlling the massive numbers of people who may be involved in such an event.

Law enforcement presence in the Warm Zone is necessary to handle the situations concerning crowd control that are beyond the scope of the fire department. It is expected that some individuals will become confrontational with the firefighters who are separating, segregating, and prioritizing victims for decontamination. As victims process through decontamination, they may be found in possession of contraband or weapons (possibly not related to the WMD incident) and other sorts of paraphernalia. Suspects may also be identified among those awaiting decontamination.

Recommendation. This is an area where preparation, training, and equipment are essential for providing a controlled response. The instances outlined above are only some reasons police involvement inside the Warm Zone is necessary. After these situations arise, it is too late to begin thinking about a police response. Departments need to plan and equip officers for operations inside the Warm Zone and decontamination corridors of a chemical incident.

In a joint meeting of the fire and police representatives of the CWIRP, both groups discussed their objectives as they pertain to the need for mutual support. A major concern for the fire department was a police presence inside the Warm Zone to provide additional crowd control and safety for the first responders. The major concern of law enforcement was to secure the external perimeter prior to initiating crowd control for the fire department and first responders. Even though both sides agreed on the role of law enforcement, it is

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expected that the response would not be automatic. The groups agreed on the following two basic considerations:

- The fire department needs to request support thru the senior police liaison on the scene.
- The police department saw this role as essential to the overall control of the incident and agreed that it should be supported as soon as they established police command/control and perimeter security.

Issue: Witness Tracking, Interviewing, and Debriefing

Police interviews of potential witnesses to a chemical incident will be time consuming and manpower intensive. Initial interviews to determine specifics of the incident and initial descriptions of suspects need to focus on victims closest to the point of agent dissemination. In the case of a major event (e.g., sporting event or concert) with thousands of people in attendance, the only things distinguishing these individuals from the rest of the crowd are their symptoms and injuries. The most severely injured and/or contaminated may have the most useful information; however, their treatment and



Detectives interrogate an actor portraying a potential suspect during one of the CWIRP functional exercises.

transportation to medical facilities cannot be delayed.

Most mass-casualty situations are derived from natural disasters or unexpected accidents. In the case of a chemical WMD incident, the fact that a deliberate criminal act caused the incident makes the law enforcement role much more significant. Accountability of everyone involved in the incident is essential to police investigations.

Recommendation. Patient identification and tracking begin at the incident scene and should be part of any jurisdiction's current mass-casualty response plan. The overwhelming numbers of victims and limited medical treatment facilities will result in patients being transported to many different locations. Police must coordinate closely with fire and EMS to identify the disposition of victims for them to be interviewed by investigators.

Investigators should coordinate with the medical community to identify any people who entered the healthcare system on their own reporting symptoms that indicate they may have been part of the chemical incident.

Law enforcement should establish an area to conduct interviews that is close to the incident scene for rapid processing and dissemination of information to the incident command post. This area must take into consideration that victims will have undergone decontamination and need a place to stay warm and possibly seek further, non-urgent, medical care.

The CWIRP recommends that the local health department provide a specific station to conduct victim interviews at its off-site treatment facility. This facility can be an extremely useful collection point of witnesses since all noncritical patients from the scene will be transported there as well as victims seeking critical incident stress management (CISM).

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Conducting interviews at the off-site facility and obtaining available building space should be coordinated with the agency responsible for its operation (normally the health department).

Issue: Airspace Management

One major concern during a CW incident is to contain the spread of the chemical agent, particularly when aircraft downdraft can proliferate further contamination. It can be expected that citizens will be concerned about news helicopters recording them processing through decontamination, where disrobing is recommended as part of the process.

Controlling airspace over an incident is difficult because law enforcement routinely use helicopter support to control the scene. Moreover, many media organizations will try to use helicopters to obtain better visual coverage. Containing the spread of the contamination warrants strict management of airspace over a CW scene.

Recommendation. Immediate declaration of airspace restrictions should be made as soon as a chemical incident is suspected and it should be maintained until all airborne contamination is mitigated. Police aviation assets should also assist in enforcing airspace restrictions around the incident site.

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Part IV – Follow-On Response: The First Day

Once the immediate response and lifesaving procedures are in place, a jurisdiction needs to focus on the coordinated response to manage the incident. A chemical WMD incident will result in an overwhelming amount of local, state, and federal resources responding to the scene. Management of these resources and their integration into the planned response will be a major challenge to a city. Within 24 hours local mutual aid, state resources, and local federal support (branch offices) will arrive on the scene.

This section outlines key issues and recommendations facing a jurisdiction after the initial lifesaving response measures have been conducted.

...the Panel believes that the historically more frequent, lesser consequence terrorist attack, is more likely in the near term – one involving a weapon on a relatively small-scale incident, using either a chemical, biological, or radiological device (and not a nuclear weapon), or conventional explosives. Rather than having the intention of inflicting mass casualties, such an attack could be designed to cause a limited number of casualties, but at the same time cause mass panic. ... Nevertheless, even limited casualties could precipitate a disproportionate psychological response among the public. The resulting panic by citizens who perceive that they have been exposed, but who (like many in Tokyo) in reality have not been exposed, could effectively paralyze response capabilities even among the most prepared.

First Annual Report to The President and The Congress of the Advisory Panel to Assess Domestic Response Capabilities for Terrorism Involving Weapons of Mass Destruction. RAND 1999, Washington D.C.

General

Issue: Stress Management of Emergency Personnel

It is expected that a CW terrorist incident will create an extremely stressful situation for emergency responders. The effects of stress on the individual may be immediate or delayed and will vary from person to person. It will have a direct impact on the emergency responders' ability to properly perform their duties.

Commanders should look for personnel displaying the following stress-related warning signs:

- Headaches
- Blurred vision
- Vomiting
- Isolating themselves from other responders
- No response or slow response to commands
- Acting confused, argumentative, or disillusioned



Responders face dangers and save lives everyday; however, the psychological strains associated with a deliberate MCI must be understood and addressed.

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** It is noted that several of the above warning signs are also symptoms of nerve agent poisoning. It may be difficult to tell if the symptoms are related to stress or prolonged agent symptoms.*

Experience from the Oklahoma City bombing indicated that stress debriefings had to be mandated to ensure that they were accomplished. Many responders did not willingly want to participate and actively sought ways out of the debriefings.

Recommendation. One important factor to the responders involved in the Columbine incident was the ability to notify family members of their status. Telephone communications to inform family members that they were not a casualty of the incident was extremely important. This means of stress management should be considered for any major response effort.

It is also recommended that critical incident defusing take place before personnel are released from their duties and sent home.

Twenty-four hours after the incident, an official mandatory debriefing should be implemented.

Jurisdictions should update their employee assistance programs on the impact of the event and their companies' role at the scene. Commanders should continue to look for signs of stress well after the event.

Another important element in handling stress management is each individual's right to privacy. Some responders do not wish to disclose their condition. Caution must be used not to violate this issue, as the person may or may not accept stress treatment if his or her right to privacy is violated.

Law Enforcement

Issue: Evidence Collection and Decontamination

Once the threat of airborne chemical contamination has been eliminated, law enforcement is still faced with processing a crime scene where a large part of the physical evidence may be contaminated. This is particularly true with the more persistent chemical agents such as VX and mustard. Local crime lab members are not normally trained or equipped to perform this task. In addition to the physical hazards of collecting contaminated evidence, law enforcement must consider that decontaminating evidence may subsequently destroy (contaminate) critical components of the investigation. This concern precludes decontaminating evidence on the scene to facilitate collection and processing.

Recommendation. Since an attack with chemical agents will most likely be declared an act of terrorism, the FBI will lead the criminal investigation. The FBI's Emergency Response Team (ERT) is best suited to collect the evidence from such a scene. Local law enforcement should limit their involvement to the security and preservation of the scene until federal assets arrive.

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Evidence samples of the chemical agent do not need to be hurriedly collected because potential evaporation or degradation is not a concern. A significant amount of military scientific information substantiates that chemical agent evidence can be drawn from trace elements of the agent by-products.

Chemically contaminated evidence should be packaged on scene and the detailed decontamination conducted at the laboratory. Law enforcement should decontaminate the outer package on the scene prior to transferring the evidence to a lab.

Issue: Decontamination of Law Enforcement Officers

Performing operations in a contaminated area requires personnel to undergo decontamination operations prior to being released from the incident scene. Normally decontamination is only performed by HazMat teams. This process is relatively new to most first responders especially law enforcement. In addition, equipment that enters a contaminated area to include that that is worn by an officer must be decontaminated before it is released from the scene. The following issue outlines equipment decontamination concerns.

Decontamination is the process whereby the threat of contamination is reduced through deliberate and controlled protective clothing removal and/or agent removal from such clothing. The type of decontamination process is normally determined based on the type of protective clothing worn. It is imperative that law enforcement officers operating in contaminated areas understand decontamination procedures and processes prior to initiating operations in a contaminated environment.

Recommendation. Prior to commencing any operation in a contaminated environment law enforcement must ensure that decontamination assistance is coordinated for and available. Experience through exercises indicates that all too often this is assumed and not properly coordinated. It is recommended that, subject to the availability of resources, responder decontamination be established separately from that processing the general public. This will ensure that decontamination is available for responders when needed and allow for special situations that pertain to the responder (i.e. security and decontamination of officers' weapons).

Decontamination for HazMat teams is normally referred to as technical or detailed decontamination. Since HazMat suits are water repellant, procedures for decontamination consist of washing off the suit with hoses and water sprays prior to disrobing from the suit. This form of decontamination is acceptable for the protective ensembles that the IRP recommends for patrol officers but not for those recommended for SWAT. The charcoal style ensembles, such as those recommended for SWAT, should not be wet. Getting these types of suits wet degrades the protective qualities of the suit and may serve to transfer agent trapped in the charcoal layer through the suit on to the wearer. Charcoal ensembles should be removed through a careful and controlled disrobing process. This process basically entails using an assistant or "buddy" to remove the overgarment so that the wearer does not touch the outside (contaminated) part of the suit while moving through a controlled process that reduces the danger of contamination as the procedure is performed. Details for conducting such decontamination will be included in the law enforcement PPE

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report that will be published on the SBCCOM Web site after completion of the ensemble testing.

Note: Regardless of the type of suit worn and decontamination procedures used, the respiratory protection (mask) should always be the last element of the protective ensemble to be removed.

Issue: Decontamination of Law Enforcement Equipment

The threat that officers and/or their equipment will get contaminated because of a chemical WMD incident is real. In the case of a large public gathering (e.g., concert and sporting event), officers may already be on the scene and become part of the initial casualties from the attack. Additionally, the first responding officers to a chemical incident may not immediately realize the hazard and may enter a contaminated area. Regardless of how the exposure occurs, departments must be prepared to handle the problems associated with processing law enforcement equipment through decontamination. Of particular concern are weapons, radios, badges, and other highly sensitive equipment. This problem can quickly extend beyond the realm of the individual officer's equipment to include patrol vehicles, robots used to handle bombs (secondary devices), and other specialized team equipment.

Equipment known or suspected of being contaminated must be decontaminated and monitored before it is returned to service. Based on the amount of equipment in question and the need to maintain a community response capability, the senior law enforcement representative from each department must determine the amount of decontamination and monitoring that will be performed on essential equipment.

Recommendation. Contaminated equipment will be separated from the officers at the decontamination line inside the Warm Zone. Officers are not expected to willingly relinquish their equipment to anyone other than a supervisor from their own department. Departments need to be prepared to provide someone inside the Warm Zone who is responsible for the security and processing of contaminated law enforcement equipment. This individual must be properly equipped with PPE.



Decontamination and security of law enforcement are challenges that must be closely coordinated between responder agencies.

Small, nonelectronic equipment can be placed in a bucket or container of bleach. A lockable container is recommended because the equipment will have to remain in the solution for a considerable amount of time (15 to 30 minutes for most agents). Since most decontamination solutions are going to be in liquid form, ammunition should be removed from firearms and processed separately. Electronic equipment should be double bagged and processed by a laboratory with appropriate guidance based on the agent involved.

All equipment should be monitored to validate the effectiveness of decontamination prior to being returned to service. The level of monitoring should be discussed and approved with on-scene safety officials. Compounding the issue of effective decontamination is the fact that there are no standards established by OSHA or EPA for military chemical warfare

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agents in the civilian community. The more readily available types of monitoring devices expected to be in possession of the local response community (e.g., M8 paper and chemical agent monitors) provides only gross level detection capabilities. A more detailed level of monitoring, a time consuming process, is necessary and requires equipment that will probably be available only through federal assets.

Small quantities of equipment (e.g., handguns and radios) may be replenished through inter-departmental resources or through mutual-aid support while the contaminated equipment is processed. Equipment obtained through mutual-aid support must be compatible with the gaining department's equipment (e.g., communications and weapons) to be a viable solution to the immediate situation. Otherwise, to continue to provide service to the community, department supervisors may have to decide on returning equipment to service based on results from lower levels of monitoring.

Issue: Security of Victim's Personal Effects

Decontamination studies reflect that the majority of contamination is removed by removal of the outer clothing from an exposed victim. Those individuals who were close to the agent release point are likely to have agent trapped in their clothes. The first step of processing anyone through a chemical decontamination is to remove as much of their clothing as they will permit prior to washing them down. The clothing and personal effects must be bagged, the owner's identity recorded, and the belongings secured until a determination is made on its disposition.

The fire department will handle the processing of victims through decontamination, but law enforcement must be prepared to handle the security of the items collected. An additional interest to law enforcement is the fact that the perpetrator(s) may be among those processed.

Recommendation. The items collected must be segregated and labeled with the owners' identification. This is essential to the investigation if law enforcement determines that someone connected with the criminal act was processed through decontamination. The rights of private citizens concerning probable cause, however, prohibit law enforcement from processing all collected items when looking for evidence.

Items collected from victims will include sensitive items such as keys, wallets, purses, cell phones, and pagers and may not be willingly surrendered. The fire department may elect to bag these items and allow the owner to process through decontamination with them. If law enforcement wants all the belongings of a certain individual (i.e., a suspect to be detained for questioning after decontamination) to be collected, they must relay this to the fire department IC. Law enforcement should be available to assist with the collection of items from the individual for chain of custody reasons.

Senior officials from the responding agencies as well as local emergency management personnel must determine who has the overall control and disposition authority over the collected personal items.

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Issue: Security of Critical Facilities

There are two types of critical facilities that law enforcement may be asked to assist in securing during a chemical attack. The first will be those facilities associated with the processing of casualties from the incident. The second are other key areas that may be the target of additional attacks.

Hospitals and off-site medical treatment centers must establish limited access to keep their facilities from becoming contaminated. This controlled access may cause confusion among the population. Patients may perceive that they are being denied access to care, which could result in panic and unruly conduct.

Just as the threat of secondary devices targeting responders has become a reality, the possibility that the initial attack is part of a series of attacks or a diversion from a separate attack must be considered.

Recommendation. Local law enforcement may not have the manpower to simultaneously handle the incident response and security issues at other locations. Those locations with internal security should do the best they can with their own resources. It is recommended that law enforcement maintain a rapid response team capable of responding to any disturbance that may occur at these locations.

Police intelligence, in conjunction with the local emergency management office, should notify other key areas that are possible targets. Increased security and awareness should be stressed, as well as procedures to report suspicious activities or threats. If there is a clear “theme” to the initial attack (e.g., political, social, racial) similar such groups, organizations, and gatherings, should be warned.

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Part V – Long-Term Response and Recovery

Completion of the response to and recovery from a chemical incident will be an extensive and drawn out effort. A well-prepared and organized response to such an event will be the catalyst to a rapid recovery and return to normalcy for a city. The integration of federal assets may be necessary to mitigate long-term medical care of casualties, financial and social recovery, and the ongoing criminal investigation before eventual return to local control is possible.

This section outlines important issues surrounding the long-term recovery process for a community. It provides insight on recovery from the immediate and long-term effects of an attack and care for those affected.

Considering the serious nature and potential consequences of any terrorist incident, the Panel is convinced that comprehensive public education and information programs must be developed, programs that will provide straight-forward, timely information and advice both prior to any terrorist incident and in the immediate aftermath of any attack

First Annual Report to The President and The Congress of the Advisory Panel to Assess Domestic Response Capabilities for Terrorism Involving Weapons of Mass Destruction. RAND 1999, Washington D.C..

General

Issue: Employee Assistance Programs

Healthcare providers may experience long-term effects from having to manage the overwhelming task of a CW terrorist attack. Many personnel will be affected and perhaps have difficulty performing their jobs, even after receiving Critical Incident Stress Debriefing (CISD) therapy. Employee Assistance Programs (EAPs) need to be notified, since they play a part in the long-term recovery of their personnel.

Recommendation. Personnel should go through CISD as soon as possible. If the agency EAP is not prepared to initiate CISD, then an outside agency should be called for support. The International Federation of Critical Incident Stress Debriefing developed by Jeffery Mitchell, Ph.D. and George Everley, M.D., can be contacted for further recommendations.

EAPs should be prepared to respond to their employees' needs based on the circumstances of the CW incident and what role their facility played in the overall operation.

Law Enforcement

Issue: Long-Term Scene Security

A WMD event is expected to initially cover a large operating area. The attack venue, which may include a large gathering area (e.g., sporting event), use of multiple agent

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dissemination points, and an airborne contamination threat are factors relating to the initial size of the incident scene. As the incident is controlled and hazards are mitigated, the size of both the response and crime scene will be reduced. Based on the chemical agent used, the area immediately surrounding the dissemination point may remain contaminated. Processing of the scene is expected to be an extensive operation, and access to the incident site will have to be controlled throughout the process.

Recommendation. Initial scene security will be a manpower intensive operation for law enforcement. Controlled ingress and egress must be closely coordinated with the fire department and EOC. Investigation of the scene and possible long-term contamination hazards could require security for an extensive period of time. As the size of the controlled area is reduced and the extent of the crime scene determined, law enforcement is expected to turn to a more fixed type of security as a method of access control. This includes temporary fencing around the crime scene with controlled access gates.

In addition to the standard controlled access for a crime scene, law enforcement and/or scene safety officials may be required to monitor personnel entering the area for proper protective equipment and to ensure that decontamination is conducted prior to departure.

Issue: Contaminated Equipment Monitoring

The fact that law enforcement equipment may become contaminated and require decontamination is discussed in Part IV of this document. Monitoring of decontaminated equipment and material, however, is considered the final step to the process. Only after verification that all agent has been removed or neutralized can it be determined safe to return equipment to service.

Recommendation. Departments should coordinate monitoring their equipment through the emergency management office. The level of monitoring and type of detector should be coordinated by the community following advice from various federal agencies including, but not limited to, the Department of Defense (DoD), EPA, and OSHA.

It is important that supervisors know that thorough (low-level) monitoring is resource-intensive costly and time consuming. Although the resources will most likely be made available through federal agencies, departments may have to operate without their equipment for a considerable period of time (several days or more, depending on the amount of equipment requiring monitoring and the availability of resources). Equipment can include everything from vehicles and firearms to individual officer protective gear such as their ballistic vests. Departments must look at how they will continue to provide support and respond to the community during this time.

Equipment that is contaminated and unable to be decontaminated to a safe level will have to be destroyed. Funds for replacement equipment may have to be processed through federal grant channels, which will be a time consuming process.



Low-level monitoring will most likely only be available through federal response agencies.

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Part VI – Participating Agencies

SBCCOM has developed a working partnership with numerous federal, state, and local agencies and organizations to solicit a variety of expert opinions on the functional areas aligned under the CWIRP. The individuals from these agencies have dedicated a great deal of personal time in providing input to the recommendations published in this document.

Federal Partners

Director of Military Support (DOMS)
Disaster Mortuary Operational Response Team (DMORT) Region 3
Federal Bureau of Investigation (FBI), Baltimore Field Office and FBI Headquarters
Federal Emergency Management Agency (FEMA)
U.S. Department of Energy (DOE)
U.S. Department of Health and Human Services (HHS)
U.S. Environmental Protection Agency (EPA)
U.S. Public Health Service (USPHS)
U.S. Army Aberdeen Proving Ground Fire Department
U.S. Army Medical Research Institute of Chemical Defense (USAMRICD)
U.S. Coast Guard Security

Maryland State Partners

Department of Health and Mental Hygiene
Department of Public Safety and Correctional Services
Maryland Department of Agriculture
Maryland Emergency Management Agency (MEMA)
Maryland Institute for Emergency Medical Services Systems (MIEMSS)
Maryland National Guard
Maryland State Police (MSP)
Maryland Transportation Authority Police
Mass Transit Administration Police Force
Office of Chief Medical Examiner

Local Partners

Anne Arundel County Fire Department
Baltimore City Fire Department
Baltimore City Health Department
Baltimore City Office of Emergency Management
Baltimore City Police Department
Baltimore County Fire Department
Baltimore County Office of Emergency Preparedness
Baltimore County Police Department
Carroll County Office of Emergency Management
District of Columbia Fire and Emergency Services

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Harford County Sheriff's Office
Howard County Fire and Rescue Services
Howard County Police Department
Metropolitan District of Columbia Police Department
Montgomery County Fire and Rescue Service
Montgomery County Police Department
New York City Police Department (NYPD)
Philadelphia, PA Fire Department
Prince George's County Police Department
Talbot County Office of Emergency Management

Private Partners

American Red Cross
Johns Hopkins University

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Part VII – Program Reports

The CWIRP identified several issues pertaining to emergency response and personal protection that required detailed specific scientific study to draw conclusions on the successful application to a chemical WMD response. These issues were researched through a series of studies that involved SBCCOM technical experts supported by local response organizations from the CWIRP.

These studies are documented in individual reports by SBCCOM. Copies of these reports that can be downloaded are being placed on the SBCCOM Web site when they are finalized. At the time of printing this document, the Web site is www2.sbccom.army.mil/hld.

Reports

Guidelines for Incident Commander's Use of Firefighter Protective Ensemble (FFPPE) with Self-Contained Breathing Apparatus (SCBA) for Rescue Operations During a Terrorist Chemical Agent Incident. Final Report dated August 1999.

Use of Positive Pressure Ventilation (PPV) Fans to Reduce the Hazards of Entering Chemically Contaminated Buildings. Final Report dated October 1999.

Chemical Protective Clothing for Law Enforcement Patrol Officers and Emergency Medical Services when Responding to Terrorism with Chemical Weapons. Final Report dated November 1999.

Guidelines for Mass Casualty Decontamination During a Terrorist Chemical Agent Incident. Final Report dated January 2000.

An Alternative Health Care Facility. Concept of Operations for the Off-Site Triage, Treatment, and Transportation Center (OST³C). Draft report, undated.

Guidelines for Mass Fatality Management During Terrorist Incidents Involving Chemical Agents. Draft report, undated.

Personal Protective Equipment Guidelines for Use by Law Enforcement Officers at a Terrorist Chemical Agent Incident. Draft report, undated.

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Part VIII – Supporting Information

Training Recommendations for Law Enforcement

Basic Training

Each level of departmental training should include training on the basic Awareness and Operations level of the Domestic Preparedness city training. This focuses on the basic areas of nuclear, biological, and/or chemical (NBC) agents as outlined below:

Awareness

Threat
Agent characteristics
First aid
Protection
Detection
Self-decontamination
Agent recognition

Operations

Responder actions
Hazard prediction
PPE
Detection and identification equipment
Emergency decontamination

This training is basic and broad in its scope and content. Therefore, more enhanced training in some topics included in the Awareness and Operations courses are recommended in the specialty training listed below.

After review of this Playbook and associated law enforcement technical reports, departments should identify what procedures they will incorporate into their operating procedures. In addition to the basic Awareness and Operations topics, departments should tailor their training programs to include accepted procedures with emphasis recommended on the following:

- Training should clearly outline the role and mission identified for officers and specialized teams. This should include the contamination threat and associated PPE.
- Departments should conduct threat and vulnerability analysis' to include identification of the types of individuals/groups that may consider use of chemical terrorism and potential targets in the area.
- The fact that contaminated items need to stay in the contamination reduction corridor (Warm Zone) until they are decontaminated and monitored is of paramount concern to law enforcement officers. It is against the very instinct of every officer to relinquish their equipment, especially their firearm, to anyone other than a direct supervisor. Advance information regarding decontamination requirements will assist in alleviating problems when the situation arises.

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The above listed training is recommended for all personnel. Additional training recommendations for specific roles/teams are also provided.

Training by Specialty

Patrol Officer

Protective Equipment

Departments must determine what type and style, if any, of protective equipment they will provide to their basic patrol officer. Recommendations on protective equipment are provided in the law enforcement PPE guideline report.

Officers must receive basic training on the correct operation, use, and wear of the equipment they are provided. Individual maintenance to keep the equipment serviceable must not only be taught, but the performance of routine operators' maintenance must be enforced and checked. Wearing improperly maintained PPE can be just as life threatening as wearing no PPE.

The limitations of the protection afforded by the PPE must be stressed. A standard respirator and protective suit are not as protective as a HazMat Level-A suit. Officers cannot assume that because they have some form of protection that they can enter all contaminated areas. These limitations must clearly be made known to save officers' lives.

Threat of Secondary Devices

The use of secondary devices targeting responders has become a reality. It can only be expected that the use of such devices would be a possibility in conjunction with a WMD attack. In fact, a WMD may be the secondary device and not the initial action that brings responders to the scene.

Officers should be briefed on types of devices that can be used to disseminate C/B agents.

SWAT

Protective Equipment

In addition to the types of equipment training specified for the basic patrol officer, PPE for Special Weapons and Tactics (SWAT) teams may also include some form of voice amplification system. SWAT teams must train in their PPE, since they will clearly be affected by this equipment. Teams should perform all aspects of their mission in full protective equipment. This should include live fire qualification in PPE.

HazMat Responder Training

SWAT teams will be expected to operate in areas where there is greater risk of agent exposure and dissemination. As a result, it is recommended that they receive formal HazMat responder training. This can best be accomplished through a memorandum of agreement (MOA) with the local fire department.

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Decontamination

Teams should be instructed on specific immediate decontamination steps to take if a device activates or they become contaminated. This would be an extension of the basic decontamination received under the awareness training.

SWAT teams may be expected to undergo complete decontamination upon termination of their mission. This will definitely be a requirement if there is any type of agent release. This decontamination will be the same as the decontamination that a HazMat team would undergo. The specifics of a technical decontamination should be trained and be a part of the team's rehearsal for a mission involving C/B agents. Actual setup and conduct of the technical decontamination should be performed by the fire department in support of the police operation.

Recognition of C/B Devices and Agents

SWAT officers are second only to bomb technicians in possibly encountering C/B devices. Additional training should be given on recognizing C/B devices and on the physical characteristics of the agents.

Incident Command

Reality of NBC Threat

Nowhere is this training more important than at the supervisory and command levels. If the department's leadership does not understand and accept the threat of NBC agents being used by terrorists' organizations, militia groups, or lone individuals, then there will be no enhanced preparedness within the department. Formulation of the threat training and vulnerability analysis for the area should be a joint effort of the local and state police departments in conjunction with the local FBI office.

Unified Command

Possibly, the greatest challenge facing the senior official on the scene will be operating as part of a unified command. Police, fire, emergency management, and many local and state agencies can be expected to quickly converge on the scene. Initial command of the incident will most likely rest with the fire department until the rescue of lives is complete. It is normal for each agency to want to operate in their own boundaries and with their own command structure; however, only through good cooperation and communication can all agencies effectively perform their missions and support one another. Drills and exercises focusing on a unified command are essential to the development of a relationship between various agencies that will allow for a focused response to a terrifying event. Exercises must continue beyond the local level of response, as various state and federal agencies will come into play and, at times, manage various aspects of the incident.

Incident Management Challenges

WMD scenarios pose specific challenges for the commander on the scene. As specified under the basic training recommendations, there is a potential for limited loss of major items of equipment. Additionally, the release of an agent could potentially affect the

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majority of the responders on the scene. These individuals would then have to be taken from their post or mission to undergo decontamination and possibly receive first aid.

Officers operating in PPE pose additional concerns. Any type of PPE will cause additional heat buildup and stress on the body. Officers may have to be rotated more frequently to allow them the opportunity to rehydrate. Operating in PPE also poses a psychological strain on individuals, especially over prolonged periods.

Support Requirements to State and Federal Law Enforcement Agencies

As mentioned above there will be times and instances when various state or federal agencies will assume command of a WMD scene. Local departments should know the specific policies of their state police in response to a WMD incident. It can be expected that all incidences involving the release of a WMD agent will receive response from the FBI. Their involvement will either be in support of the local and/or state police, or they will assume control of the investigation and require the assistance of the local police. These command relationships for the most part are already in place in normal operations. Specific support requirements for a WMD incident should be determined and trained before becoming a response issue.

Bomb Squad

Personal Protective Equipment

PPE for bomb technicians is basically limited to one type of standard C/B bomb suit. This equipment affords basic C/B agent protection while maintaining about 70 percent of the total blast protection of a standard bomb disposal suit. This suit is expensive, and departments will probably to rely on money from the federal grant process to purchase it.

Numerous C/B exercises have resulted in situations where it became necessary for a bomb squad to clear an area (predominantly a building) of explosive devices (perform a sweep or actual render-safe procedures [RSP]) in an area already contaminated by an agent release. Without the above-mentioned C/B bomb suit, this has presented a very real problem.

HazMat Technician

In addition to being the most likely law enforcement personnel to wear Level A protection, bomb technicians are most likely to encounter and handle C/B agents and devices. It is agreed that they would receive valuable training in handling these materials by completing the HazMat technician level of training afforded to fire department HazMat teams. Currently, all FBI certified bomb technicians undergo 40 hours of HazMat/WMD training as part of their recertification.

Increased Decontamination Procedures

As mentioned in the SWAT training recommendations, bomb technicians have the highest possibility of being exposed to harmful agents. Therefore, they should receive increased training on the individual decontamination measures and the procedures necessary for undergoing complete technical decontamination (e.g., HazMat).

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Recognition of C/B Agents, Devices, Laboratories

Bomb technicians also need additional training on agent physical characteristics and the items that would comprise a clandestine agent lab.

Remote Detection of Agents

The use of robots should be considered for reconnoitering devices and carrying agent detection equipment.

Render-Safe Procedures for C/B Devices

Technicians need training on the specifics of C/B agent devices that differ from the standard explosive devices that they normally may encounter. Additional training on C/B IEDs has been included in the training conducted at the Redstone Arsenal in Huntsville, AL.

Communications

Keys to Recognition of C/B Threat or Incident

Operators receiving 9-1-1 calls must be able to recognize key indicators that a mass-casualty or C/B incident has taken place. They should be given a checklist of questions to ask as soon as they perceive the possibility of a C/B attack or threat.

Operators must be trained to pass a suspected or actual C/B threat on to all responding agencies and all agencies contacted. For the most part, it will be the information gained and provided by the dispatchers that will save the lives of the first responders on the scene.

Agencies for Automatic Notification if a Dispatcher Suspects a C/B Threat or Incident

Departments should have a standard list of emergency response, emergency management, and medical organizations that will be notified immediately on the suspicion of a C/B incident or threat. Rapid notification of all possible agencies that will be involved will assist in the total response effort. This list should include the input of local, state, and federal partners.

Procedures for Continued Operations in Case of Loss of Communications Center

All agencies should train and conduct exercises involving the loss of standard communications. In addition to the police department, joint training with other response agencies (especially the fire department) should be conducted without radio communications. The fact that radio transmission is not allowed within 300 meters of a suspected or unknown explosive device renders this a very likely situation involving a C/B device.

Crime Lab/Investigations

All investigative and evidence collection procedures for a C/B incident will likely be handled by the FBI. It may be necessary for local and state law enforcement agencies to support their efforts. The training listed below is recommended for investigators in case of

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this necessity. It is not meant to train local departments to conduct procedures in lieu of waiting for federal response.

HazMat responder, PPE, and advanced C/B agent device recognition training is recommended, as mentioned for SWAT and bomb technicians.

Sampling, Packaging, and Preservation of C/B Evidence

Collection, packaging, and preservation of C/B agents require specific equipment and procedures. The FBI should assist in the development of training on the procedures necessary for this type of scenario.

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Performance Objectives Matrix

		Performance Requirements				
		<i>Legend for requirements:</i> ○ -basic level ● advanced level ◆ specialized				
Competency level		Awareness		Operations	Technician/ Specialist	Incident Command
		Employees	Responders			
Examples		Facility workers, hospital support personnel, janitors, security guards	Initial firefighters, police officers, 911 operators/dispatchers	Incident response teams, EMS, basic HazMat personnel on scene	Incident response team specialists, technicians, EMS advanced, and medical specialists	Incident commanders
Areas of Competency	Ref.					
1. Know the potential for terrorist use of NBC weapons: - What nuclear/biological/chemical (NBC) weapons substances are. - Their hazards and risks associated with them. - Likely locations for their use. - The potential outcomes of their use by a terrorist. - Indicators of possible criminal or terrorist activity involving such agents. - Behavior of NBC agents.	C, F, M, m, G	○ ○ ○ ○	● ● ● ●	● ● ● ● ●	● ◆ ● ● ◆	● ● ● ● ●
2. Know the indicators, signs, and symptoms for exposure to NBC agents and identify the agents from signs and symptoms, if possible.	C, F, M, m	○	●	●	◆	●
2a. Knowledge of questions to ask caller to elicit critical information regarding an NBC incident.	G, m		● (911 only)			
2b. Recognize unusual trends which may indicate an NBC incident.	G, m		●	●	◆	●
3. Understand relevant NBC response plans and standard operating procedures (SOP) and your role in them.	C, F, M, m	○	●	●	●	●
4. Recognize and communicate the need for additional resources during an NBC incident.	C, m, G	○	●	●	●	●
5. Make proper notification and communicate the NBC hazard.	C, F, M, m	○	●	●	●	●
6. Understand: - NBC agent terms. - NBC toxicology terms.	C, F, m	○	●	● ● (EMS-8 only)	● ●	● ●
7. Individual protection at an NBC incident: - Use self-protection measures. - Properly use assigned NBC protective equipment. - Select and use proper protective equipment.	C, F, M, m	○	●	● ● ●	◆ ◆ ◆	● ● ●
8. Know protective measures and how to initiate actions to protect others and safeguard property in an NBC incident.	F, M	○	●	●	●	●
8a. Know measures of evacuation of personnel in a downwind hazard area for an NBC incident.	M, G		●	●		●

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Performance Requirements						
<i>Legend for requirements:</i> ○ -basic level ● advanced level ◆ specialized						
Competency level		Awareness		Operations	Technician/ Specialist	Incident Command
		Employees	Responders			
9. CB decontamination procedures for self, victims, site/equipment, and mass casualties: - Understand and implement. - Determine.	C, F, M, m	○ self	●	● ●	◆ ◆	● ●
10. Know crime scene and evidence preservation at an NBC incident.	F, M, m	○	● (except 911)	●	●	●
10a. Know procedures and safety precautions for collecting legal evidence at an NBC incident.	F, G, m		●	●	◆	●
11. Know federal and other support infrastructure and how to access in an NBC incident.	C, F, M, m		○ (911 only)	○	●	◆
12. Understand the risks of operating in protective clothing when used at an NBC incident.	C, F, m		○	●	●	●
13. Understand emergency and first aid procedures for exposure to NBC agents and principles of triage.	F, M		○	●	◆	○
14. Know how to perform hazard and risk assessment for NBC agents.	C, F, M, m			●	◆	●
15. Understand termination/all clear procedures for an NBC incident.	C, F, m			●	●	●
16. Incident Command System/Incident Management System - Function within role in an NBC incident. - Implement for an NBC incident.	C, F, M			●	●	◆ ◆
17. Know how to perform NBC contamination control and containment operations, including for fatalities.	C, F, M, m			●	◆	●
17a. Understand procedures and equipment for safe transport of contaminated items.	G, m			●	◆	●
18. Know the classification, detection, identification, and verification of NBC materials using field survey instruments and equipment, and methods for collection of solid, liquid, and gas samples.	C, F, M, m			○	◆	●
19. Know safe patient extraction and NBC antidote administration.	F, m			● (medical only)	◆ (medical only)	○
20. Know patient assessment and emergency medical treatment in an NBC incident.	M, m, G			● (medical only)	◆ (medical only)	
21. Be familiar with NBC related public health and local EMS issues.	G			● (medical only)	● (medical only)	○
22. Know procedures for patient transport following an NBC incident.	F, G			● (medical only)	● (medical only)	○
23. Execute NBC triage and primary care.	G			●	◆ (medical)	

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Performance Requirements						
<i>Legend for requirements:</i> ○ -basic level ● advanced level ◆ specialized						
Competency level		Awareness		Operations	Technician/ Specialist	Incident Command
		Employees	Responders			
				(medical only)	only)	
24. Know laboratory identification and diagnosis for biological agents.	G				◆ (medical only)	
25. Have the ability to develop a site safety plan and control plan for an NBC incident.	C, F				◆	◆
26. Have ability to develop an NBC response plan and conduct exercise of response.	G, m					●

Legend for references:

C - 29 CFR 1910.120 (OSHA Hazardous Waste Operations and Emergency response)

M - Macro objectives developed by a training subgroup of the Senior Interagency Coordinating Group

m - Micro objectives developed by U.S. Army Chemical & Biological Defense Command

G - Focus Group workshop

F - NFPA Standard 472 (Professional Competence of Responders to Hazardous Materials Incidents) and/or

NFPA Standard 473 (Competencies for EMS Personnel Responding to Hazardous Materials Incidents)



FIRST RESPONDERS' ENVIRONMENTAL LIABILITY DUE TO MASS DECONTAMINATION RUNOFF

The Environmental Protection Agency (EPA) is issuing this alert as part of its ongoing effort to provide information on environmental issues related to biological, chemical, and nuclear terrorist incidents. EPA publishes *Alerts* to increase awareness of possible hazards and environmental concerns. It is important that SERCs, LEPCs, emergency responders and others review this information and take appropriate steps to minimize risk.

PROBLEM

On April 19, 1999, the Team Leader of the Chemical Weapons Improved Response Team (CWIRT), U.S. Army Soldier and Biological Chemical Command sent a letter to EPA raising issues concerning first responders' liability during a weapons of mass destruction (WMD) terrorist incident. Specifically, the CWIRT asked about the first responders' liability for spreading contamination while attempting to save lives.

Environmental liability resulting from critical lifesaving actions may seem unlikely, but could be a serious concern for many first responders. The question is: Can emergency responders undertake necessary emergency actions in order to save lives in dire situations without fear of environmental liability even when such emergency actions have unavoidable adverse environmental impacts? This concern is not limited to WMD terrorist incidents, it has

and frequently is discussed in the hazardous materials response community.

THE NERVE AGENT DRILL

The federal government recently sponsored a multi-agency drill based on a simulated nerve-agent attack. The release of the nerve agent resulted in hundreds of simulated casualties who survived the initial terrorist attack. The hazmat team had to rescue and decontaminate these "survivors" before they could receive medical attention. The hazmat team identified the need to collect the water used to decontaminate the victims (deconwater) to avoid a release to the environment. During the drill, these very capable, well-equipped, well-intentioned, professional hazmat teams delayed their initial entry for more than one hour, awaiting the arrival and set-up of pools to collect the deconwater. While the actor-survivors were dying a slow, painful, convulsive death, state and federal officials were debating and insisting that deconwater had to be collected for proper disposal. By the time the rescuers set up the holding pools and entered the site, nearly 90 minutes later, the "survivors"

CHEMICAL SAFETY

ALERT

broad implications for our National Response System (NRS)

had expired. The contaminated water was collected but the “victims” died.

GOOD SAMARITAN PROVISIONS

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Section § 107 (d) Rendering Care or Advice, addresses this issue. Section 107 (d) (1), often known as the “good Samaritan” provision states: “No person shall be liable under this sub chapter for costs or damages as a result of actions taken or omitted in the course of rendering care, assistance, or advice in accordance with the National Contingency Plan (NCP) or at the direction of an on-scene coordinator appointed under such plan, with respect to an incident creating a danger to public health or welfare or the environment as a result of any releases of a hazardous substance or the threat thereof.” This provision does not preclude liability for costs or damages as a result of negligence. Releases of chemical and biological warfare agents due to a terrorist incident are considered hazardous materials incidents and therefore CERCLA §107 (d) (1) could apply, to the extent that there is a release or threatened release of a hazardous substance.

In addition, §107(d)(2) provides that state and local governments are not liable under CERCLA “as a result of actions taken in response to an emergency created by the release or threatened release of a hazardous substance generated by or from a facility owned by another person.” Section 107(d)(2) would insulate state and local governments from potential CERCLA liability arising from first responder actions. **However, the provision does not apply to costs or damages caused by “gross negligence or intentional misconduct by the state or local government.”**

During a hazardous materials incident (including a chemical/biological agent terrorist event), first responders should undertake any necessary emergency actions to save lives and protect the public and themselves. **Once any imminent threats to human health and life are addressed, first responders should immediately take all reasonable efforts to contain the contamination and avoid or mitigate environmental consequences.** EPA will not pursue enforcement actions against state and local responders for the environmental consequences of necessary and appropriate emergency response actions. First responders would not be protected under CERCLA from intentional contamination such as washing hazardous materials down the storm-sewer during a response action as an alternative to costly and problematic disposal or in order to avoid extra-effort.

OTHER LIABILITY ISSUES AND STATE TORT LAWS

EPA cannot prevent a private person from filing suit under CERCLA. However, first responders can use CERCLA’s Good Samaritan provision as defenses to such an action. First responders could also be subject to actions under other laws, including state tort laws. A state’s tort law allows individuals and businesses to seek compensation for losses or harm caused by another. The extent of tort liability of a state or local governmental jurisdiction, as well as individual employees or representatives of that jurisdiction, is established by the tort law of each state. The liability of governmental jurisdictions and their employees may be shaped by factors such as negligence, statutory and discretionary immunity, etc. **First responders should consult legal counsel in their state to discuss authority, status as an agent of the state, immunities, and indemnification.**

FEDERAL SUPPORT DURING A WMD INCIDENT

Contaminated runoff should be avoided whenever possible, but should not impede necessary and appropriate actions to protect human life and health. **Once the victims are removed and safe from further harm and the site is secured and stable, the first responders should be doing everything reasonable to prevent further migration of contamination into the environment.**

First responders should involve state and federal officials as soon as possible to reduce potential liability concerns. Under CERCLA, the Federal On-Scene Coordinator (FOSC) can determine which environmental regulations are applicable (or relevant and appropriate) to any removal response and may further determine that any such environmental regulation is impracticable to achieve depending on the exigencies of the situation. If the FOSC determines that it is impracticable to comply with any particular environmental regulation, then the responders (local, state, Federal or responsible party) do not have to comply with that particular environmental regulation. **By involving FOSC, first responders can substantially reduce their potential liability.**

In addition, FOSCs have an expanse of resources under the NRS to support state and local responders in determining a solution which best addresses protectiveness of human health and the environment. Under the NRC, the FOSC can provide invaluable assistance in determining clean-up and decontamination needs, health criteria and appropriate clean-up protocols as needed. FOSC support is even more critical in the aftermath of a WMD terrorist attack when critical post-emergency actions such as agent identification, crime scene sampling, crime scene preservation, and long-term risk evaluation are also being

conducted.

PRE-PLANNING IS KEY!

It may not be technically feasible to contain all the runoff resulting from a WMD incident, but emergency responders may be able to reduce its impact to the environment by pre-planning. Responders can maximize local resources by using existing response mechanisms as much as possible. Local Emergency Planning Committees (LEPCs) are a good starting point. LEPCs are established under the Emergency Planning and Community Right-to-Know Act to develop local governments' emergency response and preparedness capabilities through better coordination and planning, especially within the local community. LEPCs include elected officials, police, fire, civil defense, public health professionals, environmental, hospital and transportation officials, who can work together creatively using available resources to minimize the environmental impact of WMD incidents.

For More Information.....

**Contact the Emergency Planning and
Community Right-to-Know Hotline**

**(800) 424-9346 or (703) 412-9810
TDD (800)553-7672**

**Monday -Friday, 9 AM to 6 PM, EASTERN
TIME**

Visit the **CEPPO Home Page on the
World Wide Web at:**
<http://www.epa.gov.ceppo/>

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NOTE: All SBCCOM completed reports can be downloaded from their Web site at www2.sbccom.army.mil/hld.

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Part X – Acronyms

AAR	After-Action Report
ACF	Alternate Care Facility
ACGIH	American Conference of Government Industrial Hygienists
ALS	Advanced Life Support
APR	Air Purifying Respirator
ARES	Amateur Radio Emergency Services
BAL	British Anti-Lewisite (dimercaporal)
BALTEX	Baltimore Exercise
BATF	Bureau of Alcohol, Tobacco, and Firearms
BDC	Bomb Data Center (FBI)
BLS	Basic Life Support
BWTTX	Biological Weapons Tabletop Exercise
C	Celsius/Centigrade
CAD	Computer-Aided Dispatch
CAM	Chemical Agent Monitor
CANA	Convulsant Antidote for Nerve Agent (diazepam)
C/B	Chemical and/or Biological
CBIRF	Chemical Biological Incident Response Force (USMC)
C/E	Controller and Evaluator
CISD	Critical Incident Stress Debriefing
CISM	Critical Incident Stress Management
CNS	Central Nervous System
CO	Carbon Monoxide
CW	Chemical Warfare
CWA	Chemical Warfare Agent
CWFX	Chemical Weapons Functional Exercise
CWIRP	Chemical Weapons Improved Response Program
CWTTX	Chemical Weapons Tabletop Exercise
CX	Phosgene Oxime (blister agent)
DA	Department of the Army
DEQ	Department of Environmental Quality
DEST	Domestic Emergency Support Team
DMAP	4-dimethylaminophenol-hydrochloride
DMAT	Disaster Medical Assistance Team (USPHS)
DMORT	Disaster Mortuary Operational Response Team (USPHS)
DoD	Department of Defense
DOE	Department of Energy
DOH	Department of Health
DOJ	Department of Justice
DPP	Domestic Preparedness Program

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DPW	Department of Public Works
DS2	Decontamination solution number two (a corrosive decontamination solution)
EAP	Employee Assistance Program
ECC	Exercise Control Cell
ECG	Exercise Control Group
ED	Emergency Department
EEG	Electroencephalogram
EKG	Electrocardiogram
EMRC	Emergency Medical Response Communications
EMS	Emergency Medical Services
EMSA	Emergency Medical Services Agency
EMT	Emergency Medical Technician
EOC	Emergency Operations Center
EOD	Explosive Ordnance Disposal
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
EPT	Exercise Planning Team
ERT	Emergency Response Team
ERV	Emergency Response Vehicle
EXPLAN	Exercise Plan
F	Fahrenheit
FAC	Family Assistance Center
FBI	Federal Bureau of Investigation
FD	Fire Department
FDA	Food and Drug Administration
FEMA	Federal Emergency Management Agency
FFPE	Fire Fighter Protective Ensemble
FRP	Federal Response Plan
FSL	Federal, State, and Local
GA	Tabun (a nerve agent)
G-agent	A nerve agent
GB	Sarin (a nerve agent)
GD	Soman (a nerve agent)
GF	A nerve agent
Gm	Gram(s)
H	European countries' term for HD (sulfur mustard)
HazMat	Hazardous Materials
HD	Sulfur mustard
HEICS	Hospital Emergency Incident Command System
HHS	Health and Human Services
HL	Type of HN (mustard)

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HMRU HN1, 2, 3	Hazardous Materials Response Unit (FBI) Type of HN (mustard)
IAW	In Accordance With
IC	Incident Commander
ICAM	Improved Chemical Agent Monitor
ICM	Incident Command Management
ICS	Incident Command System
ICU	Intensive Care Unit
IED	Improvised Explosive Device
IM	Intra-Muscular
IRP	Improved Response Program
IV	Intravenous
JCAHO	Joint Commission Association of Hospital Organizations
JIC	Joint Information Center
JOC	Joint Operations Center
L	Lewisite (a blister agent)
MAC	Medical Alert Center
MATF	Multi-Agency Task Force
MCI	Mass-Casualty Incident
ME	Medical Examiner
MEDEX	Medical Exercise
MERC	Medical Emergency Resource Center
MFM	Mass-Fatality Management
MG/mg	Magnesium; milligram(s)
MMRS	Metropolitan Medical Response System
MMRT	Metropolitan Medical Response Team
MOPP	Mission-Oriented Protective Posture
MSDS	Material Safety Data Sheet
MSEL	Master Scenario Events List
NAAK	Nerve Agent Antidote Kit (MARK I) containing atropine and 2-PAM CL
NBC	Nuclear, Biological, and/or Chemical
NDMS	National Disaster Medical System
NDPO	National Domestic Preparedness Office
NFPA	National Fire Protection Association
NHTSA	National Highway Traffic Safety Administration
NIOSH	National Institute for Occupational Safety and Health
NLD	Nunn-Lugar-Domenici
NMRT	National Medical Response Team (USPHS)

CWIRP Playbook

OEM	Office of Emergency Management
OSHA	Occupational Safety and Health Administration
OST ³ C	Off-Site Triage, Treatment, and Transport Center
PAO	Public Affairs Officer
PAPR	Powered Air Purifying Respirator
PAT	Personal Accountability Tag
PCC	Poison Control Center
PDD	Presidential Decision Directive
PIO	Public Information Officer
POC	Point of Contact
PPE	Personal Protective Equipment
RSP	Render-Safe Procedures
RTF	Response Task Force
SABA	Supplied Air Breathing Apparatus
SAC	Special Agent-in-Charge (FBI)
SARA	Superfund Amendments and Reauthorization Act
SBCCOM	Soldier and Biological Chemical Command (U.S. Army)
SCBA	Self-Contained Breathing Apparatus
SEL	Selective Equipment List
SOP	Standard Operating Procedure
START	Simple Triage and Rapid Treatment
2 Pam Cl	Pralidoxime chloride
TBD	To Be Determined
TEU	Technical Escort Unit (U.S. Army)
UCS	Unified Command System
USAMRICD	U.S. Army Medical Research Institute of Chemical Defense
USPHS	U.S. Public Health Service
V-agent	A nerve agent (in some countries V-agents are known as A-agents)
VX	O-ethyl methyl phosphonothiolate (a V-agent)
WMD	Weapon(s) of Mass Destruction
WMDOU	Weapons of Mass Destruction Operations Unit (FBI)



*Guidelines
for Responding
to a
Chemical Weapons
Incident*



ANNEX A

Preface

This “**Guidelines for Responding to a Chemical Weapons Incident**” document has been developed by the Domestic Preparedness Program (DPP). Through the U.S. Army Soldier and Biological Chemical Command (SBCCOM), Chemical Weapons Improved Response Program (CWIRP), members of the Law Enforcement, Health and Safety, and the Emergency Response Functional Groups designed these guidelines with the intent to give assistance to all response personnel in dealing with critical incident management decisions consistent with an actual chemical weapons (CW) emergency response.

These guidelines are neither mandated nor required procedures for response to the scene of a chemical terrorism incident. Rather, they are presented to provide technical and operational guidance for those agencies wishing to improve their response and related operations should a CW incident occur in their community. The focus of these guidelines was to validate the procedures and recommendations developed through the series of emergency response technical reports that have already been published by the CWIRP. That validation process was conducted via a forum consisting of representatives from the fire, Emergency Medical Services (EMS), police, and health and safety communities.

We encourage all agencies and jurisdictions to review the data, understand the implementations, and determine if your agency and jurisdiction will use these guidelines as part of your decision-making process during a CW incident. Once you have made the decision that is best for your community, you should establish plans, policies, and training for your personnel in all aspects against the threat of a CW attack.

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9-1-1 Operators

The 9-1-1 Communications Center presents the first opportunity to identify that a potential chemical incident exists. A chemical terrorist attack will most likely yield an abundance of calls for assistance. Through close scrutiny of the information provided and rapid cross-checking of the numerous reports, a well-trained operator should be alerted to the possibility that the incident is not routine in nature. Identifying the incident and relaying this potential threat information and precautionary measures to **all** of the responding units may be the key to saving the lives of many of the first responders on the scene.

Indicators of a Possible Chemical Weapons Incident

- Explosion with little or no structural damage
- Reports of a device that dispersed a mist or vapor
- Multiple casualties exhibiting similar symptoms
- Mass casualties with no apparent reason or trauma
- Reports of unusual odors, liquids, spray devices, or cylinders
- Dead animals
- Discarded personal protective equipment (PPE)

Questions for the Caller

- What is your name and address and the phone number you are calling from?
- What is the location of the incident?
- Was there a fire or explosion?
- Did you hear any hissing or spraying?
- Was there any mist or liquid dispersed?
- Is anyone injured or sick?
 - How many?
 - What are their symptoms and complaints?
- Is the incident inside or outside of a building?
- What is the type of structure where the incident occurred?
- Did you see anyone or anything suspicious?
- Did you see anyone wearing protective clothing (e.g., mask, gloves, chemical suits)?
- Can you describe the perpetrator or a getaway vehicle?

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Dispatch Notifications

Dispatch

- Fire
- Police and shift supervisor
- Emergency Medical Services (EMS)
- Hazardous materials (HazMat)

Update Responding Units

- Provide responding units of any new information
- Provide special response routes of travel (upwind/upgrade)
- Provide special instructions or precautions (e.g., use of PPE, report to staging areas)
- Provide weather updates, wind direction, and speed
- Provide any description of perpetrators and getaway vehicles (e.g., warn of potential contamination, additional devices on perpetrators)
- Provide number of victims, their signs, and symptoms

Notifications

- Local Federal Bureau of Investigation (FBI) office – weapons of mass destruction (WMD) coordinator
- Office of Emergency Management (OEM)
- Local health department; give information
 - Agent information
 - Patient signs and symptoms
 - Number of casualties
 - Request that hospitals, clinics, and healthcare facilities be notified
 - Consider establishment of off-site treatment center
- Local Environmental Protection Agency (EPA)
- Department of Public Works and Highways

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Actions on Arrival

Whether prewarned of a potential chemical incident or by recognizing it on arrival at the incident scene, responders should take several immediate steps to protect themselves. With proper precautions and protective equipment, responders are able to effectively perform rescue operations and scene management safely.

- Approach upwind and updrift of the incident
- Stop at a distance and collect information
 - General guidelines for initial hazard distances are contained in the North American Emergency Response Guidebook
- Alert dispatch to inform follow-on responders
- Direct all personnel to use full PPE and self-contained breathing apparatus (SCBA)
 - At a minimum, respiratory protection
- Be aware of possible secondary devices
- Consider that the perpetrator may still be on the scene
- This is a crime scene
 - Restrict entry
 - Preserve evidence
- Avoid contact with liquids
- Relay to dispatch the status of the incident and request additional resources as needed
 - HazMat, EMS, rescue, police, bomb squad, mutual aid, and other resources

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Fire Department

On arrival, fire department units will immediately be faced with mass casualties (e.g., trauma, chemically contaminated, and psychosomatic) as well as major scene and command and control challenges. The fire response and Incident Command System (ICS) will be severely tested by the magnitude of the incident. Rapid employment of the elements of a chemical incident response is essential to protect life.

- Establish Incident Command
- Establish communications
- Secure, isolate, and deny entry to area
- Establish safety zones
- Establish water supply, hose lines, and suppression duties
- Identify if live victims remain in the area of attack
- Rescue live victims
- Establish casualty collection points (CCPs)
- Perform mass decontamination, triage, and treatment of victims
- Monitor and maintain water runoff

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Incident Command

The decisions that the Incident Commander (IC) makes during the first 10 to 15 minutes of the response are the key to both protecting responders and saving lives of the victims of the attack. The ability to recognize critical needs and prioritize the limited resources available to perform them requires a thorough knowledge of chemical incident response procedures and the threats and dangers of the potential agents. It is also critical to the safety of everyone on the incident and overall success of the incident response that all agencies operate as a Unified Command, not a series of individual agency command posts.

- Establish command post upwind and upgrade away from direct involvement with victims, responders, or emergency response vehicles
- Give detailed situation report of:
 - Estimated number of casualties
 - Location of hot, warm, and cold zones
 - Recommendations for PPE

The IC evaluates the chemical threat, potential to save lives, risk to responders, and time constraints to achieve each level of responder protection before determining what level of PPE to use to perform rescue operations.

- Request additional resources immediately
- Establish a dedicated radio channel or direct telephone line with the Emergency Dispatch and Communications Center
- Consider the threat of secondary devices
- Establish a decontamination area for civilian victims and another for technical decontamination of responders. This area should also handle decontamination of responder equipment, and evidence.
- Request communications and dispatch to notify hospitals of mass casualties and the possibility of contaminated victims who have left the scene showing up at their facilities
- Establish accountability of all responders on scene
- Request that a supervisor or senior ranking law enforcement officer report to the command post
- Alert all personnel that the incident is a crime scene and to use caution to preserve suspected evidence, if possible
- Coordinate rescue operations with law enforcement
- Ensure law enforcement advises on activities being conducted in the immediate area:

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- Search for secondary devices
- Evaluate and perform render-safe procedures (RSPs) on devices
- Investigation requirements

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Fire Department Sector Assignments

- Safety
- EMS and triage
- Water
- HazMat
- Public Information Officer (PIO)
- Decontamination
- Accountability
- Rehabilitation
- Staging
- Operations
- Police liaison

ANNEX A

Casualty Rescue

The threat of cross-contamination of victims through contact with liquid agent or residue continues even after the initial agent release. The rapid removal of casualties from the contamination, triage, and decontamination areas is essential to reducing additional agent-related injuries. ICs must make rapid decisions on casualty rescue based on protective equipment available and an evaluation of the contamination threat. As many ambulatory casualties as possible should be removed from the area without rescuers entering the incident site. It should be expected, though, that live, nonambulatory casualties will be present at any chemical incident.

*Additional information on guidelines for rescue operations may be found in the “**Guidelines for Incident Commander’s Use of Fire Fighter Protective Ensemble (FFPE) with Self-Contained Breathing Apparatus (SCBA) for Rescue Operations During a Terrorist Chemical Agent Incident.**” A copy of this report can be obtained at the following Web site:
www2.sbcom.army.mil/hld.*

- Use bull horns and vehicle public address (PA) system to give directions
- Be alert for secondary devices
- Establish communications with command post
- Determine if there are live victims in the contaminated area
- Use PPE options for rescue:
 - Level-A HazMat suit with SCBA
 - Tyvek suit underneath firefighter turnout gear; all cuffs and closures (taped) with SCBA
 - Firefighter turnout gear (taped) with SCBA
- Decide to rescue or wait for HazMat to arrive
- Notify command post, emergency management, and health department with estimated number of victims
- **Avoid contact with liquids**

Responders need to be aware that the closer they are to the point of dissemination of the agent the more likely they are to expose themselves to liquid contamination. Additionally, responders should avoid contact with any deceased based on the threat of liquid contamination.

- Assist and direct all victims to decontamination and triage area

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Decontamination

For decontamination to be beneficial to the exposed victims of a chemical incident, it must be performed within minutes of the agent exposure; however, decontamination after the initial exposure is necessary to reduce the possibility of agents on the clothing or skin. This is essential to protect responders and other victims from cross-contamination. Studies have been done looking at the advantages of using soaps, detergents, and bleach in the decontamination process; however, the only decontaminant expected to be immediately available to the first responder is water. The theories and procedures referred to by the Chemical Weapons Improved Response Program (CWIRP) are based on decontaminating victims using large volumes of water.

Additional information may be found in the “Guidelines for Mass Casualty Decontamination During a Terrorist Chemical Agent Incident.” A copy of this report can be obtained at the SBCCOM Web site: <http://www2.sbccom.army.mil/hld>.

- Establish decontamination locations upwind and updrift of the incident
- Decontamination corridors are established as the passage between the Warm and Cold Zones. As such personnel operating on the Warm Zone or contaminated side of the decontamination corridor must wear PPE/SCBA
 - Firefighters recommended turnout gear (taped) with SCBA
 - EMS recommended turnout gear (taped) with SCBA or Level C
 - Police recommended Level C

Level C protection recommended for decontamination consists of full-face, negative pressure respirator with Chemical Warfare Agent (CWA) filters, full body chemical protection suit (e.g., Tyvek or similar [not charcoal lined] military style due to potential to exposure to water) with integral hood and foot covers, butyl rubber gloves, and overboots.

- Be alert for secondary devices, weapons, and perpetrators
- Request police for security of personnel, victims, personal property, and collection and preservation of evidence
- Avoid contact with unknown liquids
- Decontaminate (**immediately**) casualties with liquid contamination on their skin or clothing
- Clothing removal is decontamination. Encourage victims to remove clothing at least down to their undergarments
 - Bag and tag personal belongings
- Prioritize asymptomatic, symptomatic, and nonambulatory casualties

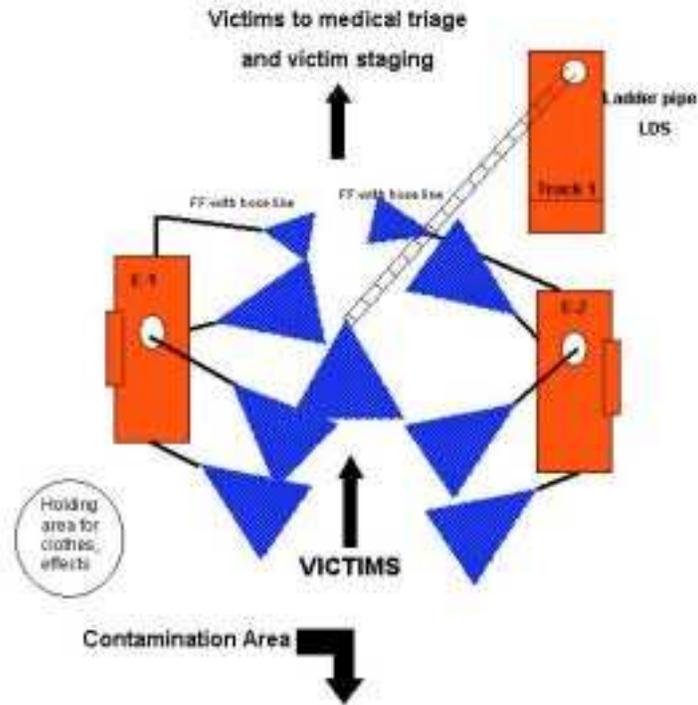
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- Coordinate decontamination with EMS triage activities
- Establish separate technical decontamination for responders away from mass-casualty decontamination

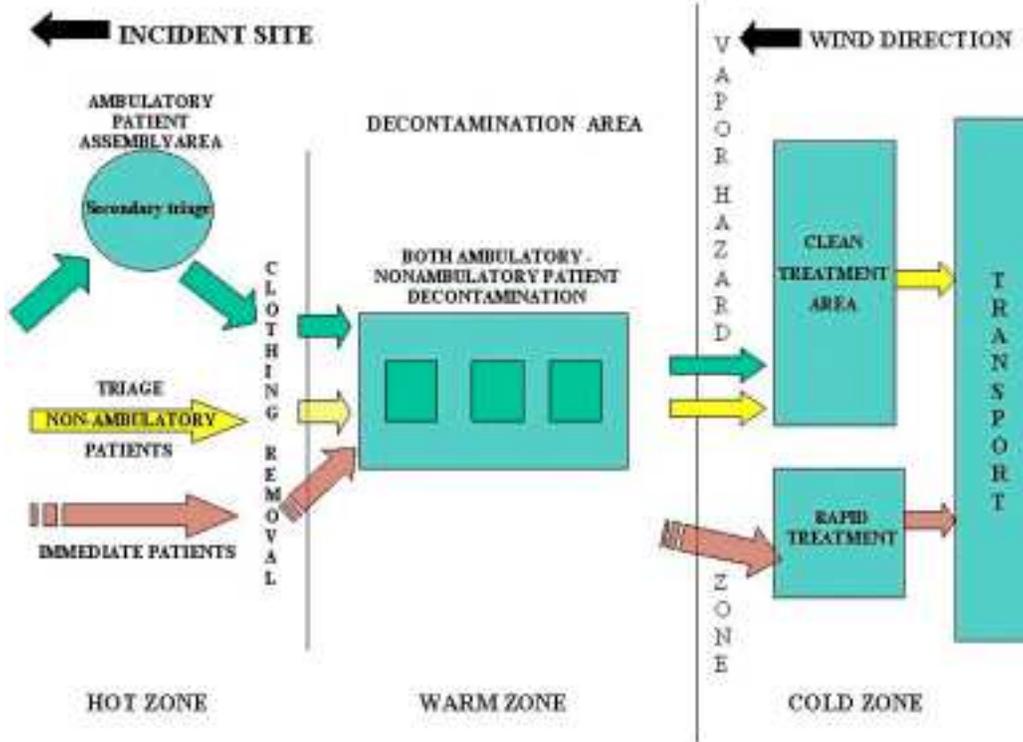
Concerns of Mass Decontamination

- Requires large volumes of water
- Containment of contaminated water runoff
 - Saving lives takes priority
 - Attempts to control runoff and environmental damage should be made as control of the situation is gained
 - Notify health department and EPA
- Weather and wind conditions
- Decontamination corridors are ideal targets for secondary devices
- Perpetrators may be among victims
- Victim identification and tracking
- Prioritization for decontamination based on medical conditions and likelihood of contamination
- Factors that determine the highest priority for ambulatory victim decontamination
 - Casualties closest to the point of release
 - Casualties reporting exposure to vapor or aerosol
 - Casualties with evidence of liquid deposition on clothing or skin
 - Casualties with serious medical symptoms (shortness of breath, chest tightness etc.)
 - Casualties with conventional injuries
- Security of personal property and clothing
- Security of sensitive equipment (e.g., police officers' weapons)
- Separation of male and female victims
- Determine method of water application
 - Must provide large quantity of water
 - Handheld hose lines
 - Aerial towers
 - Ladder Pipe Decontamination System (LDS)
 - Emergency Decontamination Corridor System (EDCS)

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Ladder Pipe Decontamination System



Emergency Decontamination Corridor System

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Types of Decontamination

- Passive (clothing removal)
- Dry agents
 - Dirt
 - Baking powder
 - Charcoal
 - Flour
 - Sawdust
 - Silica gel
- Wet agents
 - Soap and water
 - Water (only)
 - Bleach (equipment decontamination)
- Air decontamination (positive pressure ventilation [PPV]/portable fans)

Decontamination Resource Needs

- Engine companies to establish, maintain, and apply water
- Truck companies for ladder pipe and ventilation duties
- Ambulances and EMS personnel for treatment and transport of victims after decontamination
- Police for security and control
- Tracking of victims and personal property
- Dry clothing and blankets
- Department of Public Works (DPW) and highways for traffic control devices, sand bags, and equipment
- Alternate transportation methods for victims
 - Only casualties who have undergone gross decontamination on site
 - Mass transit vehicles used
 - Triage green only
 - Transport to alternative care facility (ACF)
 - Medical personnel to accompany each transport
 - Drivers with Level C PPE

Level C PPE recommended for transport drivers consists of full-face, negative pressure respirator, full body chemical suit (Tyvek or charcoal lined), chemical and/or biological protective gloves

- Relief crews for all emergency personnel

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Technical Decontamination

Technical decontamination refers to the detailed decontamination (e.g., wash, rinse, underlying procedures) used by specialized teams, most notably HazMat. It is recommended that at least one technical decontamination area be set up to support the special response teams that operate in the hot and warm zones. This includes law enforcement response and investigative teams.

- Established separate from victim decontamination
- Provide decontamination operations in support of
 - Firefighters
 - EMS providers
 - HazMat technicians
 - Bomb squad
 - Law enforcement
 - Civilian workers
- Be prepared to provide decontamination support during recovery operations to include decontamination of
 - Evidence
 - Equipment
 - Vehicles

The establishment of technical decontamination stations can become both a confusing and space absorbing process. Many organizations with technical decontamination capabilities insist on using their own decontamination assets rather than using already established technical decontamination corridors manned by local HazMat responders. The IC should be aware of this and plan accordingly. As multiple mutual-aid and state and federal response teams converge on the incident scene, technical decontamination can become a space use nightmare. Best practices involve use of personnel and specialized equipment from responding agencies on an already established technical decontamination corridor.

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HazMat Team

Missions performed by HazMat teams on a chemical incident will predominantly be the same as a normal HazMat response. However a deliberate chemical attack will most likely yield many more casualties, occur in a densely populated area or a large gathering, and be a criminal act. HazMat operations must be closely coordinated with law enforcement.

- Approach upwind and upgrade of the incident
- Wear Level A HazMat PPE/SCBA
- Identify the chemical agent using detection equipment and patient symptoms
- Collect samples for laboratory analysis
- Avoid contact with liquids
- Be alert for secondary devices
- Consider perpetrator may still be on scene
- Establish
 - Communications with command post
 - Safety, hot, warm, and cold zones
 - Casualty holding area
 - Technical decontamination for responders, evidence, equipment, and apparatus
- Provide area monitoring during response operations
- Provide equipment monitoring during recovery operations

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Emergency Medical Services

The greatest challenges facing EMS on a chemical incident will be the number of actual casualties (e.g., trauma and agent exposure)—segregating these casualties from nonexposed victims and performing triage and possibly minor medical intervention while in a contaminated environment.

Determine proper level of PPE and respiratory protection needed for EMS personnel in their assigned work area.

PPE recommended for EMS operating in warm zone consists of either turnout gear (taped) with SCBA or Level C consisting of Tyvek style overgarment with hood and foot cover, full-face, negative pressure respirator, butyl rubber gloves, and overboots. PPE for operating in cold zone is Level C, as described above.

- Be alert for secondary devices and perpetrators
- Avoid contact with liquids
- Rapid prioritization of number of patients
- Triage victims based on medical necessity
 - Mass-casualty incident (MCI) protocols
 - Simple Triage and Rapid Treatment (START) system

The CWIRP *Guidelines for Mass Casualty Decontamination During a Terrorist Chemical Agent Incident* report outlines a mass casualty decontamination algorithm for incorporating both medical and contamination prioritization.

- Segregate victims and coordinate decontamination prioritization with fire department and HazMat based on:
 - Triage categorization
 - Likelihood of agent exposure
- Establish patient identification and tracking
- Collect victim personal property
- Tag personal property and turn it over to law enforcement for security
- Establish
 - Communications with command post and hospitals
 - Staging for EMS personnel, ambulances, supplies, and resources
 - Transportation area
 - Casualty Collection Point

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- Direct walking wounded to a designated on-site CCP
- Transport yellow and red-tagged triage patients to medical treatment facility using emergency medical transports
- Transport green-tagged triage patients to ACF using mass transit assets

ANNEX A

Patient Segregation

Unlike most MCIs, victims of a chemical incident need to be evaluated not just on their medical condition (standard MCI triage protocols), but their likelihood of contamination must be considered in determining priority for decontamination.

- Ambulatory casualties: Able to understand directions, talk, and walk unassisted
- Nonambulatory casualties: are unconscious, unresponsive, or unable to move unassisted
- All patients need to be tracked by identification and documentation and be tagged or marked prior to decontamination

Decontamination Prioritization

- Casualties closest to the point of release
- Casualties with reported exposure to vapor or spray
- Casualties with liquid agent contamination to clothing or skin
- Casualties with serious medical symptoms (e.g., shortness of breath and chest tightness)
- Casualties with conventional injuries
- Casualties with no visible signs or symptoms of agent exposure and no conventional injuries

Decontamination for final category is more for psychological than medical reasons.

*Additional information may be found in the “**Guidelines for Mass Casualty Decontamination During a Terrorist Chemical Agent Incident.**” A copy of this report can be obtained at the following Web site: www2.sbcom.army.mil/hld.*

ANNEX A

Hospital Operations

Community medical systems are faced with managing two principal populations when responding to a chemical incident: those transported from the incident scene and those who self-refer. In the case of the Tokyo subway sarin attack, the majority of the people seeking medical attention self-referred. Timely notification of the incident and subsequent updates on the suspected and known agent as well as treatment protocols are essential to hospital safety and patient care.

- Once alerted, hospitals should notify
 - Staff
 - Doctors
 - Nurses
 - Security
 - Emergency department (ED)
 - Maintenance department
- Estimate number of casualties
- Identify any self-referrals that may be from the incident
- Establish decontamination procedures for walk in-patients using hospital personnel
- Obtain suspected agent information and treatment protocols from the IC, health department, CDC, poison control etc.
- Caution hospital staff to use protective measures

PPE recommended for hospital personnel performing decontamination operations and casualty care and triage prior to decontamination should be Level C protection consisting of tyvek type suit with integrated hood (not charcoal lined suits) and foot covers, full-face, negative pressure respirator, butyl rubber gloves, and overboots.

Casualty Processing

- Patient identification and tracking
- Observe/report victim symptoms of agent exposure
- Patient transport
- Determine if number of casualties exceeds the capabilities of existing healthcare systems
 - Off-Site Triage, Treatment, and transportation Center (OST³C) needs to be established
- Identify needs for long-term patient tracking
- Establish critical incident stress debriefing (CISD) team for victims

ANNEX A

Hospital Actions

- Lock down the hospital to avoid contamination and subsequent hospital shutdown
- Establish single entry and egress point
- Establish incident command system
- Establish and maintain communications with the health department and Emergency Operations Center (EOC)
 - Share casualty information
 - Mitigate effects of the incident
 - Exchange update information
- Establish a triage area outside of the facility
- Provide a decontamination station outside the facility with fire hose/stand pipe
- Integrate local EMS tag and triage system into the hospital method for catastrophic care
- Wear the appropriate level of PPE
- Identify accurate bed availability
- Use preestablished medical treatment protocols for chemical agents
- Initiate patient evacuation plans; relocate patients to other areas inside the hospital or to other rehabilitation hospitals

ANNEX A

Off-Site Triage, Treatment, and Transportation Center (OST³C)

There may be a large number of people at a chemical incident who are not exposed to the agent and who will still seek some form of treatment. To allow the existing medical system to provide care for those who need it most, communities should consider establishing an alternative treatment center for the less serious and “worried well” population. An evaluation of the impact of the casualties on the medical system and the decision to open an alternative treatment center should be made between the IC, public health officer, and the emergency manager.

*Additional information on guidelines for establishing an OST³C will be contained in the CWIRP Report **Health and Medical Services: An Alternative Health Care Facility (The Off-Site Triage, Treatment, and Transportation Center)**, which is under development by the CWIRP and will be made available on the SBCCOM Web site: <http://www2.sbccom.army.mil/hld>.*

Activate OST³C

- Determine facility and location
- Appoint staffing
 - Administrative
 - Operational
 - Support
- Identify and obtain equipment, supplies, clothing, and antidote caches
- Establish internal and perimeter security
- Establish warm and cold zones
- Coordinate ambulances and alternate transportation
- Establish a temporary morgue

OST³C Facility Requirements

- Tables, chairs, beds, televisions, PA systems, and chalk and dry erase boards
- Bathrooms
- Cafeteria
- Auditorium and large open room area for briefings
- Locker rooms; showers for males and females
- Parking facilities and large fields
- Good access roads

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- Telephones and electricity
- Heat and air-conditioning

OST³C Patient Flow

- Controlled entry point
- Initial triage
- Gross decontamination required (if not decontaminated at the incident site)
- Registration
- Detailed decontamination
- Redress and secondary triage
- Treatment
- Data collection and law enforcement investigation
- Replenishment area and cafeteria
- Victim assistance
- CISD

ANNEX A

Fatality Recovery and Management

Residual contamination and difficulty in verifying that a body is completely decontaminated require special considerations in both body recovery and decisions on returning remains to the family members.

*Additional information will be contained in a report titled “**Guidelines for Mass Fatality Management During a Terrorist Chemical Agent Incident,**” which is under development by the CWIRP and will be made available on the SBCCOM Web site: <http://www2.sbccom.army.mil/hld> (when completed).*

- Establish communications and coordination between command post, law enforcement, medical examiner (ME), and public health
- Deceased victims are evidence of the crime scene
- Deceased victims remain in place until released by lead law enforcement agency and the ME
- Personnel processing deceased need appropriate PPE based on contamination threat

PPE recommendation for body recovery operations should be made based on results of HazMat monitoring conducted at the incident scene. If law enforcement and ME personnel enter the area prior to HazMat determining the type and concentration of agent, Level A PPE should be worn.

- Be alert for secondary devices and booby traps
- Establish decontamination area for deceased
- Identify, tag, and track deceased and their personal property
- Coordinate with hospitals and other sources where deceased may occur
- Establish a temporary morgue
- Request Disaster Mortuary Operational Response Team (DMORT), clergy, and CISD team
- Prepare information for funeral homes regarding agent and dangers of handling the bodies
- Determine if bodies can be released to families

ANNEX A

Law Enforcement

A chemical weapons attack will pose unique challenges to each level of the law enforcement response. Even though the FBI has jurisdiction over domestic WMD incidents, the initial response falls on the local law enforcement agencies. The size of the initial scene perimeter (due to vapor hazards), operating in personal protective clothing and evaluating and processing a contaminated crime scene are only some of the key challenges facing law enforcement.

- Establish police command
- Establish communications between fire department IC and police commander
- Establish personnel and equipment staging area
- Be alert for secondary devices, weapons, and perpetrators
- Ensure appropriate PPE is worn based on mission, hazard zone of operation, and the likelihood of contamination

*** PPE recommended for law enforcement officers operating on the perimeter of a chemical incident consists of Level C, Tyvek type, or charcoal lined full body chemical suit, full-face negative pressure respirator, overboots, and butyl gloves with police gear worn over the chemical protective suit.**

Officers operating in the decontamination corridor should wear the above minus the option of a charcoal lined suit.

- Police commander assigns additional duties for patrols
- Begin investigation

Studies are still ongoing regarding PPE recommendations for officers performing duties, such as suspect apprehension, inside the warm zone. Recommendations will be published as part of a comprehensive law enforcement PPE report when studies are completed. This report will be available at the SBCCOM Web site: <http://www2.sbccom.army.mil/hld>.

Identification of law enforcement officers in PPE is an issue of concern. Using vests and writing department names on suit with markers can be readily duplicated by perpetrators seeking to gain access to, or escape from, the incident scene. Careful consideration must be given to officer identification in PPE.

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Law Enforcement Roles

Basically, the roles that law enforcement will perform on a chemical incident are the same as for any crime scene. However, due to the nature of the event, level of training, availability of protective equipment, and special equipment requirements, local departments may not be able to perform several tasks. It is imperative that officers always operate within their level of training and protective equipment when dealing with a chemical incident, response, and investigation.

- Traffic and crowd control outer perimeter
- Crowd control in decontamination area
- Security
 - Site access
 - Responders and victims
 - Victims' personal belongings
 - Law enforcement sensitive equipment
 - Evidence
 - Critical off-site facilities
 - OST³C
 - Locations/gatherings with links to an identified theme of initial attack
- Crime scene processing
- Evidence collection and decontamination
- Witness interviews
- Multiagency communications
- Suspect detention
- Long-term site security

ANNEX A

Patrol

The first key element to a successful response to a chemical incident and to providing for officers' safety is rapid identification of the hazard and immediately gaining control over the responding units. The normal tendency to rush onto the scene to assist victims must be controlled. It is possible that officers on scene at the time of an attack, or the first arriving officers, could become casualties. A call to assist an officer in distress must be handled differently in a chemical incident or a large part of the immediate response force may be lost.

*Additional information will be available in the **Personal Protective Equipment for use by Law Enforcement Officers at a Terrorist Chemical Agent Incident** report. This report is under development and, when completed, will be available on the SBCCOM Web site:
<http://www2.sbccom.army.mil/hld>.*

- Senior officer will assume on-scene command
- Notify command and responding units of situation
- Designate areas for responding patrols to report to staging area
 - Verify levels of PPE before responding to scene
- Establish liaison with Incident Command and command post
- Identify manpower requirements
- Establish scene control
- Control additional responding units
- Get advice from fire department on contaminated zones, safe zones, and PPE requirements
- Do not enter the contaminated area

ANNEX A

Bomb Squad

Bomb technicians routinely operate in a highly dangerous environment with sophisticated equipment; however, none of this standard equipment provides protection from chemical agent hazards. Protective suits and specialized equipment for bomb technicians are limited; however, a chemical incident is likely to require them to operate in a contaminated environment and dispose of devices that may contain chemical agents. Police and fire commanders, bomb squads, and HazMat teams need to work together to formulate and rehearse plans for dealing with these types of problems.

- Establish communications with fire command, HazMat, and police command
 - Ensure actions are coordinated with each level of command
- Establish bomb squad staging area equipment/vehicles
- Identify appropriate PPE needed for agent hazard
 - Reconnaissance may be conducted in chemical or biological (C/B) protective clothing only
 - In areas where HazMat has not been determined, agent type and concentration Level A protection (fully encapsulating suit and SCBA) is warranted
 - If HazMat has identified agent and concentration, coordinate PPE levels with them
 - At a minimum, Level C PPE should be worn
- Have fire and HazMat teams establish technical decontamination area for personnel, evidence, and equipment
- Be alert for perpetrators who may still be on the scene
- Request Special Weapons and Tactics (SWAT) team (as needed) to secure perimeters
- Conduct search, disarmament, and detonation of suspected devices

ANNEX A

Special Weapons and Tactics Team

SWAT teams represent the law enforcement agency with the most training and diversity, operating in various specialized equipment under a variety of circumstances. As such, they are the most probable unit to perform specialized operations at a chemical incident, including operations inside the contaminated zones. Mission necessity, equipment, and training must always be considered prior to committing a team for operations in a contaminated environment.

- Establish communications with IC and police command
- Assist with security
- Establish a staging area for equipment
- Be alert for secondary devices
- Suspect detention and apprehension
- Coordinate for decontamination support if conducting mission inside warm and hot zones

ANNEX A

Intelligence

Prior to the occurrence of a chemical incident, intelligence networks should be established between local, state, and federal agencies, including adjoining departments. WMD should become a standard element of their information gathering and intelligence sharing.

- Identify possible “theme” for attack
- Identify group(s) that may be responsible for attack
- Identify related events and other possible targets
- Determine if threat warrants notification and security for other related targets
- Conduct regional notifications of incident

ANNEX A

Investigation

It can be expected that a deliberate chemical attack will be directed at a high-profile event involving a large number of people. As such, the number of potential witnesses can be in the hundreds or thousands. Identifying and locating everyone from the scene will be an enormous task for investigators.

- Witness interviews
- Suspect interrogations
- Identify locations where witnesses have been taken
 - Alternative treatment centers
 - Hospitals
- Public announcement to reach witnesses who departed area
- Establish hotline and tip line

ANNEX A

Emergency Management

Not unlike a major natural disaster, a chemical incident will challenge all of the local and regional resources and involve a large state and federal response. Emergency managers are well prepared to deal with those disasters common to their area (e.g., tornados, floods, hurricanes, earthquakes), but a chemical incident presents its own unique challenges.

- Notify local, city, and county officials
- Coordinate with fire department and health department to establish a single point of contact (POC) for public release of information
- Establish Emergency Operations Center (EOC). As operation expands merge into a Joint Operations Center (JOC) and Joint Information Center (JIC)
- Determine if incident exceeds local jurisdiction capabilities
- Notify state Emergency Management Agency (EMA)
- Make available resources, as needed
- Start compiling data for replenishment of losses and reimbursement of funds
- Work with EPA on environmental site cleanup
- Establish hotline for victim information

ANNEX A

On-Scene Communications

- Need spare and replacement radios, batteries, chargers, and supplies
- Mutual-aid radios and frequencies for ability to communicate with multiple agencies and jurisdictions
- Hard wired telephones to relieve use of radios
- Wireless cellular telephones as an alternate to radio overload
- Hard wired or wireless fax machines:
 - Free up airtime use of radios
 - Send and receive information and resource list without being monitored or heard by others
- Vehicle or handheld computers
- Private and business owned two-way radios may be used to relieve overloaded emergency radios
- Message runners in the event of loss of radio communications

ANNEX A

Media

Public Information Officer (PIO)

- Establish a PIO for the incident
- Establish a media staging and briefing area
- Maintain single contact person for release of information
- Schedule regular press releases
- Include key agency representatives in press releases to answer specific questions
- Use media for public service announcements

Pertinent Information for PIO

- Information on chemical agent
- Symptoms
- Number of people affected
- Size of the contaminated area
- Treatment for the agent
- Threat of spreading the contamination
- Directions that people who were not treated at the scene should follow
- Prognosis of the exposed victims
- Any established victim and/or incident hotlines

Media Arrival

- Local, national, and international
 - Radio stations
 - Television stations
 - Newspapers
 - Other news agencies
 - Tabloids

Public Notification

- Establish a single POC

ANNEX A

- Release brief statement of the event
- Request the public not visit the area of the incident scene
- Provide the public information on:
 - Self-decontamination
 - Information on and directions to alternative treatment centers
 - Chronology of the event
 - Public safety information
 - Instructions for the victims
 - Locations that the public needs to avoid
- Give regular media and public updates