U.S. Army Soldier and Biological Chemical Command

Homeland Defense Business Unit

Law Enforcement Officers Guide for Responding to Chemical Terrorist Incidents

Prepared by the U.S. Army Soldier and Biological Chemical Command's Improved Response Program for the Department of Justice, Office of Justice Programs

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Section I - Introduction

Purpose

To provide law enforcement personnel a quick reference guide to the basics for identification of, and response to, an attack using chemical warfare agents. This Guide is brief and general in nature and supplements the U.S. Army Soldier and Biological Chemical Command's (SBCCOM) Chemical Weapon Improved Response Program (CWIRP) reports that are referenced in this document. These reports should be read in order to comprehend the complete magnitude of a law enforcement response to this type of an incident.

Assumptions

In order for law enforcement officers (LEOs) to respond as outlined in this Guide and the referenced CWIRP reports, the following assumptions must be made:

- LEOs are trained, at a minimum to the chemical and biological awareness level.
- LEOs are equipped with the level(s) of personal protective equipment (PPE) referenced throughout these documents.
- LEOs are properly trained in the use and limitations of their PPE.
- PPE is properly maintained and serviceable.

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Section III - Indicators of a Chemical Incident

Early identification of a chemical terrorist event is critical to the protection of emergency responders and the ability to save the lives of those people directly affected by the attack. This early identification requires all persons involved in the initial response (911 operators, dispatchers, responding officers, and supervisors) to be well informed and alert to the key indicators of a chemical event.

911 Calls

The first source of information will most likely come in the form of information provided via emergency calls to 911. 911 operators should be alerted by any of the following types of information and be familiar with the role of the dispatcher as outlined in Section V.

- Large volume of calls reporting sick or injured persons with no known reason.
- Numerous persons reporting similar illness (signs/symptoms).
- Numerous calls from the same general geographic area or large gathering of people (e.g., a sporting event) reporting unusual illness.
- Symptoms indicative of chemical agent exposure (drooling, tearing, shortness of breath, difficulty breathing, irritation of the eyes, nose, throat, and/or skin, redness or itching of skin).
- Report of an explosion with little or no structural damage.
- Reports of unexplained liquids (droplets, oily substances).
- Reports of unusual odors (e.g., mowed grass, garlic, bitter almonds).
- Reports of a release of a spray (hissing sounds, presence of a mist or vapor).
- Suspicious devices/packages (spray devices, damp/wet packages or bags, explosive device that causes little explosive damage).

Section III - Indicators of a Chemical Incident

- Unexplained dead wildlife/animals.
- Discarded PPE (masks, gloves, gowns).

On-Scene Indicators

Officers responding to any mass casualty scene need to be alert for key indicators that a chemical agent may have been used. Key indicators include, but are not limited to:

- Multiple casualties with similar signs/symptoms.
- Multiple casualties with no visible injuries other than being sick (no trauma injuries).
- Widely dispersed casualties indicating a possible aerial dispersal of agent.
- Unusual or unexplained liquid in the area.

** Officers without PPE are too close to the suspected agent if they can observe pools or droplets of liquid.*

- Unusual odors (e.g. mowed grass, garlic, bitter almonds).

** Officers who can smell the odor of a potential chemical agent should immediately evacuate the area and don PPE.*

- Discarded PPE (masks, gloves, suits) or antidote auto injectors.
- Spray devices (pesticide sprayers, out of place fire extinguishers, briefcases or similar items with spray nozzles).
- Containers with hazardous materials labels or stickers.
- Unexplained dead wildlife/animals.
- Reports from victims or bystanders of a spray, mist, hissing sounds.

Section III - Indicators of a Chemical Incident

Dissemination Devices

The types of devices that can be manufactured to disseminate chemical agents are limited only by the imagination of the manufacturer. The only two key characteristics of a chemical dissemination device are an agent source (any type of container capable of holding a liquid or gas) and a dissemination mechanism. Dissemination mechanisms can vary from crude to sophisticated. Examples are:

- Normal evaporation of a liquid (the method used in the Tokyo subway attack).
- Blower or fan to aid in the evaporation process and to spread the agent vapor.
- Building ventilation systems.
- Burster/limited explosive used to break apart the agent container and spread a liquid agent.
- Explosive (the greater the explosive yield, the more agent will be consumed in the detonation).
- Pressurized spray release.

Since there is no clear profile of what a chemical dissemination device will look like, LEOs should be alert to the visual indicators associated with a chemical dissemination device or the release of a chemical agent.

- Unusual liquids.
- Wet spots on walls, ceilings, floors, or items (furniture).
- Damp or wet items such as backpacks, bags, boxes, or briefcases.
- Out of place items (pesticide sprayers in an office building).
- Containers of liquid.
- Pressurized gas cylinders.

- Items with spray nozzles.
- Any item that appears to be altered from its original form.
- Explosive devices that produce little explosive damage.

Officer Down

Early identification of a chemical incident is essential to officer safety and survival. Failure to do so can result in the first responding officer(s) becoming chemical agent casualties. No call produces a more urgent response than one of an officer down or in need of assistance; however, failure to recognize the incident for what it is can result in additional officers becoming casualties. Key issues to consider include:

- Immediate loss of contact with officers already on the scene (i.e., performing security or traffic control at large gatherings — sporting events).
- Officers reporting signs/symptoms associated with chemical agent exposure.
- Distress calls indicating medical problems as opposed to physical attack.
- Automatic distress signals (i.e., panic button on a radio) coming from an area where 911 calls or other information indicate the potential for a chemical agent incident. Dispatchers must work rapidly to compare such information and identify the potential cause for the distress signal.

AGENT	PHYSICAL STATE	SIGNS AND SYMPTOMS	ODOR	DECONTAMINATION	PERSISTENCE	DOT ERG
NERVE						
GA/GB/GD	Liquid	Pinpoint Pupils, SLUDGE - **S**alivation, **L**acrimination (tearing), **U**rination, **D**efecation, **G**astro-Intestinal distress, **E**mesis (vomiting), twitching, convulsions	Fruity	Remove contaminated clothing. Flush with soap and large volumes of water.	Minutes, days in heavy concentrations	153
VX	Like oil		Sulfur		Days to weeks	
BLISTER						
Mustard	Liquid	Eye pain, gritty eyes, reddened skin, large fluid-filled blisters	Garlic	Remove contaminated clothing. Flush with soap and large volumes of water.	Days to years	153
Lewisite	Liquid	Immediate eye pain and burning lungs, bee sting blisters, grayish skin	Geraniums		Hours to days	153
BLOOD						
Hydrogen Cyanide	Gas	Bright red lips and skin, headache, gasping, nausea	Bitter Almonds	Remove contaminated clothing. Flush with soap and large volumes of water.	Minutes	117
Cyanogen Cloride						125
CHOKING						
Phosgene	Gas	Coughing, choking, pneumonia	New-mown hay	Remove contaminated clothing. Flush with soap and large volumes of water.	Minutes	125
Chlorine	Gas	Coughing, choking	Bleach			124

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Section V - Initial Response

The actions of the first LEO on the scene set the stage for the remainder of the response including the safety of all responding officers. The first priority must be self-protection. The following list outlines actions that are necessary to gain initial control of the response effort.

Approach to the Scene

- Notify dispatch, request supervisor, additional units, and other necessary assistance (e.g., fire department, HazMat, bomb squad, etc.).
- Protect self.
- Approach from upwind.
- Maintain distance (minimum of 200 meters up wind until further advised by the Incident Commander).
- Wear protective equipment:
  - Level C provides adequate protection for on the perimeter where live victims exist.
  - Full-face respirator necessary for respiratory protection.
  - Chemical protective gloves.
  - Chemical protective suit.
  - Foot covers.
  - Know the limits of the protective clothing.
  - Do not enter enclosed areas (i.e., buildings) or areas without live victims with Level C protection.

- Avoid liquid contamination.
- Decontaminate immediately if exposed to liquid contamination.
- Officers inside of the hazard area should exit and be decontaminated as soon as possible.

- Avoid physical contact with victims.
- Report critical information.
  - Type of injuries and symptoms.
  - Estimated number of victims.
  - Size or boundaries of the affected area. May be estimated based on the distribution of victims.
  - Upwind direction and safe access routes.
  - Witness information.
- Coordinate response with fire department Incident Commander.

Responding to an Officer Down

- Request EMS.
- Attempt to determine the nature of the problem (i.e., chemical agent related, trauma, etc.)
- Assume chemical agent is present unless able to verify otherwise (e.g., direct communications with the officer).
- Consider the possibility of additional devices in the area (explosive or chemical).
- Consider that the agent concentration at the officer's location may be higher than on the perimeter of the area.
- Enter the area only after gaining supervisor's approval.
- Conduct rescue using PPE levels based on the following:
  - Level A Protection
    - Officer is inside of an enclosed area (i.e., building) and is unable to communicate.
    - There are no live casualties in the immediate vicinity.
    - Unable to determine if there are any live victims in the area.

- Level C Protection
  - Officer is outdoors or in a well-ventilated area.
  - There are live victims in the vicinity of the officer.
  - Officer is alive, although unable to self-evacuate (e.g., trauma injury).

- Avoid liquids while performing rescue.
- Decontaminate immediately upon exit of the contaminated area.

Define Perimeter

- Coordinate with fire department.
- Isolate the area.
- Corral victims into casualty collection areas, away from the area where the agent was released.
- Control ingress and egress from the scene.

Staging Area

- Identify area for responding law enforcement officers.
- Site should be upwind of the incident scene.
- Inform responding units and dispatch of staging area location.
- Identify a staging area officer to control the flow of responding officers.

Secondary Devices

- Be alert for additional devices.
- Take into account descriptions of chemical agent dissemination devices outlined in Section III.
- Secondary device may not be a chemical device.

Section V - Initial Response

- Avoid use of cell phones and radios within 300 feet of any suspected device. Coordinate this with other response agencies.
- Evacuate areas around suspected device. For suspected explosive devices refer to the Vehicle Bomb Explosion Hazard and Evacuation Distance Tables as published by the Department of the Treasury, Bureau of Alcohol, Tobacco and Firearms. For suspected chemical devices coordinate with fire department to determine distances.
- Do not touch or disturb devices.
- Notify supervisor, bomb squad, and other response agencies operating in the area.

Section VI - Dispatcher's Role

The dispatcher is the vital link to piecing together information from the scene (911 calls and responder reports) and informing initial responders of the current situation. While some jurisdictions have a consolidated 911/Dispatch center, others do not. Communications between all emergency response agencies is critical to a safe response. The following list outlines some of the critical functions necessary to protect the lives of the initial responding officers.

- Analyze 911 calls for information that may indicate a chemical agent incident (see Section II, 911 Calls).
- Alert other dispatchers of the situation.
- Notify the dispatch supervisor.
- Notify fire and EMS dispatchers of the situation.
- Contact adjacent jurisdiction 911 centers. This is important if the incident occurs near adjoining jurisdictions. Share and collect information from adjacent jurisdictions.
- Contact 911 center for military installations if near the incident site.
- Question officers on the scene regarding indicators of a chemical incident (see Section III, On-Scene Indicators and Dissemination Devices).
- Provide other dispatchers, including fire and EMS, with updated information until a Unified Command System is established.
- Provide responding officer with key information including:
  - Reported signs/symptoms.
  - Approach to the incident (upwind).
  - Staging areas.
  - Use of PPE if available.

SECTION VI - DISPATCHER'S ROLE

- If an officer is down or in need of assistance the following may indicate that the problem is related to a chemical agent exposure:
  - Immediate loss of contact with officers already on the scene (i.e., performing security or traffic control at large gatherings — sporting events).
  - Officers reporting signs/symptoms associated with chemical agent exposure.
  - Distress calls indicating medical problems as opposed to physical attack.
  - Automatic distress signals (i.e., panic button on a radio) coming from an area where 911 calls or other information indicate the potential for a chemical agent incident. Dispatchers must work rapidly to compare such information and identify the potential cause for the distress signal.
- If an officer is down from exposure to a chemical agent:
  - Verify with supervisor if a department-wide broadcast should be made. More officers rushing into the scene to assist a fallen comrade may only result in more officers becoming agent casualties.
  - Direct responding officers away from the incident scene to a staging area upwind.
  - Direct the use of PPE if available.
  - Request EMS.

Section VII - Notifications

Departments should develop internal policies outlining automatic notification procedures in the event of a suspected chemical agent incident. The list below represents those agencies that law enforcement may choose to contact.

Law Enforcement

- Dispatch, upon arrival on scene
- Shift Supervisor/Watch Commander/Chain of Command
- Local FBI Field Office
- Bomb Squad/EOD
- Intelligence
- WMD/Anti-Terrorism Section
- Adjacent law enforcement agencies
- State Police

Other Response Agencies

- Fire Department
- HazMat Unit
- Office of Emergency Management
- Public Health Department
- Federal Aviation Administration (restrict airspace)

Numbers for Assistance

- Department of Justice Office for Domestic Preparedness Helpline
  (800) 368-6498
- National Response Center
  (800) 424-8802
- CHEMTREC
  (800) 424-9300
- Center for Disease Control and Prevention
  (888) 232-3228
- U.S. Public Health Service
  (800) USA-NDMS

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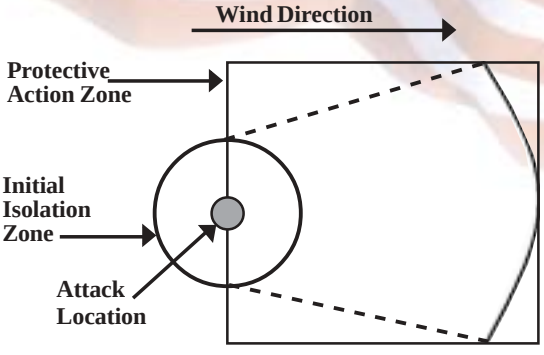
Section VIII - Scene Control

Outer Perimeter

- The outer perimeter of a chemical agent incident can be expected to be fairly large until the extent of the airborne contamination can be determined. The outer perimeter should be outside of the Protective Action Zone as defined by the Emergency Response Guide. For determination of the Protective Action Zone confer with fire department and HazMat officials.
- As monitoring information becomes available, coordinate with the fire department to reduce the size of the outer perimeter.
- Primary mission of law enforcement on the outer perimeter will be traffic control.
- Level D PPE (normal duty uniform) is appropriate; however, Level C PPE should be immediately available (i.e., in the patrol vehicle) since:
  - The release of additional agent through secondary devices may result in contamination outside of the initial Protective Action Zone area.
  - Residual contamination may exist on the clothes of victims in, and fleeing from, the area. Contact with victims, particularly any exhibiting agent signs/symptoms should be avoided.
  - LEOs may be required to physically detain someone fleeing the area that may be contaminated.
- Consider the rotation of officers due to the restrictions of wearing PPE (heat buildup, dehydration, etc.).



Inner Perimeter

- The inner perimeter is defined as the Initial Isolation Zone by the Emergency Response Guide and the contamination reduction area (commonly referred to as the Warm Zone and decontamination corridor respectively). The area inside of the Initial Isolation Zone is considered contaminated and should only be entered by personnel wearing the appropriate PPE based on the type and level of contamination present.
- LEOs performing duties on the perimeter of the Initial Isolation Zone should wear at least Level C PPE.
- Live victims inside of the Initial Isolation Zone do not mean that the area is free of contamination. Not all agents are immediate acting and a physical contact hazard may still exist although the vapor hazard has dissipated.
- LEOs will most likely perform the following actions on the inner perimeter:
  - Crowd control.
  - Assist fire department and EMS in segregating victims based on priorities for treatment and decontamination.
  - Security of the Initial Isolation Zone.
  - Maintaining one entrance and exit from the area.

- Ensuring no one enters without proper PPE.
- Security of the decontamination corridor (see Section IX for additional duties in the decontamination corridor).
- Detention of suspects.
- Control of contraband found on victims.
- Control over, and initial interview of, persons identified as having information regarding the incident.

- Consider the rotation of officers due to the restrictions of wearing PPE (heat buildup, dehydration, etc.).
- Process through decontamination prior to release from the scene.
- Provide long-term security over the immediate incident site.

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Section IX - Decontamination

Law enforcement is faced with several key functions in the decontamination process. These are listed below along with critical self-protection measures.

General

- Decontamination support should be closely coordinated with the fire department and exercised routinely prior to a chemical incident occurring.
- Consider the rotation of officers due to the restrictions of wearing PPE (heat buildup, dehydration, etc.).
- Officers must be processed through decontamination prior to being released from the scene.

Security of Personal Belongings

- Ideally everything inside of the Initial Isolation Zone (Warm Zone) stays inside until it is decontaminated and monitored (clothing, personal belongings, etc.).
- Collection of personal belongings is expected to be a shared task between the fire department performing decontamination and law enforcement.
- Citizens may refuse to disrobe and/or leave personal items (wallets, purses, cell phones, keys, etc.) behind.
- Allowing citizens to bag small, high value, items may be more prudent than collecting them by force.
- Segregate, bag, and label items by individual for future reference.
- Evidence pertaining to the incident may be among the collected items.
- Safety dictates collection of the items until they are determined to be free of contamination.
- The rules governing search and seizure of personal property still apply.

- Secondary devices targeting first responders in the decontamination area may be among the collected items. Be cognizant of items such as backpacks and briefcases.

Security of Law Enforcement Equipment

- LEOs who were inside of the Initial Isolation Zone must go through decontamination.
- A separate decontamination area for first responders should be established. This should be coordinated with the fire department.
- Equipment and personal belongings should be removed and left at the decontamination area until cleared of contamination.
- Sensitive law enforcement equipment (weapons, badges, radios, etc.) should be surrendered to a supervisor operating in the decontamination area.
- Security containers (lock boxes) should be used to secure sensitive law enforcement equipment.
- Security containers should be under the control of law enforcement officers at all times.
- Re-equip officers with clean items necessary to continue their mission and/or return to duty.
- Monitoring of items for completion of decontamination should be coordinated with HazMat officials and Federal response agencies.

Security of Agent Samples

- HazMat teams operating in the attack area (Hot Zone) can be expected to collect samples for the purposes of identifying the agent. These samples may be considered part of the evidence from the scene and should be controlled by law enforcement accordingly.

- Chain of custody should be started as soon as possible.
- Samples used for the initial hazard analysis should be processed expeditiously. Samples can be placed in secondary containers or double bagged in order to reduce the contact hazard with the sample container.
- Samples to be used for formal evidence should remain in the decontamination area under control of law enforcement until the outside of the containers are decontaminated and determined free of contamination.

Self-Protection

- Level C protection is appropriate for operations in the decontamination area.
- Personnel working in the decontamination area should wear impermeable protective clothing (not charcoal-based suits) to protect against water penetrating the suit.
- Decontamination with large volumes of water is the most practical form of decontamination immediately available to the first responder.
- Decontamination should occur within minutes of an expected exposure.

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Section X - Incident Investigation

Interview of Witnesses

- Focus on those who were closest to the point of dissemination first. Most likely these will be the more severely injured and ill.
- Questioning of potential witnesses should be done as quickly as possible; however, do not delay medical treatment and transport for investigative purposes.

** If witnesses have not undergone decontamination, officers conducting interviews will need to wear at a minimum level C PPE.*

- Consider that the suspect may be among the victims/witnesses.
- In addition to normal crime scene investigation questions, questions should focus on the key indicators of a chemical agent incident (spray devices, PPE, mists, etc.).
- Coordinate victim identification and tracking with the EMS transportation officer.
- Identify victims who left the scene on their own and reported for medical treatment at hospitals, clinics, and private doctors offices. Coordinate this with the health department.
- Use public media to reach out to those victims who left the scene on their own.
- Establish an incident hotline/tipline.
- Coordinate with the fire department to prioritize decontamination of persons identified as having information regarding the incident ahead of routine victims.
- Provide investigators at alternative casualty collection/treatment facilities.

Section X - Incident Investigation

Documentation of Events

- Consider the following as media for collecting documentation of the events that occurred at the incident site.
  - Personal cameras (still/video)
  - Surveillance cameras
  - Media (TV/still cameras, tape recording devices)
- Consider that devices that may capture recordings of the event may be located in the personal belongings collected during decontamination processing.

Section XI - Evidence Collection

Specially trained teams from the Federal Bureau of Investigation best handle the collection of physical evidence from a contaminated crime scene.

- Collection of physical evidence is not time critical.
- Level A or B PPE is warranted until the exact agent and concentration are determined and protective clothing levels are reduced.
- The collection of evidence places investigators in areas of increased agent concentration and threat of physical contamination.
- HazMat teams will most likely collect the **initial** samples of agent in order to determine the agent.
- Instruct HazMat teams to collect/sample only what they need for agent identification. Law enforcement personnel should perform formal collection of physical evidence.
- Instruct HazMat teams to avoid disturbing any known or suspected device.
- Immediately establish a chain of custody over samples collected by HazMat once they are brought to the decontamination area.
- The outside of evidence collection containers should be decontaminated prior to transport offsite.
- Evidence should only be processed at laboratories capable of handling the type of chemical agents known or suspected of being used in the attack.
- Coordinate all evidence collection and processing with the lead investigative agency (normally the FBI).

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SECTION XII - REFERENCES

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