Center for Domestic Preparedness

Law Enforcement Protective Measures for CBRNE Incidents

FEMA

The U.S. Department of Homeland Security is responsible for enhancing the capabilities of jurisdictions to prevent, deter, respond to, and recover from all-hazards incidents. A part of this mission is to increase these jurisdictional abilities by providing training opportunities.

The Center for Domestic Preparedness (CDP), a federal training facility located in Anniston, Alabama, is dedicated to the mission of training and preparing America's emergency responders by offering programs that are nationally recognized for providing progressive training that enhances the capability of the emergency response community.

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Instructor Guide

Law Enforcement Protective Measures for CBRNE Incidents
PER-264

Instructor Guide

Administrative 1
Course Introduction and Overview

Number: Admin 1

Total Time: 15 minutes

Instructional Methods

Method	Time	Instructor-to-Student Ratio
Lecture	15 minutes	1:40

Media/Technology: Multimedia presentation

INTRODUCTION

LECTURE ***1 minutes*** ***1:40***

Media 1

1. **Gain Student Attention.** Not applicable

2. **Provide an Overview of the Module.** Good morning/afternoon. Welcome to the Center for Domestic Preparedness (CDP). My name is _____ and this is the "Course Introduction and Overview" for *Law Enforcement Protective Measures for CBRNE Incidents*.

3. **Explain the Learning Objectives**

   a. **Terminal Learning Objective:** Not applicable

   b. **Enabling Learning Objective:** Not applicable

4. **Provide an Assessment of the Risk:** Low

5. **Explain the Safety Precautions:** None

6. **Describe the Method of Student Assessment.** This is an administrative module and is not assessed.

BODY

LECTURE ***5 minutes*** ***1:40***

Media 2

1. **Course Purpose.** The purpose of this course is to provide responders with the ability to identify threats, protect themselves, operate, and perform essential law enforcement skills in a chemical, biological, radiological, nuclear, or explosive (CBRNE) hazard environment.

Media 3

2. Course Overview

a. Immediately following this overview, we will administer a brief Pre-Test. The results from this examination will assist us in determining existing knowledge and allow us to better facilitate the class' specific learning needs.

b. Module 1: Identification of Terrorist and Extremist Behavior addresses the current national terrorist and extremist threat and methods for assessing potential terrorist or extremist actions.

c. Module 2: CBRNE Incident Operations addresses the organization and control of a CBRNE incident site and the essential law enforcement functions in response to a CBRNE incident (e.g., providing security, evidence preservation, and basic sampling).

d. Module 3: Personal Protective Equipment and Decontamination provides an overview of the purpose, selection criteria, and types of personal protective equipment and considerations for operating in PPE. Additionally the lesson addresses the purpose, types, basic procedures, and law enforcement specific considerations for decontamination.

e. Experiential Learning Activity (ELA): Law Enforcement Techniques in Personal Protective Equipment provides an opportunity to receive demonstrations and conduct practical application of the law enforcement skills required to operate in a CBRNE incident environment.

f. The Post-Test is conducted to assess your comprehension of the course content and determine achievement of the learning objectives.

Media 4

3. Course Graduation Criteria. To successfully complete the course, you must accomplish each of the following:

a. Achieve a 70% or higher on the Post-Test;

b. Participate in all learning activities for ELA1: Law Enforcement Techniques in PPE; and

c. Complete and submit an end of course evaluation. This evaluation has been provided and you are encouraged to provide your assessment, comments, and remarks as we proceed through the course. The evaluation will be collected at the end of the day.

Media 5

4. Facilities Orientation and Key Policies and Procedures

Instructor Note. Orient the class to the appropriate facilities and events. Additionally explain the process for dining and the key policies and procedures and how they affect the students during the class.

a. **Classroom(s)**

b. **Training Area(s)**

c. **Restrooms**

d. **Dining Facility**

e. **Breaks and Timely Return to Class Considerations**

f. **Smoking and Smokeless Tobacco Area(s)**

g. **Smoking Policy**

h. **Cell Phone and Pager Policy and Courtesy Considerations**

i. **Evening Lecture Series**

j. **Meet and Greet**

Media 6

5. **Tablet and Student Materials.** Student materials for this course are provided using a tablet computer.

   a. **Operation**

   > **Instructor Note.** Provide the class with a quick review of the procedures for logging onto the tablet; accessing the student materials to include the student guide, note-taking guide, and glossary and acronym listing, as appropriate; highlighting content; changing font size; and adding notes.

   Are there any questions about operating the tablet or using the student materials?

   b. **E-mailing Student Materials.** At the conclusion of the class, you may e-mail your student materials along with your notes.

   c. **Downloading Student Materials.** Using your Federal Emergency Management Agency (FEMA) student identification (SID) number, you may log into CTAS at https://cdp.dhs.gov/ctas/LogIn/tabid/74/Default.aspx?returnurl=%2fctas%2f and download current student materials.

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6. **CDP Information.** If you would like additional information about the CDP or our courses, you may want to:

   a. **Web.** Check us out on the web at http://cdp.dhs.gov/

   b. **Facebook®.** Follow us on Facebook® at https://www.facebook.com/CDPFEMA

c. Twitter®. Join us on Twitter® at https://twitter.com/cdpfema

FACILITATION ***8 minutes*** ***1:40***

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7. Staff Introductions

Instructor Note. Introduce fellow instructors or have them briefly introduce themselves by providing their names and a synopsis of experience.

8. Student Introductions

Instructor Note. Ask students to quickly share their name, jurisdiction, and a quick synopsis of their experience. Facilitate time to ensure all students have an opportunity to introduce themselves. Reinforce with the class that this is an excellent networking opportunity and encourage them to leverage their classmates and instructors during the course.

SUMMARY

LECTURE ***1 minutes*** ***1:40***

Summary. Are there any questions before we begin administration of the Pre-Test?

Instructor Note. Provide students with instructions on what to do and when and where to be in preparation for the next scheduled activity.

REFERENCES

Center for Domestic Preparedness. (2013). *Tobacco, Smokeless Tobacco and Electronic Cigarette Use*. Directive Number 066-7-01.

Law Enforcement Protective Measures for CBRNE Incidents
PER-264

Instructor Guide

Module 1
Identification of Terrorist and Extremist Behavior

Number: Module 1

Title: Identification of Terrorist and Extremist Behavior

Total Time: 1 hour

Instructional Methods

Method	Time	Instructor-to-Student Ratio
Lecture	50 minutes	1:40
Guided Discussion	10 minutes	1:40

Media/Technology: Multimedia presentation

INTRODUCTION

LECTURE ***5 minutes*** ***1:40***

Media 1

1. **Gain Student Attention.** Rob Chapman and Matthew C. Scheider, senior analysts at the Office of Community Oriented Policing Services (COPS), suggest that community policing could play an integral role in homeland security. They contend that by applying the principles of organizational change, problem solving, and external partnerships, community policing can help police to prepare for and prevent terrorist acts, and respond to the fear such threats engender. Community policing helps to build trust between the community and law enforcement, which allows officers to develop knowledge of the community and resident activity and can provide vital intelligence relating to potential terrorist actions. Local law enforcement can facilitate information gathering among ethnic or religious community groups with whom police have established a relationship. It will generally be citizens who observe the unusual — groups of men living in apartments or motels, or unusual behavior at flight schools — in their own community, and could be expected to report such observations to the local police. Problem-solving models typically used in community policing are well-suited for preventing and responding to possible terrorist activity. Using existing data sources, agencies can conduct target vulnerability assessments and develop risk-management and crisis plans (Chapman & Scheider, 2002).

2. **Provide an Overview of the Module.** Good morning/afternoon. My name is _____ and the title of this module is “Identification of Terrorist and Extremist Behavior.” In this module, we’ll define terrorism and extremism, discuss international and domestic terrorism, review terrorist and extremist trends and indicators, provide an overview of threat and hazard identification, and review community-based policing as it applies to terrorism and extremism.

> **Instructor Note.** Refer students to the learning objectives in their student guide. Explain the learning objectives to the students. Ask questions to ensure students comprehend what is to be learned, as appropriate.

3. **Explain the Learning Objectives**

   a. **Terminal Learning Objective.** Given a situation, assess terrorist and extremist actions in accordance with *The Domestic Terrorist Threat: Background and Issues for Congress* and *Community Preparedness Guide 201: Threat and Hazard Identification and Risk Assessment Guide*. (LE-0009)

   b. **Enabling Learning Objectives**

      (1) Given a requirement, define terrorism and extremism in accordance with *Counterterrorism Analytical Lexicon*. (LE-0009a)

      (2) Given a requirement, identify terrorist and extremist trends in accordance with *The Domestic Terrorist Threat: Background and Issues for Congress and Country Reports on Terrorism 2011*. (LE-0009b)

      (3) Given a situation, identify indicators of terrorist and extremist activity in accordance with *8 Signs of Terrorism*. (LE-0009c)

      (4) Given a situation, identify threats and hazards in accordance with C*ommunity Preparedness Guide 201: Threat and Hazard Identification and Risk Assessment Guide*. (LE-0009d)

      (5) Given a situation, identify community-based policing techniques for the prevention of terrorism and extremism in accordance with *Policing Terrorism: An Executive's Guide*. (LE-0009e)

4. **Provide an Assessment of the Risk:** Low. This module involves classroom activities requiring little or no exertion. Minimal risk exists for injury to personnel or damage to equipment or systems.

5. **Explain the Safety Precautions:** None

6. **Describe the Method of Student Assessment.** The learning objectives for this lesson will be assessed during the Post-Test. To achieve the objectives, you must receive a score of 70% or higher on the examination.

TRANSITION. Ensure students comprehend what is to be learned and/or performed, the safety precautions, and how they will be evaluated. When achieved, introduce the first learning activity.

BODY

LECTURE ***15 minutes*** ***1:40***

Media 2

1. **Terrorism and Extremism Defined.** Terrorism is the unlawful use or threat of violence in furtherance of political, religious, ideological or social goals that are intended to evoke fear, intimidate, or coerce a civilian population or any segmented thereof; influence the policy of a government by intimidation or coercion (U.S. Department of Justice [DOJ], Federal Bureau of Investigation [FBI], n.d.). Violent Extremism is any ideology that encourages, endorses,

condones, justifies, or supports the commission of a violent act or crime against the United States, its government, citizens, or allies in order to achieve political, social, or economic changes, or against individuals or groups who hold contrary opinions (DOJ, FBI, n.d.).

2. International Terrorism and Extremism

a. Increasingly, international terrorism is recognized as a threat to the United States because of terrorists' avowed goal of overthrowing secular or Western-allied regimes in certain countries with large domestic security, both timing and target selection by terrorists can affect U.S. interests in areas ranging from preservation of commerce, to nuclear nonproliferation, to the Middle East peace process. Such groups are seen as a particular threat to U.S. foreign policy objectives (Perl, 2007).

b. International terrorist groups occur primarily outside the territorial jurisdiction of the United States (Crimes and Criminal Procedures, 18 *United States Code* [U.S.C.] § 2331, 2012).

c. Formal international terrorist organizations continue to pose a domestic terrorist threat (U.S. Department of State, 2011). A few examples of such terrorist groups include the following:

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(1) Al-Qaeda

(a) Since 1980, has financed, recruited, transported, and trained Sunni Islam extremists for the Afghan resistance.

(b) Became a direct threat to the United States in 1998 in a series of showdowns between the United States and Iraq over United Nations weapons inspections.

(c) To date, responsible for the worst terrorist attacks in American history (September 11, 2001 attacks). The terrorist attacks on September 11, 2001 resulted in the collapse of the World Trade Center towers, significant damage to the Pentagon the downing of United Flight 93 and more than 2,800 deaths.

(d) Still in existence today and has a number of regional affiliates (U.S. Department of State, 2011).

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(2) Lashkar-e-Taiba

(a) Formed in the 1980s

(b) Financed, recruited, transported, and trained Sunni Islam extremists for the Afghan resistance.

(c) A formidable and highly adaptable adversary with genuine global reach, the most dangerous terrorist group operating in South Asia today, after Al-Qaeda.

(d) Possesses growing capabilities and enjoys relatively robust sanctuary in Pakistan.

(e) Tends to forge coalitions with like-minded groups such as Al-Qaeda.

(f) Still in existence today - a large and proficient militant group (U.S. Department of State, 2011).

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(3) Hezbollah

(a) Closely allied with Iran and supports them with funds and arms.

(b) Has carried out numerous anti-U.S. attacks overseas.

(c) Involved in a 33-day military conflict in Lebanon and northern Israel, known as the Summer War of 2006.

(d) Transformed itself from a militant group to the preeminent political and military force in Lebanon (U.S. Department of State, 2011).

3. Domestic Terrorism and Extremism

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a. Many people believe that the majority of terrorists in the United States come from the Middle East and are radical Muslims. The fact is the majority of terrorists are home-grown, originating with American citizens with extreme left- or right-wing views.

(1) Homegrown extremists are a significant concern. A homegrown violent extremist is a person who rejects the cultural values, beliefs, and environment of the United States and intends to commit terrorism inside the United States without direct support from a foreign organization. Homegrown terrorists are harder to detect, easily able to connect with other extremists and in some instances highly capable operationally. (*Protecting the Nation in Today's Complex Threat Environment*, 2013).

(2) Lone terrorists “commit terrorist acts alone, and without the witting support from others.” In 2012, numerous acts of terrorism and violence were committed by lone offenders (*The Domestic Terrorism Threat*, 2012).

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(a) In 2011, a 26-year-old man was arrested for planning to destroy the Pentagon and U.S. Capitol using large remote controlled aircraft filled with explosives (U.S. Attorney’s Office, 2011a).

(b) In 2011, four members of a militia in Georgia were arrested for planning to acquire explosives, silencer and to manufacture a biological toxin to use against various U.S. government targets (U.S. Attorney’s Office, 2011b).

(c) In 2012, the FBI dismantled an anarchist extremist cell in Cleveland, Ohio who planned to blow up a bridge in that city (*The Domestic Terrorism Threat*, 2012).

(d) In 2012, there were multiple lone-offender shootings: a movie theater in Aurora, Colorado; a Sikh temple in Oak Creek, Wisconsin; Family Research Council headquarters in Washington, DC; and Sandy Hook Elementary School in Newtown, Connecticut (*The Domestic Terrorism Threat*, 2012).

(3) Domestic extremists are likely to continue to pose a persistent threat involving smaller-scale bombings and assaults (*The Domestic Terrorism Threat*, 2012). According to the FBI, extremist types, within the U.S. include the following:

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(a) Animal Rights Extremists and Environmental Extremists—The term "animal rights extremism" covers criminal acts committed in the name of animal rights.

(b) Environmental extremism—Most often referred to as "Eco-terrorism"-includes criminal acts committed in the name of the environment.

(c) Anarchist Extremists—Believe that individual autonomy and collective equality are fundamental and necessary for a functional, civilized society. [Anarchism] They resist the existing hierarchical structure of society that gives some people authority and control over others.

(d) White Supremacist Extremists—The term "white supremacist extremism" (WSE) describes people or groups who commit criminal acts in the name of white supremacist ideology.

(e) Anti-Government Extremists—Believe that even though they physically reside in this country, they are separate or 'sovereign' from the United States. The law enforcement agency noted such citizens believe they don't have to answer to any government authority, including courts, taxing entities, motor vehicle departments or police

(f) Jewish Defense League—protectionist of Jewish peoples

(g) Black Separatist Extremists—a movement to create separate institutions for black people in societies historically dominated by whites particularly in the United States.

(h) Anti-Abortion Extremists—The vast majority of anti-abortion activists engage in constitutionally protected activity. However, anti-abortion extremism involves crime committed in the name of the anti-abortion movement.

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(4) Examples of Domestic Terrorism and Extremism

(a) On March 29, 2010, nine members of an extremist group were charged in Michigan with seditious conspiracy and attempted use of weapons of mass destruction in an alleged plot to attack law officers and rise up against the government. They tried to use bombs to attack a caravan of a funeral procession.

Fortunately, the FBI and Michigan State Police intervened before their plot could be carried out (FBI, 2011).

(b) 2012, Daniel Andreas San Diego made the FBI's "Most Wanted Terrorists" watch list in 2009. Listed as "armed and dangerous," with a $250,000 price on his head, the Berkeley, California, native is only the second U.S. citizen to make this particular FBI list. San Diego is an animal rights zealot. He is under federal indictment for allegedly igniting explosive devices outside two Northern California firms—biotechnology giant Chiron and homecare-product manufacturer Shaklee—in 2003. The FBI says a potentially deadly second explosive at Shaklee, strapped with nails was likely targeted at first responders, was defused (Russell, 2012).

(c) 2013, the alleged Boston Marathon bombers, April 15, 2013, Tamerlan Tsarnaev, 26, and his 19-year-old brother, Dzhokhar, apparently came to identify closely with the cause of radical Islam, but that is not the whole story. These marathon terrorists were more like rampage killers who enter a school, cinema, or shopping mall and indiscriminately target anything that moves. Their motive for planting explosives near the finish line of the marathon seemed to be revenge. They apparently blamed the United States for wars in Afghanistan and Iraq, but they also seemed to blame everybody but themselves for their personal miseries (Levin, 2013).

GUIDED DISCUSSION ***2 minutes*** ***1:40***

Instructor Note. Facilitate a guided discussion using the open-ended questions below. Probe the class, as necessary, to leverage their experiences and reinforce lesson objectives.

b. Guided Discussion Question

(1) What known terrorist or extremist groups may operate in your local jurisdiction?

(2) What terrorist or extremist incidents have occurred in your jurisdictions?

(3) How have these incidents affected policing in your jurisdiction?

TRANSITION. Before we move on, does anyone have any questions concerning anything that we have covered to this point? Next, we will discuss terrorist and extremist trends.

LECTURE ***10 minutes*** ***1:40***

4. Terrorist and Extremist Trends

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a. International Terrorist and Extremist Trends. Formal international terrorist organizations have their own infrastructures, financial arrangements, and training facilities such as Al-Qaeda, Lashkar, and Hezbollah and continue to plan and mount domestic and international terrorist campaigns (U.S. Department of State, 2011). Three trends include the following:

(1) The emergence of so-called "micro actors," spurred in part by U.S. and allied successes in isolating and killing much of Al Qaeda's leadership. The result is Al Qaeda is perceived as having a more subdued operational role, but assuming more of an ideological, motivational, and propaganda role.

(2) A trend toward "sophistication" (i.e., terrorists exploiting the global interchange of information, finance, and ideas to their benefit, often through the Internet).

(3) A growing overlap between terrorist activity and international crime, which may expose the terrorists to a broad range of law enforcement activities (Perl, 2007).

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b. Domestic Terrorist Trends. A 2013 Congressional Research Service report (focused on domestic terrorism) discusses five current trends or issues.

(1) The Level of Activity-Domestic. Terrorist have been responsible for more than two-dozen incidents since September 11, 2001 and the number of anti-government extremists has grown significantly since then.

(2) Use of Nontraditional Tactics. A large number of domestic terrorists do not necessarily use tactics such as suicide bombings or airplane hijackings. They have been known to engage in activities such as vandalism, arson, shootings, trespassing, and tax fraud, to achieve their goals.

(3) Exploitation of the Internet. Domestic terrorists—much like their jihadist analogues—are often Internet savvy and use the medium as a resource for their operations.

(4) Decentralized Nature of the Threat. Many domestic terrorists rely on the concept of leaderless resistance. This involves two levels of activity. Operationally, militant, underground, idealist cells or individuals engage in illegal activity without traditional leadership. On the above-ground public face, (the “political wing”) focused on propaganda and the dissemination of ideology—engaging in protected speech.

(5) Prison Radicalization. Prison has been a place where terrorist thinking can bloom. Some prison gangs delve into radical or extremist ideologies that motivate domestic terrorists. However, even for gangs exhibiting these ideological dimensions, criminal enterprises such as drug trafficking—not radical beliefs—largely drive their activities (Bjelopera, 2013).

GUIDED DISCUSSION ***3 minutes*** ***1:40***

Instructor Note. Facilitate a guided discussion using the open-ended questions below. Probe the class, as necessary, to leverage their experiences and reinforce lesson objectives.

c. Guided Discussion Questions

(1) What do you see as the most likely threat(s) in your jurisdiction?

(2) What steps has your agency taken to prevent or mitigate terrorist or extremist activity?

LECTURE ***8 minutes*** ***1:40***

TRANSITION. We've discussed terrorist and extremist threats, current terrorism trends. Now let's discuss indicators of terrorist or extremist activity.

5. Indicators of Terrorist and Extremist Activity

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a. Eight Signs of Terrorism. Because terrorist acts are rarely spontaneous, law enforcement should learn to identify the eight signs of terrorism in order to mitigate or respond to terrorist or extremist acts. According to the Counterterrorism Education Learning Lab (2012), there are eight signs of terrorism.

(1) Surveillance—Attempts to monitor or record activities. For example, an individual observes the security measures outside a federal building or target facility to determine if those facilities or assets are secure.

(2) Elicitation—Attempts to gain information through inquiries. For example, an individual sits next to an employee of a targeted organization and politely and slowly gets to know the employee through general questions, then after gaining trusts asks more specific questions about the organization.

(3) Tests of Security—Attempts to measure reaction times by entering restricted areas. For example, three individuals try to enter into a secured nuclear facility in an attempt to determine how many minutes it takes for a certain presence of security to arrive, with the intention of entering a later time if they feel the security is not reacting sufficiently.

(4) Funding

(a) Suspicious transactions involving large cash payments, deposits, withdrawals, or transfers of money

(b) Bulk cash smuggling

(c) Suspected financial fraud

(d) Sale of counterfeit goods

(e) Misleading charities

(5) Acquiring Supplies—Attempting to obtain explosives, weapons, uniforms, badges, credentials, etc. For example, an individual or group enters a hospital to sneak out radiological material from a storage area.

(6) Impersonation—Suspicious people who just do not belong or are attempting to assume another person's actual or false identity to gain access to a site, information, etc. For example, an individual calls an employee of a sensitive facility impersonating someone from a government regulatory agency in order to gain security information

or a person without the proper credentials uses a back story when stopped trying to gain access to a secure area.

(7) Rehearsal—Practicing to work out flaws and unanticipated problems. For example, a terrorist drives to a mall, simulates planting explosive devices at entry points and leaves the area within a given timeframe to see if they can bypass security cameras and exit without being apprehended by law enforcement.

(8) Deployment—Positioning assets. For example, a team of terrorist drive to predetermined locations placing explosives, get-away vehicles, changes of clothing, and other supplies to conduct a terrorist attack.

GUIDED DISCUSSION ***3 minutes*** ***1:40***

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Instructor Note. Based upon time available at this point in the lesson, presentation of the video illustrating the eight signs of terrorism and the associated guided discussion is optional. The video is approximately 3 minutes in length and the guided discussion is an additional 2 minutes. If the video is presented, after its conclusion conduct a guided discussion using the questions below.

Guided Discussion Questions

(1) Which signs of terrorism can be identified in the video?

Anticipated response. Impersonation and Surveillance. The individuals in the video were suspicious and did not belong. Also, they were taking video of the facilities in an unusual manner.

(2) What critical infrastructure do the suspects seem to be targeting?

Anticipated response. The individuals in the video are targeting an oil refinery.

(3) What critical infrastructure or venues in your area might be a potential target for terrorists or extremists?

Some anticipated responses may include:

Oil refineries

Oil pipelines

Gas stations

Water treatment facilities

Post offices

Sporting events

Nuclear facilities

Power sub-stations

Churches

LECTURE ***9 minutes*** ***1:40***

TRANSITION. Are there any questions at this point in the lesson? Next we will discuss threat and hazard identification.

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6. Threat and Hazard Identification

a. Targets are selected by terrorist organizations to generate fear, to have social impact, for political change, and to cause financial chaos (Federal Emergency Management Agency, 2011).

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b. National Infrastructure Protection Plan. Revised in 2013 to reflect the evolution in the "critical infrastructure risk, policy, and operating environments, as well as experience gained and lessons learned since…2009" (U.S. Department of Homeland Security [DHS], 2013, p. 1).

(1) A comprehensive risk management framework that defines critical infrastructure, protection roles, and responsibilities of Federal, state, local, tribal, territorial, and private sector partners.

(2) Defines vulnerability as "the physical feature or operational attribute that renders an entity open to exploitation or susceptible to a given hazard" (DHS, 2013, p. 33). In calculating the risk of an intentional hazard, a common measure of vulnerability is the likelihood that an attack is successful, given that it is attempted.

(3) Protecting and ensuring resiliency of United States' critical infrastructure and key resources are essential. Critical infrastructure are the assets, systems, and networks, whether physical or virtual, so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, national public health or safety, or any combination thereof.

(4) Developing an effective strategy for critical infrastructure and key resources protection requires a clear understanding of potential threats.

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(5) A convenient resource that you may find helpful is the DHS Daily Open Source Infrastructure Report.

(a) It is a non-commercial publication intended to educate and inform personnel engaged in infrastructure protection.

(b) It is a daily, Monday through Friday, summary of open-source published information concerning significant critical infrastructure issues.

(c) It is available on the web at http://www.dhs.gov/dhs-daily-open-source-infrastructure-report.

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c. Threat and Hazard Identification and Risk Assessment (THIRA). It is important that every community understands and identifies the risks it may face. By understanding the risks, it allows the community to make informed decisions to manage risk, as well as develop needed capabilities. THIRA is a tool that allows a jurisdiction to understand its threats and hazards and how the impacts may vary according to time of occurrence, season, location, and other community factors.

(1) This knowledge helps a jurisdiction establish informed and defensible capability targets. The THIRA is intended to inform the whole community about its risks and capabilities needed to address those risks (DHS, 2012).

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(2) The THIRA (DHS, 2012) process consists of the following five basic steps:

(a) Step 1: Identify the Threats and Hazards of Concern. Based on past experience, forecasting, expert judgment, and available resources; identify a list of the threats and hazards of concern to the community.

(b) Step 2: Give Threats and Hazards Context. Using the list of threats and hazards, develop context that shows how those threats and hazards may affect the community.

(c) Step 3: Examine the Core Capabilities. Using the threat and hazard context, identify impacts to the community through the lens of the core capabilities described in the Goal.

(d) Step 4: Set Capability Targets. Looking across the estimated impacts to the community, in the context of each core capability and coupled with a jurisdiction's desired outcomes, set capability targets.

(e) Step 5: Apply the Results. Plan for the ability to deliver the targeted level of capability with either community assets or through mutual aid, identify mitigation opportunities, and drive preparedness activities.

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d. Community-Based Policing. Community-based policing is a philosophy that promotes organizational strategies, which support the systematic use of partnerships and problem-solving techniques, to proactively address the immediate conditions that give rise to public safety issues such as crime, social disorder, and fear of crime. (DOJ, Community Oriented Policing Services, n.d.)

(1) Community-based policing is a critical component of identifying threats and preventing them before they occur. It is identified by the President as a critical element in his national plan to combat violent extremism (Obama, 2011).

GUIDED DISCUSSION ***3 minutes*** ***1:40***

Instructor Note. Facilitate a guided discussion using the open-ended questions below. Probe the class, as necessary, to leverage their experiences and reinforce lesson objectives.

(2) Guided Discussion

(a) How have community-based policing initiatives been employed in your jurisdiction?

(b) What types of community partnerships have been established to mitigate extremism in your jurisdiction?

(c) What problem-solving mechanisms are used in your jurisdiction? How is information collected to enable problem solving?

(d) How have these initiatives aided in the deterrence or prevention of extremist actions or behavior in your jurisdiction?

SUMMARY

LECTURE ***3 minutes*** ***1:40***

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Summary. In this module, we defined terrorism and extremism; discussed international and domestic terrorism; reviewed terrorist and extremist trends and indicators of terrorism; discussed the eight signs of terrorism; and reviewed means to identify threats and hazards to the community. Are there any questions about what has been covered in this lesson?

Instructor Note. Provide students with instructions on what to do and when and where to be in preparation for the next scheduled activity.

REFERENCES

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Law Enforcement Protective Measures for CBRNE Incidents PER-264

Instructor Guide

Module 2
CBRNE Incident Operations

Number: Module 2

Title: CBRNE Incident Operations

Total Time: 1 hour

Instructional Methods

Method	Time	Instructor-to-Student Ratio
Lecture	1 hour	1:40

Media/Technology: Multimedia presentation

INTRODUCTION

LECTURE ***5 minutes*** ***1:40***

Media 1

1. **Gain Student Attention.** The emergency response actions taken by law enforcement during the initial minutes and hours after a chemical, biological, radiological, nuclear, or explosive (CBRNE) incident are critical. A poorly controlled response could lead to widespread panic, and a high number of casualties. For example, a response to a biological incident that fails to contain the infection, or exacerbates the spread, could result in a contagious disease being spread to several towns, counties, or even states. Similarly, the incorrect response to an incident involving chemical or nerve agents can cause unconsciousness or death within minutes. Therefore, all law enforcement first responders must be adequately equipped and trained to respond to CBRNE incidents.

2. **Provide an Overview of the Module.** Good morning/afternoon. My name is _____ and this is Module 2: "CBRNE Incident Operations." During this lesson, we will discuss the overall tasks of law enforcement in a CBRNE environment, incident response management, control zones, security, evidence preservation, bulk sampling of biological agents, and Federal Bureau of Investigation (FBI) resources to aid in a CBRNE incident.

Instructor Note. Refer students to the learning objectives in their student guide. Explain the learning objectives to the students. Ask questions to ensure students comprehend what is to be learned, as appropriate.

3. **Explain the Learning Objectives**

   a. **Terminal Learning Objectives**

      (1) Given a scenario, assume initial command of a CBRNE incident to establish and maintain command and control of the scene. (IC-0001)

      (2) Given a CBRNE crime scene, preserve evidence in accordance with *The First Responder's Field Guide to HAZMAT and Terrorism Emergency Response*. (LE-0006)

(3) Given personal protective equipment (PPE) Level C and required materials, collect samples using Method A in accordance with ASTM International *E2458-10: Standard Practices for Bulk Sample Collection and Swab Sample Collection of Visible Powders Suspected of Being Bio-threat Agents from Nonporous Surfaces*. (HO-0001)

b. Enabling Learning Objectives

(1) Given a written examination, identify the roles of law enforcement personnel at a CBRNE incident in accordance with *Critical Incident Management: A Complete Response Guide*. (IC-0001a)

(2) Given a written examination, identify the purpose of the incident command system in accordance with the *National Incident Management System*. (IC-0001b)

(3) Given a written examination, identify hazard control zones in accordance with National Fire Protection Association® *National Fire Protection Association Publication 472, Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents (NFPA 472®)*. (IC-0001c)

(4) Given a written examination, compare traditional and CBRNE crime scenes in accordance with *Practical Crime Scene Investigations*. (LE-0006a)

(5) Given a written examination, identify resources provided to state, county, and municipal law enforcement agencies according to the Federal Bureau of Investigation. (LE-0006b)

(6) Given a written examination, identify guidelines for preserving evidence in accordance with *The First Responder's Field Guide to HAZMAT and Terrorism Emergency Response*. (LE-0006c)

(7) Given a written examination, identify the purpose of the Method A Bulk Sampling method in accordance with ASTM International *E2458-10: Standard Practices for Bulk Sample Collection and Swab Sample Collection of Visible Powders Suspected of Being Bio-threat Agents from Nonporous Surfaces*. (HO-0001a)

(8) Given a written examination, identify the purpose of the Method B Swab Sampling method in accordance with ASTM International *E2458-10: Standard Practices for Bulk Sample Collection and Swab Sample Collection of Visible Powders Suspected of Being Bio-threat Agents from Nonporous Surfaces*. (HO-0001b)

4. **Provide an Assessment of the Risk:** Low. This module involves classroom activities requiring little or no exertion. Minimal risk exists for injury to personnel.

5. **Explain the Safety Precautions:** None

6. **Describe the Method of Student Assessment.** The objectives are assessed through a written evaluation at the end of today's training. You must receive a minimum score of 70% to successfully pass the examination.

TRANSITION. Are there any questions concerning the course objectives or how you will be evaluated? We will begin by discussing the role of law enforcement during a CBRNE incident.

BODY

LECTURE ***15 minutes*** ***1:40***

Media 2

1. **Role of Law Enforcement at CBRNE Incident.** During a CBRNE incident, law enforcement first responders play a number of crucial roles. These roles may change as the incident progresses from initial response through termination.

   a. **Initial Incident Response.** The initial response phase typically occurs within the first hour of the incident. The effectiveness of the initial response is critical in beginning management of the scene and stabilizing and limiting growth of the incident. Most incidents begin and end locally (U.S. Department of Homeland Security [DHS], 2008). Because there is often no pre-warning of an incident, it is imperative that law enforcement officers, who are often the first to arrive at the scene, are prepared to assume command of a chemical, biological, radiological, nuclear, or explosive (CBRNE) incident. According to Faggaino, McNall, and Gillespie (2012) there are Seven Critical Tasks™ essential to managing the initial response to a CBRNE incident. These critical tasks are

Media 3

(1) Establish command and communications

(2) Identify the hot zone

(3) Establish the inner perimeter

(4) Establish the outer perimeter

(5) Establish the command post

(6) Establish a staging area

(7) Identify and request additional resources

These tasks are covered in detail in *Law Enforcement Response Actions for CBRNE Incidents* later in the week.

Media 4

   b. **Incident Operations.** After the initial response phase has concluded, law enforcement personnel play an essential role in the command and control of the incident. Depending upon the nature of the hazard and the duration of the incident, qualified law enforcement personnel may serve as incident commander for some or all operational periods. Other law enforcement personnel will

(1) establish and maintain isolation perimeters to ensure the safety of responders and the public;

(2) secure access control points into and out of the incident site;

(3) search for, arrest and detain suspects; and

(4) determine the existence of a crime scene and preserve evidence.

c. Incident Termination. It may require days or weeks for an incident to terminate. During this phase, crime scene investigation will be the primary role for law enforcement personnel. This role includes

(1) maintaining an isolation perimeter around the incident site;

(2) preserving evidence; and

(3) collecting and processing evidence.

Media 5

2. Incident Management. After the initial response phase and if the incident requires further action, command will be transferred from the first arriving responder to an incident commander. The incident commander will assume ultimate responsibility for management of the incident in accordance with the Incident Command System (ICS).

a. Incident Command System. The ICS is a standardized, on-scene, all-hazards incident management approach. It allows for the integration of facilities, equipment, personnel, procedures and communications operating within a common organizational structure. It enables a coordinated response among various jurisdictions and functional agencies, both public and private. It establishes common processes for planning and managing resources. The incident command system is flexible and can be used for incidents of any type, scope and complexity.

(1) Incident Commander. The incident commander is responsible for overall management of the incident including: determining incident objectives, determining policies for ensuring the safety of citizens and first responders, reducing the effects of the hazards, site control, establishment of hazard control zones, handling of resources, staff assignments, etc.

(2) The Incident Action Plan (IAP). The IAP is developed and it is the responsibility of the planning section. An ICP includes incident goals, operational period objectives, the response strategy defined by incident command, and general tactics to achieve goals and objectives within the overall strategy. The incident action plan also facilitates dissemination of critical information about the status of response assets. Because incident parameters evolve, action plans must be revised on a regular basis (at least once per operational period) to maintain consistent, up-to-date guidance across the system.

(3) Organizational Structure. The organization structure for a typically incident command system consists of five major functional areas: command, operations, planning, logistics and finance/administration. All of the functional areas may or may not be used based upon incident needs. Intelligence and investigations is an optional sixth functional area that is activated on a case-by-case basis. Intelligence and

investigations may be required if it is necessary to determine or apprehend those responsible or if information is needed to determine the cause, evaluate the potential spread or impact, or determine countermeasures for a given incident.

Media 6

3. Site Control. The first act of the incident commander for a CBRNE incident must be to establish control of the site. A site must be controlled to prevent the avoidable spread of hazardous substances from contaminated areas to clean areas and maximize the safety of first responders and the public. The most common approach is to establish three distinct zones around the incident site. These zones are the hot/exclusion zone, the warm/contamination reduction zone, and the cold/support zone. These zones establish areas were critical response activities will occur. These zones will be established based upon the nature of the hazard, environmental conditions, and information available. These zones may change during the course of the incident and must be monitored routinely by qualified personnel using appropriate monitoring and sampling techniques.

a. Hot/Exclusion Zone. This zone is the area where the actual incident occurred and contamination exists.

(1) It extends far enough to prevent adverse effects from hazardous materials releases to personnel outside the zone.

(2) All individuals entering the hot/exclusion zone must wear the prescribed level of personal protective equipment established by the incident commander and be decontaminated before leaving the warm/contamination reduction zone.

(3) Entry and exit access control points will be established at the outer boundary of the hot/exclusion zone to regulate movement of personnel and equipment in and out.

(4) The outer boundary of the zone will initially be established based upon visual survey and information available. Technology will be used to determine more precise boundaries as additional support arrives.

(5) Once established, the boundary of the hot/exclusion zone should be clearly marked by placards, hazard tape, signs, or barriers to prevent unintentional entry.

b. Warm/Contamination Reduction Zone. The warm/contamination reduction zone is a transitional area between the hot/exclusion zone and the cold/support zone.

(1) This zone is designed to reduce the probability that the clean cold/support zone will become contaminated.

(2) Because this zone is less hazardous than the hot/exclusion zone, personnel operating in this zone can typically wear PPE one level below those working in the hot zone.

(3) Decontamination procedures take place in a designated area within this zone called the decontamination corridor. The corridor begins at the boundary of the hot/exclusion zone and extends to the outer boundary of the warm/contamination

reduction zone. Responders are required to complete decontamination procedures before entering the cold/support area.

(4) Evidence collected at the scene may be packaged or decontaminated in this zone.

(5) Triage, tagging, and life-saving emergency care of victims may occur in this zone.

(6) Access to the warm zone is restricted through an access control point to regulate movement of personnel and equipment in and out. Primary purpose is to avoid contamination of the cold/support zone.

(7) The decontamination corridor and access control point(s) must be located up wind of the incident site to avoid cross-contamination.

(8) Once established, the boundary of the warm/contamination reduction zone should be clearly marked by placards, hazard tape, signs, or barriers to prevent unintentional entry.

c. Cold/Support Zone. The cold/support zone is the outermost part of the site and is considered free from contamination.

(1) Normal work clothes, rather than PPE, are acceptable in this area.

(2) The command post and support capabilities are established in the cold/support zone. These functions will be positioned upwind of the hot/exclusion zone and should have convenient access to roadways and communications.

(3) Rest and rehabilitation areas for responders will be established upwind of the hot/exclusion zone and in locations that would not interfere with the command post or the movement of personnel in and out of the warm zone access control point(s). Dependent upon the type and concentration of the CBRNE hazard, responders may be restricted to operating for only short periods even in PPE. This may require responders working in the hot and/or warm zones to periodically process through decontamination and into the cold/support zone to rehabilitate before reentering either zone. Rehabilitation periods will be determined by the situation and the incident commander.

(4) The press would typically be allowed within the cold/support zone.

d. Staging Area. A staging area is a designated location where personnel and equipment are positioned awaiting tasking. The staging area is located outside the cold/support zone but conveniently close to the scene. The staging area should be positioned in a location with good access to roadways and communications.

Media 7

4. Incident Site Mapping. The incident commander must consider the actual location and surrounding areas of the hazard, and then use established procedures, techniques, and methods to mitigate the hazardous incident. Typically, the incident commander will create a site map to communicate the situation and facilitate command. A site map shows topographic features; prevailing wind direction; control zones; location of the command post, staging area,

and rehabilitation area; the location of structures, drainage concerns, etc. (Noll, Hildebrand, & Yvorra, 2005). When creating a site map, using easily identifiable references such as roads, streets, organic barriers, buildings, etc. will help simplify command, control, and communication procedures during the incident response.

Media 8

5. **CBRNE Crime Scene Versus Traditional Crime Scene.** Crime scene investigations involving CBRNE agents add additional complexities over traditional crime scene investigations. (Fish, Stout, & Wallace, 2011). The additional complexities include:

   a. **Crime Scene Contamination.** During a traditional investigation, the crime scene is roped off and secured to prevent contamination of evidence. At a CBRNE investigation, the crime scene may be contaminated by the hazard and first responders. For example during the Boston Marathon bombing in 2013, the explosions caused three deaths and more than 200 injuries. Responders and citizens aiding the victims undoubtedly altered the crime scene in a way that would not typically occur at a traditional scene that could be more realistically controlled.

   b. **Monitoring.** At a CBRNE crime scene continuous monitoring of the scene must be conducted by hazardous materials experts or crime scene investigators to ensure the safety of all personnel. Crime scene investigators require skills in hazardous materials handling, monitoring, and packaging in order to investigate the scene.

   c. **Collection Equipment.** Use of CBRNE sampling and monitoring methods are necessary to collect and to assess the nature and concentration of the hazardous evidence. At a CBRNE crime scene, evidence collection equipment may consist of biological sampling kits, chemical agent monitoring equipment, radiac meters, etc.

   d. **Crime Scene Documentation.** At a traditional crime scene, crime scene investigators use standard paper with pencil or pen to write notes, draw sketches, or prepare evidence and photo logs. At a CBRNE crime scene paper can be used. But, it would have to be sealed in plastic bags afterwards, and would pose storage hazards. Depending upon the scene, investigators may be required to communicate to another investigator outside the hot or warm hazard control zone to record scene details.

   e. **Packaging.** At a traditional crime scene cardboard or paper packing is used to package evidence. However, these porous and breathable materials cannot be used at a CBRNE crime scene, since the agents would evaporate creating additional exposure to responders. At a CBRNE crime scene forensic evidence must be packaged in sterile glass and plastic jars, vacuum canisters, plastic bags or nylon/polyester heat-seal bags. Also, it is packaged at least twice and sometimes three times before it can be removed from the hot zone. Likewise, if it has to be transported to a laboratory for analysis it must be packaged again (over packing).

   f. **Decontamination.** All physical evidence collected and packaged at the hot zone of a CBRNE crime scene must be safely decontaminated or properly packaged to avoid contamination of individuals or the environment.

   g. **Chain of Custody.** At a CBRNE crime scene, evidence requires additional links in the chain of custody. Evidence may be packaged in the hot or warm zone, decontaminated in

the warm zone, and then over-packed prior to transportation to a laboratory adding additional complexity and greater potential for a breach of the chain.

h. Work Time. At a traditional investigation, crime scene investigators may work at the scene until the final survey is completed. At a CBRNE crime scene, time available to work at the scene may be restricted based upon the nature and concentration of the hazard. In many cases, investigation of a CBRNE crime scene will require operating in PPE. Dependent upon the nature and concentration of the hazard, work time even in PPE may be restricted due to exposure limitations of the breathing apparatus, respirator, or ensemble. Additionally, working for prolonged periods in PPE may cause physiological and psychological stresses that further affect how long an investigator can work. The stressors of wearing PPE will be discussed further in the next module.

Media 9

6. Evidence Preservation. Evidence preservation is critical for identifying, arresting, and convicting the perpetrator(s) and preventing further acts of terrorism or extremism. The following is a summary of the guidelines for evidence preservation as listed in *The First Responder's Field Guide to HAZMAT and Terrorism Emergency Response (*Levy, 2010).

a. Observe. From the start to the end of the incident, continuously look for things of evidentiary value animate or inanimate that could have a connection to the crime scene.

(1) Be alert for evidence throughout the area, not just at the seat of the release or point of origin.

(2) Do not overlook trash containers and dumpsters. Perpetrators often leave valuable evidence in nearby trash containers.

(3) Take note of anything suspicious even though it may not be directly related to the incident.

(4) Look for blast patterns, debris fields, discolored foliage, sick or dead animals, and smoke or fog plumes.

b. Protect. Leave evidence alone unless it is necessary for the performance of duties or emergency operations. Obtain approval, if possible, prior to moving. Work with the fewest number of personnel possible (with due consideration for safety).

(1) Secure and isolate any areas where evidence is located and minimize the number of people allowed in the area.

(2) Secure and isolate any apparent source location.

(3) Touch as little as possible and do not disturb the scene more than is necessary to ensure safety and treat the injured.

(4) Leave fatalities and body parts where they are unless necessary to protect them from further damage.

(5) Flag evidence items with cones or other markers.

c. **Document.** A CBRNE incident will create enormous public pressure to apprehend and convict the perpetrators. Considerable scrutiny and concern over actions or inactions related to evidence preservation and collection should be expected. Therefore, it is important to take written notes describing what the crime scene looks like (e.g., location of potential evidence, its description). These notes will later be used as evidence and may be especially valuable in a situation where the crime scene was disrupted for lifesaving or safety considerations.

(1) Do not rely on memory; begin documenting the incident as soon as possible.

(2) Concentrate first on documenting things that may be moved or that could be lost or destroyed.

(3) Use multiple forms of documentation including written notes, voice recordings, photos, and video tape.

(4) Be sure documentation is clear, accurate, and specific.

d. **Collect.** At a CBRNE crime scene, small samples will be collected and packaged by crime scene investigators for later analysis at forensic laboratories, and evidence in court. Also, samples will be collect by a public safety sampling team to aid in identifying the appropriate medical treatment that exposed persons may require or to determine proper levels of PPE.

(1) In situations where biological threat agents are suspected, the item(s) should be field safety screened and immediately transported in law enforcement custody to an Laboratory Response Network (LRN) laboratory.

(a) Field safety screening should be limited to ruling out explosive devices, radiological materials, corrosive materials and volatile organic compounds.

(b) Additional field testing can mislead response efforts by providing incorrect or incomplete results, and destroy limited materials critical for definitive laboratory testing required to facilitate any appropriate public health and law enforcement response.

(2) Wear appropriate PPE.

(3) Use an organized search pattern to ensure nothing is missed.

(4) Pack each item separately.

(5) Maintain an unbroken chain of custody.

(6) Tag each item of evidence with the date, your name or initials, and a number that corresponds to the evidence log.

(6) Collect small samples; enough to be useful for laboratory analysis, or evidence in court but not enough to pose a hazard for others.

Media 10

(a) Two examples of sampling methods that law enforcement may be required to perform are biological sampling method A and B. These two methods are recommended for sampling suspicious powders believed to be biological agents.

(b) Biological sampling method A and B are typically performed together to ensure that unadulterated samples are collected for public health and law enforcement officials for confirmatory and forensic analysis, while leaving enough sample for presumptive, on-site determination. Presumptive testing is conducted to locally determine if a substance is actually a threat and to inform further investigation. Confirmatory testing is required by most Federal agencies and to ensure validity of the sample as evidence.

1) Method A is the bulk collection and packaging of suspicious, visible powders. Bulk samples are collected and transported in a manner that permits public health and safety and law enforcement agencies to obtain uncompromised samples for confirmatory analysis and forensic testing. Method A, involves the bulk collection and packaging of the suspicious visible powders from solid nonporous surfaces. Bulk samples are collected using a sterile swab to push the powder onto a thin plastic card. The powder is then placed with the plastic card into sterile containers, sealed and transported to a public health laboratory such as one of the Center for Disease Control's .LRN.) laboratories for analysis. If the source of the powder is a letter or small package, that item is also packaged in a manner that permits it to be safely transported to an LRN reference laboratory.

2) Method B is for nonporous surfaces from which a suspicious, visible bulk powder, a suspected biological agent, has previously been collected. It consists of simple swab sampling of residual suspicious powders for presumptive, on-site biological screening using an appropriate method. The surface is swabbed using a sterile, moistened swab to collect any residual powder. The sample may then be used in onsite biological assessment using biological assessment tools or through local laboratory testing.

Media 11

7. CBRNE Crime Scene Authority. Because an act of terrorism is a Federal crime, the Secretary of the Department of Homeland Security (DHS), the Attorney General, and the FBI will likely have authority over a significant CBRNE crime scene. However, there are numerous CBRNE-related state and local crimes that do not fall under the purview of the Federal government and Federal law does not prohibit state and local law enforcement agencies from conducting parallel or independent criminal investigations and prosecutions (Fish, Stout, & Wallace, 2011). Additionally, the FBI has resources available to support state, local, and tribal law enforcement agencies in conducting CBRNE-related investigations.

a. Chemical, Biological, Radiological, and Nuclear Sciences Unit. Conducts forensic examinations of hazardous chemical, biological, radiological materials and all related evidence. Provides services to other government agencies including local and state authorities. The Chemical, Biological, Radiological, and Nuclear Sciences Unit currently has three case-working programs:

(1) The Chemistry Program addresses chemical warfare agents such as nerve, blood or blister agents, and other chemical hazards, including biological toxins and hazardous industrial chemicals that can be used as weapons.

(2) The Biology Program addresses hazardous biological materials used as weapons. Biological weapons include toxins and microbial agents such as bacteria, viruses, and fungi that can cause disease in humans, animals, and plants.

(3) The Radiological/Nuclear Program addresses radiological and nuclear materials with the potential to be used as weapons. These include materials which could be employed in a radioactive dispersal device or in an improvised nuclear device.

b. Hazardous Evidence Response Team Unit. The Hazardous Evidence Response Team Unit (HERTU) provides support to the U.S. government's response to weapons of mass destruction (WMD) incidents and threats. HERTU also supports the investigation of terrorist or criminal use of chemical, biological, radiological, or nuclear (CBRN) materials. The unit trains, equips, and manages the field HERT program. HERTU provides training, leadership, and subject matter expertise in hazardous evidence collection, as well as in the management and processing of forensic evidence in CBRN crime scenes.

SUMMARY

LECTURE ***5 minutes*** ***1:40***

Media 12

Summary. In this module, we reviewed the role of law enforcement in a CBRNE incident, incident management, site control, incident site mapping, CBRNE crime scene considerations, hazardous evidence preservation, and CBRNE crime scene authority. Are there any additional questions about the topics covered?

Instructor Note. Provide students with instructions on what to do and when and where to be in preparation for the next scheduled activity.

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Law Enforcement Protective Measures for CBRNE Incidents
PER-264

Instructor Guide

Module 3
Personal Protective Equipment and Decontamination

Number: Module 3

Title: Personal Protective Equipment and Decontamination

Total Time: 1 hour

Instructional Methods

Method	Time	Instructor-to-Student Ratio
Lecture	1 hour	1:40

Media/Technology: Multimedia presentation and actual equipment

INTRODUCTION

LECTURE ***5 minutes*** ***1:40***

Media 1

1. **Gain Student Attention.** The tragic shootings on July 20th, 2012 at the Century Theater in Aurora, Colorado demonstrate the importance of training in the use and access to personal protective equipment for law enforcement personnel. Minutes after the call to respond to the scene, an officer attempting to work his way into the theater identifies the presence of smoke and a hazardous gas. Knowing that he did not have protective equipment immediately available, the response was delayed as officers waited for masks to be requested and arrive. Over the radio an officer is heard, "Do we have gas masks available? Any units that can bring gas masks to Theater 9, again we need gas masks. Get us some damn gas masks to theater 9, we can't get in it."

2. **Provide an Overview of the Module.** Good morning/afternoon my name is _____ and this module is Module 3: “Personal Protective Equipment and Decontamination.” The purpose for this lesson is to develop an understanding of the purpose, levels, selection criteria, characteristics, and stressors of personal protective equipment (PPE) and the purpose, methods, categories, and unique law enforcement considerations for decontamination of personnel.

Instructor Note. Refer students to the learning objectives in their student guide. Explain the learning objectives to the students. Ask questions to ensure students comprehend what is to be learned, as appropriate.

3. **Explain the Learning Objectives**

   a. Terminal Learning Objectives

   (1) Given a complete PPE Level C ensemble, don and doff PPE Level C in accordance with manufacturer specifications. (HO-0003)

(2) Given a weapon, suspect, and/or evidence while wearing PPE Level C, process through technical decontamination in accordance with National Fire Protection Association® *National Fire Protection Association Publication 472, Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents (NFPA 472®)*. (HO-0027)

b. Enabling Learning Objectives

(1) Given a scenario, identify the purpose of PPE in accordance with Hazardous Waste Operations and Emergency Response (HAZWOPER), 29 *Code of Federal Regulations* (C.F.R.) § 1910.120. (HO-0003a)

(2) Given a scenario, identify characteristics of the four levels of PPE according to HAZWOPER, 29 C.F.R. § 1910.120. (HO-0003b)

(3) Given a scenario, identify the stressors of wearing PPE in accordance with *Surviving Field Stress for First Responders*. (HO-0003c)

(4) Given a scenario, identify the equipment requirements for PPE Level C in accordance with *NFPA 472*. (HO-0003d)

(5) Given a scenario, identify the purpose of decontamination in accordance with *NFPA 472*. (HO-0027a).

(6) Given a scenario, identify the four types of decontamination in accordance with *NFPA 472*. (HO-0027b).

(7) Given a scenario, identify considerations for mass decontamination in accordance with *NFPA 472*. (HO-0027c).

(8) Given a scenario, identify considerations for emergency decontamination in accordance with *NFPA 472*. (HO-0027d)

(9) Given a scenario, identify considerations for gross decontamination in accordance with *NFPA 472*. (HO-0027e)

(10) Given a scenario, identify considerations for technical decontamination in accordance with *NFPA 472*. (HO-0027f)

4. **Provide an Assessment of the Risk:** Low. If the activity is conducted outdoors, temperature may raise the risk to moderate.

5. **Explain the Safety Precautions**

a. Physiological stressors of wearing PPE may have significant effects upon some individuals. If you or a fellow student experience adverse physiological effects from wearing PPE, inform an instructor immediately.

b. Psychological stressors of wearing PPE may have significant effects upon some individuals. If you or a fellow student experience adverse psychological effects from wearing PPE, inform an instructor immediately.

6. **Describe the Method of Student Assessment.** Your will be assessed on your comprehension of the learning objectives through the Final Written Examination at the conclusion of this training day. To achieve the objectives, you must receive a score of 70% or higher on the examination.

TRANSITION. Ensure students comprehend what is to be learned and/or performed, the safety precautions, and how they will be evaluated. When achieved, introduce the first learning activity.

BODY

LECTURE ***50 minutes*** ***1:40***

Media 2

1. **Purpose of PPE.** The purpose of PPE is to reduce exposure to hazards when engineering and administrative controls are not feasible or effective to reduce these risks to acceptable levels.

2. **Selection of Personal Protective Equipment.** The emergency responder must be provided with appropriate respiratory and dermal protection from suspect or known chemical, biological, radiological, or nuclear hazards. The amount of protection required is material and hazard specific. Physical and durability properties for personal protective equipment must meet or exceed minimum requirements for operations at a CBRN incident scene. The selection of appropriate PPE is typically the responsibility of the Incident Commander and/or the on-scene Safety Officer. Proper selection of PPE for individual responders must be based upon a careful assessment of the following two factors:

   a. The hazards anticipated to be present, or are present at the scene.

   b. The probable impact of those hazards, based upon the mission role of the individual.

Media 3

3. **Levels of PPE for Hazardous Materials.** No single PPE ensemble can protect the wearer from exposure to all hazards. It is important that the appropriate combination of respirator, protective ensemble and other equipment be selected based on a conclusive hazard assessment at the scene. The Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) standard defines the protection levels as A, B, C or D as follows:

   a. Level A. This level is selected where the hazards are unknown or unquantifiable or when the greatest level of skin, respiratory and eye protection is required. Level A also provides the best protection during constant high concentration exposure to hazards.

   b. Level B. Selected when the highest level of respiratory protection is necessary but a lesser level of skin protection is needed.

   c. Level C. Used when the concentration(s) and type(s) of airborne substances are known and the criteria for using air-purifying respirators are met.

d. Level D. Necessary when concentration(s) and type(s) of hazards are known and do not warrant respiratory protection or skin protection greater than that typically provided by a responder's duty uniform.

Media 4

4. Characteristics of the Four Levels of PPE

a. PPE Level A. Level A protection affords the responder the highest level of both respiratory and skin protection. It has sometimes been called a "moon suit" because of its encapsulating style. This level of PPE is vapor-tight and liquid-resistant.

(1) Ensemble requirements for Level A include

(a) A positive-pressure, full-facepiece, self-contained breathing apparatus or positive-pressure, supplied-air respirator with escape self-contained breathing apparatus approved by the National Institute for Occupational Safety and Health (NIOSH). NIOSH is a component of the Center for Disease Control and is responsible for conducting research and making recommendations for the prevention of work-related illnesses and injuries.

(b) Totally encapsulating chemical-protective suit;

(c) Outer chemical-resistant gloves;

(d) Inner chemical-resistant gloves;

(e) Chemical-resistant boots with steel toe and shank; and

(f) Head protection is optional.

(2) Limitations of PPE Level A. The limitations of Level A include

(a) Bulky

(b) Physically stressful to operating in; does not allow for cooling

(c) Psychologically stressful due to the confining nature of the encapsulating style

(d) Reduced mobility and dexterity; increases the time required to perform most tasks

(e) Difficult to don and doff

(f) Can make communication more difficult

(g) Cost

Media 5

b. PPE Level B. PPE Level B is the lowest level of protection when entering an environment with an unknown hazard. It provides the responder with the highest level of respiratory protection but a lower level of skin protection because the ensemble is not completely encapsulated.

(1) Ensemble requirements for Level B include

(a) A positive-pressure, full-facepiece self-contained breathing apparatus, or positive-pressure supplied-air respirator with escape self-contained breathing apparatus;

(b) Hooded chemical-resistant clothing that may consist of an overall and long-sleeved jacket, coveralls, one-piece or two-piece chemical splash suit, or disposable chemical-resistant overalls;

(c) Outer chemical-resistant gloves;

(d) Inner chemical-resistant gloves; and

(e) Chemical-resistant boots with a steel toe and shank.

(2) Limitations of PPE Level B. The limitations of Level B include

(a) Not gas or vapor tight

(b) Not designed or tested to be used at scenes involving carcinogens or skin absorbable chemicals

Media 6

c. PPE Level C. PPE Level C is for environments were the hazard(s) are well characterized and have been clearly measured. Contact between the hazard's vapors, liquid, or solid and exposed skin would not constitute a health hazard to the exposed individual and the criteria for using an air-purifying respirator are met. Level C may also provide effective protection against radiological particulate contamination and biological agents if appropriate air-purifying respirator filters are used. Level C is lighter, less confining, less costly, and, since a respirator is used, causes less respirator stress than Level A or B PPE.

(1) Ensemble requirements for Level C include

(a) Full-face or half-mask, air-purifying respirator approved by the NIOSH;

(b) Hooded, chemical-resistant clothing consisting of an overall, two-piece chemical splash suit, or disposable chemical-resistant coverall;

(c) Inner chemical-resistant gloves;

(d) Outer chemical-resistant gloves; and

(e) Outer chemical-resistant boots with steel toe and shank.

Media 7

(2) Respirator Fit Testing. Prior to using a respirator, fit testing as defined by OSHA in HAZWOPER, 29 *Code of Federal Regulations* (C.F.R.) § 1910.134 Appendix A must be performed to ensure proper fit and safe function. Fit testing consists of a review of proper mask fit and donning, test fitting respirators to select one that provides appropriate fit and comfort, conducting user seal checks, and conducting test exercises consisting of normal breathing, deep breathing, turning the head side to side, moving the head up and down, and talking, grimace, bending over, and more normal breathing. Additionally either qualitative and/or quantitative fit testing protocols are conducted.

(a) Qualitative Fit Testing Protocols. In a qualitative respirator fit test, the test subject, while wearing a respirator with the proper cartridge(s) attached, is exposed to a challenge aerosol or vapor. If the challenge agent is not detected (i.e., smelled or tasted) by the test subject, the respirator is judged to fit adequately.

(b) Quantitative Fit Testing Protocols. In a quantitative fit test, the test subject is exposed to a challenge aerosol while wearing a respirator, but in this case a sample of the air inside the facepiece is analyzed for the challenge aerosol. The concentration inside the facepiece is compared to the challenge concentration outside the facepiece, and a numerical "fit factor" is obtained. A numerical value is obtained which indicates how well or how poorly a respirator fits the test subject. This protocol eliminates the sensory reliance of a qualitative fit test.

Media 8

d. PPE Level D. Level D provides the least amount of skin protection and provides no respiratory protection. It is used when there is no known hazard in the atmosphere and work activities preclude splashes, immersion, or the potential for unexpected inhalation or contact with hazardous materials. Essentially there is no known emergency requiring greater protection. Typically ensemble requirements for Level D include

(1) Eye protection;

(2) Coveralls;

(3) Boots or shoes which are chemically resistant and steel-toed and shanked;

(4) Hard hat; and

(5) Gloves, when appropriate.

Media 9

e. Escape Respirator. While not a designated level of PPE or approved for wear with level A, B, or C, escape respirators are an emerging trend for portable respiratory protection within the law enforcement community.

(1) Intended to provide short-term respiratory protection, usually 15 minutes, for responders to evacuate an area.

(2) The escape respirator may be attached to responder's duty belt, or otherwise conveniently carried.

(3) Once clear of the incident site, the responder would don the appropriate level of PPE before returning to the scene.

(4) An escape mask respirator should never be used to enter a CBRNE incident environment. These devices are only for use to escape a CBRNE environment (Mine Safety Appliances Company, 2006).

TRANSITION: Are there any questions regarding the purpose, four levels or characteristics of personal protective equipment for hazardous material?

Question 1. If the hazard is unknown, what level of PPE would provide the highest level of protection?

Answer 1. Level A. Level A provides the greatest level of respiratory and skin protection; particularly when the hazard is unknown.

Question 2. The hazard is known and has been measured, skin contact with hazard vapors, liquids, or solids is unlikely, respirator protection meets the requirements for an air-purifying respirator. What level of personal protective equipment is most appropriate?

Answer 2. Level C

Next we will discuss how wearing personal protective equipment may affect the responder.

Media 10

5. Stressors Involved with Wearing PPE. Use of personal protective equipment causes both psychological and physiological stress to the wearer.

a. Stress as a Factor in PPE Selection and Rehabilitation. Stress is a key factor in choosing appropriate personal protective equipment. Given conditions, stress to the wearer, rather than duration of air supply or resistance to penetration by the hazard, may be a key limiting factor in how long a responder can work in an ensemble. The NIOSH has conducted studies of individuals wearing personal protective equipment and has found that even at low work intensities equivalent to walking at an average speed in moderate temperature and humidity conditions, worker tolerance time was reduced by as much as 56%. If responders are to operate for prolonged periods in personal protective equipment, a rehabilitation plan must be established consistent with conditions to allow responders to decontaminate, doff equipment, rest, rehydrate, and recover before returning to work in the hazard area.

b. Medical Screening Requirements. Because of the physical stresses involved, OSHA regulations require a medical surveillance program for those wearing personal protective equipment or respirators. A physician must certify that any particular worker may wear a respirator. Common practice in the industrial and fire service hazardous materials response community is to check workers' respiration rate, pulse, and blood pressure when PPE is donned and prohibit workers from wearing personal protective equipment

should vital signs vary greatly from the normal range. Some screening protocols also include core temperature and cardiac monitoring.

Media 11

c. Signs of Physiological Stress. An individual's fitness level is a key factor in determining how effectively they will be able to operate in personal protective equipment. If you identify any of the following signs or symptoms of physiological stress in yourself or others, seek assistance immediately:

(1) Shortness of breath or panting

(2) Queasiness or nausea

(3) Vomiting

(4) Diarrhea

(5) Dry mouth

(6) Pale skin

(7) Excessively increased pulse rate

(8) Muscle twitches and/or shaking limbs

(9) Elevated blood pressure

d. Heat Stress. Heat stress and illness are a major concern when personnel are working in personal protective equipment. The body's principal means of cooling is through the evaporation of sweat. When personnel are working in protective suits, sweat is trapped inside the suit clothing and cannot evaporate. This raises the body's core temperature and can result in heat-related illness. Being in good physical condition, maintaining adequate hydration, allowing adequate cool down between work periods, and limiting the duration personnel work in personal protective equipment may reduce heat stress, as may the use of a cooling vest or other garment that slows the heating of the body using a circulating fluid or replaceable cold packs.

e. Psychological Stress. Wearing PPE affects the worker's attitude and ability to perform work. Personnel may feel claustrophobic when wearing personal protective garments or respiratory protection. The bulk of most ensembles will make movement more difficult. Multiple gloves will compromise manual dexterity. The facepiece of the breathing apparatus or respirator reduces peripheral vision, and fogging of the face piece may further impair vision. Given the ever present concern over potential exposure to the hazard, these conditions can cause frustration and may create addition emotional stress. Training and experience in donning and operating in personal protective equipment are a key factor in reducing psychological stress.

TRANSITION. Are there any questions regarding the stressors of operating in personal protective equipment? Next we will discuss considerations for performing law enforcement tasks in personal protective equipment.

Media 12

6. Purpose of Decontamination. Decontamination is the physical and/or chemical process of reducing and preventing the spread of contamination from people, animals, the environment, or equipment involved at hazardous materials or weapons of mass destruction incidents (NFPA, 2013).

7. Methods of Decontamination. All personnel, clothing, equipment, and samples leaving the hot/exclusion zone must be decontaminated to remove any harmful chemicals or infectious organisms that may have adhered to them. Decontamination methods include (1) physical removal of contaminates, (2) chemical removal of contaminates, and (3) removal of contaminates by a combination of both physical and chemical means.

a. Physical Removal of Contaminates. Contamination can be removed by physical means through dislodging, displacement, rinsing, wiping off, or evaporation.

(1) Contaminates that can be removed by physical means include:

(a) Loose Contaminates. Loose contaminates like dusts or vapors cling to equipment and personnel and can typically be removed by water or a liquid rinse.

(b) Adhering Contaminates. Adhering contaminates have adhesive properties other than electrostatic attraction that make them more difficult to remove. Adhering contaminates may include petroleum, toxic glues, contaminated mud, resins, etc. and may require scraping, brushing, and wiping to remove.

(c) Volatile Liquids. Volatile liquid contaminates can be removed from PPE and equipment by evaporation followed by a water rinse. Forced air may be used to expedite evaporation.

(2) For personnel, the most common form of decontamination through physical removal will be through a pressurized or gravity flow water rinse that may include scrubbing using brushes or sponges.

(3) It should however be noted that some chemicals are water reactive and water should never be used to remove these contaminates. If wetted, water-reactive chemicals may give off enough heat to ignite or give off toxic and/or flammable gases harmful to humans, animals, and the environment. The *Emergency Response Guide* is a readily available source for the identification of water-reactive chemicals and the proper procedures for handling, decontaminating, and treating victims.

b. Chemical Removal of Contaminates. Chemical removal of contaminates uses a chemical process to chemically degrade, sanitize, disinfect, neutralize, sterilize, or solidify a hazard. For example, bleach may be used on a bacterial or viral agent to kill the organisms and neutralize and/or sanitize tools and equipment. Household detergents may be used directly or mixed with water to chemically degrade petroleum-based contaminates and make them easier to remove, dilute, or absorb.

Media 13

8. **Categories of Personnel Decontamination.** The four primary categories of decontamination are emergency, gross, mass, and technical. The category(ies) of decontamination used in a particular incident depends upon the nature of the hazard, resources available, and the situation.

   a. **Gross.** Gross decontamination is the phase of the decontamination process during which the amount of surface contaminants is significantly reduced (NFPA, 2013). The goal of gross decontamination is to quickly remove the worst of the contamination from the victim. Emergency, the initial phase of technical, and most instances of mass decontamination are a form of gross decontamination.

      (1) Resources Required. Typically quantities of water from a hose, safety shower, or other means.

      (2) Typical Procedure

         (a) The victim removes clothing. Dependent upon the hazard, removal of clothing can eliminate a significant percentage of contaminates.

         (b) The victim is rinsed with quantities of water to remove the worst of contaminates.

         (c) The victim is provided clothing or a covering and monitored for symptoms that may require secondary decontamination.

Media 14

   b. **Emergency.** Emergency decontamination is the physical process of immediately reducing contamination of an individual in a potentially life-threatening situation with or without the formal establishment of a decontamination corridor (NFPA, 2013). Emergency decontamination may be necessary for both victims and responders. For example, it may be required due to a failure of PPE, accidental contamination of a responder, heat or other injury suffered by a responder in the hot zone, or the requirement to provide immediate medical attention to a victim. Removal of all contaminates is not typically practical through emergency decontamination and a more thorough decontamination will be required once the immediate life-threatening issue is addressed.

      (1) Resources Required

         (a) Quantities of water

         (b) Cutting tools to aid in quickly removing clothing or PPE

      (2) Typical Procedure

         (a) Remove the victim from the contaminated area, if practical.

         (b) Wash immediately any exposed body parts with flooding quantities of water.

         (c) Remove the victim's clothing and/or PPE as quickly as possible. Cut from the top down in a manner that minimizes further contamination.

         (d) Wash the individual from head to toe with water.

(e) Provide life-saving treatment as necessary until the individual can be transferred to medical personnel.

(f) Provide medical personnel with as much information possible regarding the hazard, decontamination procedures performed, and the nature of the individual's injury.

Media 15

c. Mass. The physical process of reducing or removing surface contaminants from large numbers of victims in potentially life-threatening situations in the fastest time possible (NFPA, 2013). Mass decontamination may be conducted with or without a formal decontamination corridor and is initiated when the number of victims and time constraints make a more thorough decontamination process impractical.

(1) Resources Required. High volume, low pressure water provided through hose lines or a ladder pipe decontamination system most typical

(2) Typical Procedure. In accordance with the guidelines produced by the U.S. Army Edgewood Chemical Biological Center (2009), the essential process for conducting a typical mass decontamination is:

(a) Triage victims to determine those requiring immediate medical treatment or alternative means of decontamination based upon injury, symptoms, risk factors, functional needs, etc.

(b) Direct victims determined to be capable of enduring the remaining steps of this process to remove clothing. Removing clothing is the single most critical step in mass decontamination and may remove 80% to 90% of physical contamination. Modesty concerns may need to be considered based upon sex, culture, religion, etc.

(c) For temperatures 36° Fahrenheit and above, rinse victims with high volume, low pressure water. Wash time should be between 30 seconds and three minutes depending upon the hazard and situation. For temperatures 35° Fahrenheit and below, removal of clothing and a "dry" decontamination method for removal of liquid contamination may be used outdoors, such as blotting with paper towel or application of a decontamination solution, followed by a high-volume, low-pressure water shower at a heated facility to prevent the potential for hypothermia.

(d) When the contamination involves chemical vapors, biological or radiological material, using gentle friction, such as rubbing with hands, cloth or sponges is recommended to aid in removal of the contamination. Rubbing should start with the head and proceed down the body to the feet.

(e) Provide a covering, if available, and move victims to a safe area for observation.

(f) Observe victims to monitor for signs of delayed symptoms or evidence of residual contamination.

(g) Perform a more thorough secondary decontamination if symptoms are observed and/or residual contamination exists.

(h) Provide and/or seek medical treatment for victims with persistent symptoms.

Media 16

d. Technical. The planned and systematic process of reducing contamination to a level that is as low as reasonably achievable (NFPA, 2013). Technical decontamination is a thorough decontamination process that includes gross decontamination as its first phase.

(1) Resources Required

(a) Water hoses

(b) Hose nozzles and wands

(c) Buckets

(d) Scrub brushes

(e) Sponges

(f) Pools/Water collection devices

(g) Tarps or sheeting

(h) Water manifold

(i) Water pressure reducer

(j) Trash bags

(k) Detergent or solutions

(l) Garbage cans or barrels

(m) Etc.

Media 17

(2) Typical Procedure

(a) Prior to crossing the hot line into the warm/contamination reduction zone, contaminated tools and equipment are dropped on tarps or sheeting for reuse in the hot/exclusion zone or for later decontamination.

(b) Prior to crossing the hot line, contaminated trash is deposited into containers for decontamination or later disposal.

(c) After entering into the warm/contamination reduction zone, a head to toe wash/rinse of the entire PPE ensemble is conducted.

1) The individual being decontaminated continues breath through their self-contained breathing apparatus or air-purifying respirator until step 6 of the process.

2) For liquid contaminates, detergent or other appropriate solution may be used to aid in removing adhering agents.

(d) Remove outer garment and outer gloves. Disposable items are deposited into containers or bags, as appropriate.

(e) A head to toe wash/rinse of the inner garments, inner gloves and self-contained breathing apparatus or air-purifying respirator is conducted.

(f) Given the decontamination steps taken to this point in the process, it is now safe to remove the self-contained breathing apparatus or air-purifying respirator. Boots are also removed at the stage.

(g) Because all contaminated items have been removed or decontaminated at this point, it is now safe to remove and dispose of the inner gloves.

(h) The individual removes all clothing, showers thoroughly, and dresses in fresh clothing or a covering to complete technical decontamination. A medical evaluation should be ensue or rehabilitation if necessary.

Media 18

e. Medical Evaluation Following Entry Into a Contaminated Area. All responders should receive a medical evaluation following entry into a contaminated area. During this checkup

(1) Vital signs should be checked against baselines.

(2) Any injuries, open wounds, or sores should be reported, examined, and treated, as appropriate.

(3) Secondary decontamination in some cases may be required to further reduce contaminates.

(4) Dependent upon circumstances, treatment for exposure to the hazard may be initiated.

Media 19

9. Processing of Weapons, Equipment, and Evidence Into and Suspects or Uncooperative Victims Through Decontamination

Media 20

a. **Weapons and Equipment.** Officers operating in the hot or warm zone in PPE will not be able to take their weapon(s) and equipment into the cold zone until they have been properly decontaminated. Dependent upon the nature of the hazard, these items may be contaminated to the extent that they must be disposed of as hazardous waste. Officers must relinquish their weapon(s) prior to undergoing decontamination.

(1) Handguns should be left in the holster and removed from the officer by a decontamination team member familiar with weapons.

(2) Rifles and shotguns should be relinquished to a decontamination team member familiar with weapons.

(3) The decontamination team member should place a weapon in a clear plastic bag labeled with the officer's name and department.

(4) The officer's gun belt and any other equipment worn outside of the PPE ensemble should be placed in a clear plastic bag and labeled with the officer's name and department.

(5) As the officer progresses through decontamination and is required to remove the bulletproof vest, the vest should be placed in a clear plastic bag and labeled with the officer's name and department.

(6) As collected, weapons and ammunition should be placed in appropriate locked containers and monitored to mitigate security and safety concerns.

(7) The law enforcement agency is typically responsible for the decontamination weapons and associated equipment. Once released from the scene, the items should be decontaminated in a manner appropriate to the hazard and in accordance with manufacturer guidelines and departmental protocols.

Media 21

b. **Evidence.** The entire scene associated with a CBRNE hazard is a crime scene.

(1) Substances absorbed into clothing or that are undetectable to the eye may constitute evidence. Because of this reality, investigators will document, screen, collect, process, and package the clothing and possibly collect evidence from the clothing of victims and suspects (Fish, Stout, & Wallace, 2011). In most decontamination situations, this can be accomplished at the clothing drop prior to gross decontamination. Clothing and suspected evidence will also need to be collected from non-ambulatory individuals and the deceased.

(2) According to Fish, Stout, and Wallace, 2011, typically crime scene investigators will establish an evidence and equipment decontamination station in the decontamination corridor parallel to technical decontamination. Evidence being removed from and monitoring and detection equipment being used in the hot/exclusion zone by responders or investigators is dropped off at the evidence and equipment decontamination station. At the station,

(a) Evidence is inventories and logged. A chain of custody form is completed by an evidence decontamination team member to include their name and the name of the individual dropping off the item.

(b) Evidence is then assessed to determine what items can be decontaminated and the order in which items should be decontaminated.

(c) Using appropriate decontamination procedures such as a series of soap and water washes and uncontaminated water rinses, each item is decontaminated. Each item is processed as aseptically as possible to prevent cross-contamination or compromise of evidence.

(d) Once decontamination is completed, instruments are used to detect the presence of residual contamination. If contamination is detected, the item is again processed through decontamination.

(e) Once the process is complete, the item is properly packaged and labeled or made available for reuse.

Media 22

c. **Suspects or Uncooperative Victims.** The safety of responders and the public are paramount during the processing of suspects and uncooperative victims through decontamination during a CBRNE incident. Consistent with use of force guidelines, all appropriate measures may be used to secure a suspect and/or uncooperative victim and process them through decontamination.

(1) If practical, suspects or uncooperative victims should be escorted through decontamination by officers of the same sex.

(2) Hands of suspects should be restrained with flex cuffs.

(3) Hands of uncooperative victims should be restrained consistent with their behavior and use of force guidelines. In a criminal incident, keep in mind that those responsible may masquerade as victims to exit the scene and avoid apprehension. An uncooperative victim could be cognitively impaired, in shock, hysterical, or a suspect attempting to avoid detection.

(4) Dependent upon behavior and use of force guidelines, it may be necessary to restrain the legs with flex cuffs.

(5) After gross decontamination, a decontamination team member may cut the individual out of their close to continue the decontamination process.

(6) At some point during the process, it will be necessary for the individual to be transitioned to another officer or officers. The suspect or uncooperative victim should remain under the direct control of an officer or officers at all times during the process.

Media 23

LECTURE ***5 minutes*** ***1:40***

Summary. During this lesson, we discussed the purpose, levels, selection criteria, characteristics, and stressors of PPE. Additionally, we discussed the purpose, methods, categories, and unique law enforcement considerations for decontamination. Are there any questions regarding anything that we have covered in this lesson?

Instructor Note. Provide students with instructions on what to do and when and where to be in preparation for the next scheduled activity.

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Law Enforcement Protective Measures for CBRNE Incidents
PER-264

Experiential Learning Guide

Experiential Learning Activity
Law Enforcement Techniques in Personal Protective Equipment

Number: ELG 1

Title: Law Enforcement Techniques in Personal Protective Equipment

Purpose. To demonstrate and provide responders the opportunity to perform practical application of essential law enforcement skills while operating in personal protective equipment.

Total Time: 3 hours and 15 minutes

Instructional Methods

Method	Time	Instructor-to-Student Ratio
Experiential Learning Activity	3 hours and 15 minutes	8:40

Media/Technology: Actual equipment

1. Explain the Learning Objectives

a. Terminal Learning Objectives

(1) Given a complete Personal Protective Equipment (PPE) Level C ensemble and an air-purifying respirator don and doff personal protective equipment Level C in accordance with manufacturer specifications. (HO-0003)

(2) Given a handgun, rifle, or shotgun, and while wearing PPE Level C, sight a weapon to achieve sight and target alignment. (LE-0002)

(3) Given a handgun, rifle, or shotgun while wearing PPE Level C, perform weapon retention techniques to maintain control of the weapon. (LE-0003)

(4) Given hand cuffs or flex-cuffs and while wearing PPE Level C, apply restraint devices to maintain safe control. (LE-0004)

(5) Given PPE Level C and required materials, collect samples using Method A in accordance with *American Society for Testing and Materials International E2458-10: Standard Practices for Bulk Sample Collection and Swab Sample Collection of Visible Powders Suspected of Being Biothreat Agents from Nonporous Surfaces*. (HO-0001)

(6) Given a scenario, identify considerations for the conduct of gross decontamination in accordance with National Fire Protection Association® *National Fire Protection Association Publication 472, Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents (NFPA 472®)*. (DEC-0002)

(7) Given a weapon, suspect, and/or evidence and while wearing PPE Level C, process through technical decontamination in accordance with *NFPA 472*. (LE-0007)

b. Enabling Learning Objectives

(1) Given a complete PPE Level C ensemble and an air-purifying respirator, don equipment in accordance with manufacturer specifications. (HO-0003e)

(2) Given a complete PPE Level C ensemble and an air-purifying respirator, perform user seal checks in accordance with manufacturer specifications. (HO-0003f)

(3) Given a complete PPE Level C ensemble and an air-purifying respirator, doff equipment in accordance with manufacturer specifications. (HO-0003h)

(4) Given a handgun and while wearing PPE Level C, sight a handgun to achieve sight and target alignment. (LE-0002a)

(5) Given a rifle while and wearing PPE Level C, sight a rifle to achieve sight and target alignment. (LE-0002b)

(6) Given a shotgun, and while wearing PPE Level C, sight a shotgun to achieve sight and target alignment. (LE-0002c)

(7) Given a handgun and while wearing PPE Level C, perform handgun retention techniques to maintain control of the weapon. (LE-0003a)

(8) Given a long gun and while wearing PPE Level C, perform long gun retention techniques to maintain control of the weapon. (LE-0003b)

(9) Given hand cuffs and while wearing PPE Level C, apply hand cuffs to maintain safe control of a suspect. (LE-0004a)

(10) Given flex-cuffs and while wearing PPE Level C, apply flex-cuffs to maintain safe control of a suspect. (LE-0004b)

(11) Given a situation, identify the purpose for conducting Method A sampling in accordance with *American Society for Testing and Materials International E2458-10: Standard Practices for Bulk Sample Collection and Swab Sample Collection of Visible Powders Suspected of Being Biothreat Agents from Nonporous Surfaces.* (HO-0001a)

(12) Given PPE Level C and required materials, perform the procedures for Method A sampling in accordance with *American Society for Testing and Materials International E2458-10: Standard Practices for Bulk Sample Collection and Swab Sample Collection of Visible Powders Suspected of Being Biothreat Agents from Nonporous Surfaces*. (HO-0001b)

(13) Given a weapon and while wearing PPE Level C, process a weapon into technical decontamination with a weapon in accordance with *National Fire Protection Agency Publication 472*. (LE-0007e)

(14) Given a suspect and while wearing PPE Level C, process a suspect through decontamination with a suspect in accordance with *NFPA 472*. (LE-0007f)

(15) Given evidence and while wearing PPE Level C, process evidence into technical decontamination with evidence in accordance with *NFPA 472*. (LE-0007g)

2. Learning Event Description. The learning event consists of eight learning activities and a comprehensive after action review. The event begins with the class donning PPE Level C.

Next the class is divided into three groups of equal size and assigned to one of three stations. Once all groups complete the learning activities at their assigned station, they are rotated to another station until all three stations have been completed by the three groups. Lastly, the entire class doffs their PPE and the instructors conduct a comprehensive after action review of student performance and respond to student questions.

Station	Class Breakout	Learning Activities	Time
	Entire Class	LA 1: Donning and Doffing Personal Protective Equipment Level C	35 minutes
1	Small Group	LA 2: PPE Agility Drills	45 minutes
		LA 3: Weapon Handling and Retention	
		LA 4: Field Apprehension of a Suspect	
2	Small Group	LA 5: Method A Sampling	45 minutes
		LA 6: Process Weapons, Evidence, and Suspects	
3	Small Group	LA 7: Movement and Clearing Techniques	45 minutes
	Entire Class	LA 9: After Action Review	15 minutes

3. Risk Assessment

a. Risk Level: Moderate. This module involves controlled practical application requiring some exertion. Moderate risk exists for injury to personnel or damage to equipment or systems.

b. Safety Considerations and Control Measures

(1) Physiological stressors of wearing personal protective equipment may have significant effects upon some individuals. If you or a fellow student experience adverse physiological effects from wearing personal protective equipment, inform an instructor immediately.

(2) Psychological stressors of wearing personal protective equipment may have significant effects upon some individuals. If you or a fellow student experience adverse psychological effects from wearing personal protective equipment, inform an instructor immediately.

a. Student Safety Briefing Required: Yes. Conduct a safety brief in accordance with Annex A prior to beginning the donning activity.

Learning Activity 1: Donning and Doffing Personal Protective Equipment Level C

Purpose. To conduct practical application in donning of personal protective equipment (PPE) Level C.

Time: 35 minutes

1. **Learning Activity Setup**

   a. Prior to conducting the activity, setup stools as appropriate.

   b. Issue a complete level C PPE ensemble to each student.

   c. Issue a belt, holster, and training handgun to each student.

2. **Learning Activity Situation(s) or Scenario.** You must properly don Level C PPE in the cold zone to avoid contamination when entering the warm or hot zone. Donning will be conducted using the buddy system.

3. **Learning Activity Procedures**

   a. The lead instructor briefs students on the purpose, execution, and safety precautions for the activity.

   b. The lead instructor organizes students into two-person teams to don PPE Level C.

   c. Procedures for Donning PPE Level C

      (1) Put on coveralls (top and bottom).

      (2) Put on boots.

      (3) Put on the air-purifying respirator (APR) and adjust the straps.

      (4) Conduct an APR leak seal test:

         (a) Place hand over the opening on the voicemitter of the facepiece.

         (b) Exhale strongly one time (air should escape from the contact area between the sides of the face, forehead, and the facepiece).

         (c) Place hands over the filter-canister portal(s).

         (d) Inhale and hold for 5 seconds (facepiece should collapse on face and remain collapsed for the duration of this step).

      (5) Pull the hood on.

      (6) Using the buddy system, a team member will use chemical-resistant tape to seal the coverall.

(a) Place chemical-resistant tape on both of partner's coverall-boot junctions (center the tape at the junction).

1) Tear a 10- to 12-inch strip of tape

a) At each end, fold a tab approximately 2-inches long.

b) Tear a 3-inch strip of tape and place the sticky side to the center of the longer strip (sticky side).

c) Place this bowtie under the chin, half on the coverall and half on the facepiece.

d) Tear another four pieces approximately 4-inches long each and fold a tab at one end.

e) Put two strips on each side of the bowtie, tab down, overlapping, and leaving the top open.

f) Place another strip of tape across the top (half on the facepiece and half on the hood) of the facepiece so it looks like a ridge cap.

(b) Place chemical-resistant tape along the zipper of partner's coverall attaching the top to the bowtie and taping down the zipper.

(7) Put on the inner gloves and outer rubber butyl gloves. Pull sleeve over rubber butyl gloves.

(8) Place chemical-resistant tape on both of partner's coverall-glove junctions (center the tape at the junction).

(9) Reverse roles and repeat the procedure.

d. Instructors aid students as appropriate to ensure and reinforce proper performance.

e. Instructors also observe students' performance to ensure safety and to identify steps that present particular challenges for discussion during the after action review.

4. After Action Review

a. Discuss procedures and steps that the students performed well.

b. Describe observed challenges and/or ask students to share the challenges they experienced while donning PPE.

c. Reinforce proper and timely performance of all procedures and steps.

d. Ask questions to ensure student comprehension.

Instructor and Training Support Personnel

Description	Special Qualifications/Skill	Quantity
Lead Instructor	None	1
Assistant Instructor	None	8

Training Facilities

Facility Type	Facility Description	Quantity
Indoor/Outdoor Training Area	Large enough for the activity and class size	1

Equipment

Item	Quantity	Unit of Measure	Unit of Issue
Air-purifying respirator with filter	1	Each	Student
Belt, various sizes	1	Each	Student
Boots, rubber	1	Pair	Student
Gloves, butyl rubber	1	Pair	Student
Silver shields	1	Each	Student
Flashlight and light holster	1	Each	Student
Handgun, training	1	Each	Student
Holster, handgun	1	Each	Student
Stool	1	Each	Student
Suit, chemical, PPE Level C	1	Each	Student

Consumables

Item	Quantity	Unit of Measure	Unit of Issue
Antiseptic towelette	1	Box	Class
Gloves, nitrile/vinyl, various sizes	1	Pair	Student
Shoes, decontamination (booties)	1	Pair	Student
Tape, chemical-resistant (CHEM-Tape®)	4	Roll	Class
Towel (paper)	1	Roll	Class

Agent

Description	Unit of Measure	Quantity
None		

Additional Lesson Comments/Remarks: None

Purpose: To conduct practical application in the procedures for properly doffing PPE level C.

Time: 15 minutes

1. **Learning Activity Setup.** Prior to conducting the activity, setup stools as appropriate.

2. **Learning Activity Situation(s) or Scenario:** You must correctly doff PPE Level C in the warm zone to avoid introducing contaminants into the cold zone. Doffing is conducted using the buddy system.

3. **Learning Activity Procedures**

   a. The lead instructor briefs students on the purpose, execution, and safety precautions for the activity.

   b. The lead instructor organizes students into two-person teams to doff PPE Level C.

   c. Buddy teams perform the following procedures for PPE Level C:

      (1) Remove all chemical-resistant tape from the coverall, including gloves, boots, facepiece, and zipper.

      (2) Remove the outer, rubber butyl gloves.

      (3) Remove inner gloves.

      (4) Remove coveralls.

      (5) Reach inside the hood and roll it back touching only the inside of the coverall.

      (6) Pull the coverall off the shoulders (turning it inside out) to ensure any residual contamination is kept away from the body.

      (7) Sitting on a stool, remove boots and place in the designated container.

      (8) Peel the protective coverall down from head to toe and step out of the coverall.

      (9) Remove the APR and inner gloves

   d. Instructors provide students with guidance, as appropriate, to ensure and reinforce proper performance of doffing procedures.

   e. Instructors observe student performance to ensure safety and to identify steps that present particular challenges for discussion during the after action review.

Instructor and Training Support Personnel

Description	Special Qualifications/Skill	Quantity
Lead Instructor	None	1
Assistant Instructor	None	8

Training Facilities

Facility Type	Facility Description	Quantity
Indoor/Outdoor Training Area	Large enough for the activity and class size	1

Equipment

Item	Quantity	Unit of Measure	Unit of Issue
Air-purifying respirator with filter	1	Each	Student
Belt, various sizes	1	Each	Student
Boots, rubber	1	Pair	Student
Gloves, butyl rubber	1	Pair	Student
Handgun, training	1	Each	Student
Holster, handgun	1	Each	Student
Stool	1	Each	Student
Suit, chemical, PPE Level C	1	Each	Student

Consumables

Item	Quantity	Unit of Measure	Unit of Issue
Antiseptic towelette	1	Box	Class
Clothing set (socks, shorts, shirts, and bras), various sizes	2	Each	Student
Gloves, nitrile/vinyl	2	Box	Class
Shoes, decontamination (booties)	1	Pair	Student
Towel (paper)	1	Roll	Class

Agent

Description	Unit of Measure	Quantity
None		

Additional Comments/Remarks: None

Learning Activity 2: Personal Protective Equipment Agility Drills

Purpose. To perform basic activities and exercises to provide the student with an appreciation of the associated stressors and limitations, and to begin to develop confidence with operating in PPE.

Time: 15 minutes

1. Learning Activity Setup

a. Prior to beginning the activity, set up an agility course using tasks and obstacles (e.g., saw horse, traffic barricade, barricade tape, ladder, ball, pen/pencil, etc.,) to demonstrate the challenges associated with the following:

(1) Field of vision,

(2) Walking,

(3) Climbing,

(4) Moving over obstacles,

(5) Moving under obstacles,

(6) Picking up objects and/or items, and

(7) Pushing and/or pulling objects;

(8) Etc.

b. Suggested items and obstacles for the course may include:

(1) Climbing or walking under a ladder

(2) Moving over and/or under an obstacle (e.g., a saw horse, traffic barricade, police or caution tape, etc.)

(3) Stepping over and/or moving in between traffic cones

(4) Moving under a table

(5) Lifting and/or carrying a weighted bucket

(6) Dragging an empty or loaded SKED® (or another type of portable stretcher)

(7) Moving through a narrow hallway or along a narrow walkway

(8) Climbing up and/or down a stairway

(9) Dragging and/or carrying a mannequin

(10) Dribbling a basketball

(11) Catching a ball

(12) Picking up a pen/pencil or writing with pen/pencil and paper

(13) Performing basic exercises such as jumping jacks, touching toes, etc.

c. Students may progress through the obstacle course one at a time, as teams, or as a group depending upon the nature of the obstacles and at the discretion of the lead instructor.

2. **Learning Activity Situation(s) or Scenario(s):** You must demonstration the ability to perform basic skills in PPE. This exercise will allow you to experience the challenges of operating in PPE and also provide you an opportunity to develop confidence operating in PPE.

3. **Performance Steps or Procedures**

a. The lead instructor briefs students on the purpose, execution, and safety precautions for the activity.

(1) If student are to execute the course individually or as teams, completely describe the sequence of the course and all required action.

(2) Reinforce the physical and psychological stressors of wearing PPE and that students should immediately alert an instructor if they or a classmate exhibits any of the associated symptoms.

(3) Reinforce that the integrity of their PPE must be maintained throughout the course. Loss of PPE integrity during actual operations would have significant consequences.

b. Students complete each of the required obstacles and associated actions while sustaining the integrity of their PPE.

c. Instructors observe student performance to ensure safety and to identify steps that present particular challenges for discussion during the after action review.

4. **After Action Review**

a. Discuss procedures and steps that the students performed well.

b. Describe observed challenges and/or ask students to share the challenges they experienced performing the agility drills in PPE.

c. Ask student to describe the specific challenges they experienced maintaining integrity of their PPE while perform particular tasks or navigating obstacles.

d. Reinforce proper technique for overcoming challenges presented by PPE and ask questions to ensure student comprehension.

Instructor and Training Support Personnel

Description	Special Qualifications/Skill	Quantity
Instructor	None	1

Training Facilities

Facility Type	Facility Description	Quantity
Indoor/Outdoor Training Area	Large enough for the activity and class size	1

Equipment

Item	Quantity	Unit of Measure	Unit of Issue
Air-purifying respirator with filter	1	Each	Student
Belts, various sizes	1	Each	Student
Boots, rubber	1	Pair	Student
Gloves, butyl rubber	1	Pair	Student
Handgun, training	1	Each	Student
Holster, handgun	1	Each	Student
Items and equipment for activities and obstacles (e.g., saw horse, traffic barricade, barricade tape, ladder)	Varies	Each	Activity
Suit, chemical, PPE Level C	1	Each	Student

Consumables

Item	Quantity	Unit of Measure	Unit of Issue
Clothing set (socks, shorts, shirts, and bras), various sizes	2	Each	Student
Gloves, nitrile/vinyl	2	Box	Class
Shoes, decontamination (booties)	1	Pair	Student

Agent

Description	Unit of Measure	Quantity
None		

Additional Comments/Remarks: None

Learning Activity 3: Weapons Handling and Retention

Purpose. To conduct practical application of weapons handling and retention techniques for various weapons while operating in PPE Level C.

Time: 15 minutes

1. **Learning Activity Setup.** Setup or designate targets for students to practice sight picture and sight alignment.

2. **Learning Activity Situation(s) or Scenario(s).** In the performance of law enforcement duties while wearing PPE, you must be able to safely and effectively employ and retain your handgun, rifle, or shotgun.

3. **Performance Steps or Procedures**

   a. The lead instructor briefs students on the purpose, execution, and safety precautions for the activity.

      (1) Explain the cheek weld with a long gun is not practical while wearing a respirator and demonstrate the proper procedure for sighting a long gun while wearing a respirator.

      (2) Emphasize the importance of not being overly aggressive during the weapons retention portions of the activity.

   b. Handgun Employment

      (1) The instructor directs students to stand at a predetermined distance from an actual or designated target.

      (2) The instructor emphasizes the key considerations for employing a handgun while wearing PPE.

      (3) The instructor directs students to draw their handguns from the holsters, take aim at the target, and achieve sight picture and sight alignment with the target.

      (4) Once a student achieves sight picture and sight alignment with the target, the instructor directs the student to fully holster, then draw and repeat the steps.

      (5) The instructor observes students' performance to ensure safety and to identify class strengths and weaknesses.

      (6) Upon completion of the activity, the instructor shares observations and provides students with tips for overcoming the challenge of performing handgun handling in PPE.

   c. Shotgun Employment

      (1) The instructor directs students to stand at a predetermined distance from an actual or designated target at the ready position.

(2) The instructor emphasizes the key considerations for employing a shotgun while wearing PPE.

(3) The instructor directs students to take aim at the target and achieve sight picture and sight alignment with the target.

(4) Once a student achieves sight picture and sight alignment with the target, the instructor directs the student to return to the ready position and repeat the steps.

(5) The instructor observes students' performance to ensure safety and to identify class strengths and weaknesses.

(6) Upon completion of the activity, the instructor shares observations and provides students with tips for overcoming the challenge of performing shotgun handling in PPE.

d. Rifle Employment

(1) The instructor directs students to stand at a predetermined distance from an actual or designated target at the ready position.

(2) The instructor emphasizes the key considerations for employing a rifle while wearing PPE.

(3) The instructor directs students to take aim at the target and achieve sight picture and sight alignment with the target.

(4) Once a student achieves sight picture and sight alignment with the target, the instructor directs the student to return to the ready position and repeat the steps.

(5) The instructor observes students' performance to ensure safety and to identify class strengths and weaknesses.

(6) Upon completion of the activity, the instructor shares observations and provides students with tips for overcoming the challenge of performing rifle handling in PPE.

e. Handgun, Long Gun, and Air-Purifying Respirator (APR) Retention

(1) The instructor forms students into pairs with one person performing as an armed officer in PPE Level C and the other as a potential attacker. The officer may be armed with a pistol, shotgun, and/or rifle. Time permitting, each officer should be provided with an opportunity to experience retention of a handgun, a long gun, and their APR.

(2) The instructor directs the attacker to attempt one or more means to take away the officer's weapon or mask.

(3) The student must employ weapon and mask retention techniques while observing escalation of force guidelines.

(4) The instructor observes student performance to ensure safety and to identify points for discussion during the after action review.

4. After Action Review

a. Discuss procedures and steps that the students performed well.

b. Describe observed challenges and/or ask students to share the challenges they experienced while handling and retaining weapons while wearing PPE.

c. Reinforce proper technique for all procedures and ask questions to ensure student comprehension.

Instructor and Training Support Personnel

Description	Special Qualifications/Skill	Quantity
Instructor	None	1

Training Facilities

Facility Type	Facility Description	Quantity
Indoor/Outdoor Training Area	Large enough for the activity and class size	1

Equipment

Item	Quantity	Unit of Measure	Unit of Issue
Air-purifying respirator with filter	1	Each	Student
Belts, various sizes	1	Each	Student
Boots, rubber	1	Pair	Student
Gloves, butyl rubber	1	Pair	Student
Holster, handgun	1	Each	Student
Pistol, training	1	Each	Student
Rifle, training	18	Each	Activity
Shotgun, training	18	Each	Activity
Suit, chemical, PPE Level C	1	Each	Student

Consumables

Item	Quantity	Unit of Measure	Unit of Issue
Clothing set (socks, shorts, shirts, and bras), various sizes	2	Each	Student
Gloves, nitrile/vinyl	2	Box	Class
Shoes, decontamination (booties)	1	Pair	Student

Agent

Description	Unit of Measure	Quantity
None		

Additional Comments/Remarks: None

Learning Activity 4: Field Apprehension of a Suspect

Purpose. To conduct practical application in apprehension and restraint of a suspect using handcuffs and/or flex-cuffs while maintaining the integrity of PPE Level C.

Time: 15 minutes

1. **Learning Activity Setup.** Ensure the availability of handcuffs with keys and flex-cuffs and flex-cuff cutters in sufficient quantities to support the group size.

2. **Learning Activity Situation(s) or Scenario(s).** You have been tasked to enter the hot or warm zone of a CBRNE incident to search for and apprehend a potential suspect. You have located and secured the suspect and must restrain the individual using handcuffs and flex-cuffs while wearing PPE.

3. **Performance Steps or Procedures**

   a. The lead instructor briefs students on the purpose, execution, and safety precautions for the activity.

   b. The lead instructor divides the group into two-person teams and directs them to determine who will be the officer and who will be the suspect for the first iteration. Students performing as suspects may remove portions of their PPE to simplify the activity.

   c. An instructor directs the students in the officer role to handcuff or flex-cuff the suspect.

   d. Once completed, the student in the officer role releases the suspect from the handcuffs or from the flex-cuffs.

   e. The instructor directs student teams to switch roles and perform the same procedure.

   f. Instructors observe student performance to ensure safety and to identify steps that present particular challenges for discussion during the after action review.

4. **After Action Review**

   a. Provide students with feedback regarding the techniques that they performed well.

   b. Describe observed challenges and/or ask students to share the challenges they experienced while apprehending and restraining suspects.

   c. Reinforce proper technique and ask questions to ensure student comprehension.

Instructor and Training Support Personnel

Description	Special Qualifications/Skill	Quantity
Instructor	None	1

Training Facilities

Facility Type	Facility Description	Quantity
Indoor/Outdoor Training Area	Large enough for the activity and class size	1

Equipment

Item	Quantity	Unit of Measure	Unit of Issue
Air-purifying respirator with filter	1	Each	Student
Belt, various sizes	1	Each	Student
Boots, rubber	1	Pair	Student
Flex-cuff cutters	6	Each	Activity
Gloves, butyl rubber	1	Pair	Student
Hand cuffs with keys	18	Each	Activity
Holster, handgun	1	Each	Student
Pistol, training	1	Each	Student
Suit, chemical, PPE Level C	1	Each	Student

Consumables

Item	Quantity	Unit of Measure	Unit of Issue
Clothing set (socks, shorts, shirts, and bras), various sizes	2	Each	Student
Flex-cuffs	1	Each	Student
Gloves, nitrile/vinyl	2	Box	Class
Shoes, decontamination (booties)	1	Pair	Student

Agent

Description	Unit of Measure	Quantity
None		

Additional Comments/Remarks: None

Learning Activity 5: Method A Sampling

Purpose. To conduct practical application in the procedure for performing basic bio-threat sampling most likely to be available and relevant to law enforcement.

Time: 20 minutes

1. Learning Activity Setup

a. The activity may be conducted indoors or outdoors dependent upon weather conditions and availability of training facilities.

b. Prior to conducting the activity, setup tables and place sampling kits and simulated agents as appropriate and sufficient for the class size.

c. All required materials for Method A bulk sampling must be on hand.

d. The lead instructor divides students into teams of two students each and designates one person as the Sampler and the other as the Assistant Sampler.

2. Learning Activity Scenario. While wearing PPE Level C, you and your partner are responding to a bio-threat incident. With one of you acting as the sampler and the other acting as assistant sampler, conduct Method A bulk sampling in the pre-established hot zone.

3. Performance Steps or Procedures

a. The lead instructor briefs students on the purpose, execution, and safety precautions for the activity.

b. The lead instructor organizes students into two-person teams to conduct the activity.

c. Perform Preparatory Procedures

(1) Prepare a sampling team by designating a sampler and an assistant sampler;

(2) Prelabel required bags and containers;

(3) Don examination gloves over the PPE ensemble;

(4) Create a clean work area by laying down a clean drop cloth;

(5) Prepare documentation for each sample to include:

(a) A unique sample identification number;

(b) Location of the sample;

(c) Type of sample;

(d) Time and date the sample was collected;

(e) Signatures of the sampler and assistant sampler.

(f) Draw a sketch of the sampling area

d. Collect a Suspicious Letter or Small Package

(1) Assistant sampler opens the primary source bag and holds it next to the source;

(2) Sampler places the source into the primary source bag;

(3) Assistant sampler seals the primary source bag;

(4) Assistant sampler places the primary source bag into a second labeled bag and seals the second bag.

e. Collect a Suspicious Unpackaged Powder

(1) Assistant sampler provides the laminated card from the collection kit to the sampler;

(2) Assistant sampler removes the cap on the tube containing the swab and presents the tube to the sampler;

(3) Sampler removes the swab from the tube;

(4) Being careful to not make the powder airborne, sampler uses the card to create a pile from the suspicious powder;

(5) Sampler uses the swab to gently push the powder onto the card;

(6) Assistant sampler presents the swab tube and the sampler places the swab inside the tube;

(7) Assistant sampler places the lib on the swab tube;

(8) Assistant sampler places the tube in the dry swab bag and seals the bag;

(9) Assistant sampler opens the powder sample container, retains the lid, and presents the container to the sampler;

(10) Sampler places the card and sample collected upon it into the powder sample container;

(11) Assistant sampler presents the container lid to the sampler;

(12) Sampler places the lid onto the container;

(13) Assistant sampler opens and holds open a sealable, labeled bag;

(14) Sampler places the closed powder container into the sealable bag held by the assistant sampler;

(15) Assistant sampler seals the bag;

(16) Assistant sampler places the bag into a transport container for decontamination.

f. Instructors aid students, as appropriate, to ensure and reinforce proper performance.

g. Instructors observe student performance to ensure safety and to identify steps that present particular challenges for discussion during the after action review.

4. After Action Review

a. Discuss the steps that the students performed well.

b. Describe observed challenges and/or ask students to share the challenges they observed while performing basic bio-threat sampling.

c. Reinforce key steps and safety considerations to ensure student comprehension of the procedure(s).

Instructor and Training Support Personnel

Description	Special Qualifications/Skill	Quantity
Instructor	None	1

Training Facilities

Facility Type	Facility Description	Quantity
Indoor/Outdoor Training Area	Large enough for the activity and class size	1

Equipment

Item	Quantity	Unit of Measure	Unit of Issue
Air-purifying respirator with filter	1	Each	Student
Belt, various sizes	1	Each	Student
Boots, rubber	1	Pair	Student
Gloves, butyl rubber	1	Pair	Student
Handgun, training	1	Each	Student
Holster, handgun	1	Each	Student
Suit, chemical, PPE Level C	1	Each	Student
Table	5	Each	Class

Consumables

Item	Quantity	Unit of Measure	Unit of Issue
Bulk sample collection method A kit	1	Each	Per Two Students
Clothing set (socks, shorts, shirts, and bras), various sizes	2	Each	Student
Baby powder	1	Bottle	Class
Gloves, nitrile/vinyl	2	Box	Class
Shoes, decontamination (booties)	1	Pair	Student

Item	Quantity	Unit of Measure	Unit of Issue
Plastic Sheeting	1	Each	Activity

Agent

Description	Unit of Measure	Quantity
None		

Additional Comments/Remarks: None

Learning Activity 6: Processing of Weapons and Suspects into the Warm Zone

Purpose. To provide students with practical application in processing weapons and suspects into the warm zone.

Time: 25 minutes

1. **Learning Activity Setup**

   a. Setup a simple technical decontamination corridor with a weapons and equipment collection station positioned appropriately near the entrance to decontamination. Since this is a demonstration, water is optional for technical decontamination.

   b. Have a student or role player designated to serve as an officer who is entering the decontamination corridor and must turn in his/her weapon and equipment. The individual must be in PPE with a gun belt, holster, and pistol worn on the outside of the ensemble. Preferable the individual will wear body armor under the ensemble or body armor may be notional. If desired, the individual may also carry a rifle or shotgun.

   c. Have a student or role player designated to by either a suspect or an uncooperative victim. The individual should have their hands flex-cuffed behind their back. Additional restraints may be used if desired based upon the situation used.

2. **Learning Activity Situation(s) or Scenario(s):** You are exciting the hot/exclusion zone and entering the decontamination corridor. You have a suspect or uncooperative victim that must be decontaminated and you must turn in your weapon and equipment before processing through technical decontamination yourself.

3. **Performance Steps or Procedures**

   a. Suspect and Uncooperative Victim Decontamination Processing Demonstration. An instructor explains the process for processing a suspect or uncooperative victim through decontamination as role players demonstrate. Designated students to serve as the decontamination team members as appropriate to the demonstration.

      (1) If practical, the suspect or uncooperative victim is escorted through decontamination by an officer(s) of the same sex.

      (2) Hands of the suspect are be restrained with flex-cuffs.

      (3) Hands of uncooperative victims may be restrained consistent with their behavior and use of force guidelines.

      (4) Dependent upon behavior and use of force guidelines, it may be necessary to restrain the legs with flex-cuffs.

      (5) After gross decontamination, a decontamination team member cuts the individual out of their clothes to continue the decontamination process. The individual's clothing is placed in a plastic bag and labeled as evidence.

(6) At some point during the process, it will be necessary for the individual to be transitioned to another officer or officers. The suspect or uncooperative victim should remain under the direct control of an officer or officers at all times during the process.

b. Contaminated Weapon and Equipment Turn-In Demonstration. Conduct a demonstration for the following procedures to illustrate the process for turning in weapons and equipment prior to moving into technical decontamination. Designate students to serve as decontamination team members as appropriate to the demonstration.

(1) An officer in PPE wearing a belt, holster, and pistol on the outside of his PPE approaches the turn-in area. The officer is wearing body armor underneath his PPE ensemble.

(2) The decontamination team member removes gun belt with the pistol in the holster from the officer.

(3) If a rifle and shotgun is used in the demonstration, the decontamination team member receives the weapon from the officer.

(4) The decontamination team member places a weapon in a clear plastic bag labeled with the officer's name and department.

(5) The officer's gun belt and any other equipment worn outside of the PPE ensemble is placed in a clear plastic bag and labeled with the officer's name and department.

(6) As the officer progresses through decontamination and is required to remove the bulletproof vest, the vest is placed in a clear plastic bag and labeled with the officer's name and department by a decontamination team member.

(7) As collected, bagged, and labeled, weapons and ammunition are placed in appropriate locked containers and monitored to mitigate security and safety concerns.

4. After Action Review

a. Solicit questions from the group regarding the procedures demonstrated.

b. Ask students if they have had previous experience performing these tasks. If so, ask them to share their experience(s).

c. Reinforce proper procedures and ask questions to ensure student comprehension.

Instructor and Training Support Personnel

Description	Special Qualifications/Skill	Quantity
Instructor	None	1

Training Facilities

Facility Type	Facility Description	Quantity
Indoor/Outdoor Training Area	Large enough for the activity and class size	1

Equipment

Item	Quantity	Unit of Measure	Unit of Issue
Air-purifying respirator with filter	1	Each	Student
Belt, various sizes	1	Each	Class
Boots, rubber	1	Pair	Student
Flex cuff cutters	1	Each	Activity
Gloves, butyl rubber	1	Pair	Student
Handgun, training	1	Each	Class
Holster, handgun	1	Each	Class
Suit, chemical, PPE Level C	1	Each	Student
Table	1	Each	Activity
Technical decontamination kit	1	Each	Activity

Consumables

Item	Quantity	Unit of Measure	Unit of Issue
Clothing set (socks, shorts, shirts, and bras), various sizes	2	Each	Student
Flex-cuffs	6	Each	Activity
Gloves, nitrile/vinyl	2	Box	Class
Large plastic bags, clear	10	Each	Activity
Marker, black	2	Each	Activity
Plastic Sheeting	1	Each	Activity
Shoes, decontamination (booties)	1	Pair	Student

Agent

Description	Unit of Measure	Quantity
None		

Additional Comments/Remarks: None

Learning Activity 7: Movement and Clearing Techniques

Purpose. To conduct practical application in basic tactical movement and clearing techniques while wearing PPE.

Time: 45 minutes

1. **Learning Activity Setup.** Identify one or more appropriate buildings entrances and associated rooms to support the learning activity.

2. **Learning Activity Situation(s) or Scenario(s).** You have been assigned to provide law enforcement support to a CBRNE incident. You have been tasked as a member of a clearing team and must enter the hot zone to search for and apprehend a suspect believed to be inside of a building. During the operation, you must perform the required techniques correctly while overcoming the challenges associated with operating in PPE and maintaining the integrity of your protective ensemble.

3. **Learning Activity Procedures**

   a. The instructor briefs students on the purpose, execution, and safety precautions for the activity.

   b. Demonstration. The instructors demonstrate suggested techniques for clearing rooms and floors of a building.

      (1) Formation. Use a diamond type formation consisting of a point officer, two utility officers, and rear guard officer. The point officer is responsible for the front of the team. Utility officers offer side protection. Rear officer protects the team from a rear attack.

      (2) Crossing Threshold

         (a) Buttonhook. Officer moves quickly through the threshold looking at the forward area. Then, turns and moves to the nearest corner and scans the remainder of the room.

         (b) Cross. Officer moves quickly through the threshold looking at the forward area. Then, turns into the direction opposite of the wall he was originally stacked along, his weapon aimed into the corner while moving into the room. The officer then moves to the point of domination in the corner, scanning the remainder of the room.

         (c) Straight entry. Officer moves straight into the room to a point of domination, specified by the first officer already in the room, for example, to cover a doorway in another part of the room.

      (3) Room Clearing

         (a) One Man Room Clearing. Officer lines up along the wall near the entrance of the room. Officer crosses the threshold scanning room for suspects. Then, officer

searches the room. Once the room is cleared security is posted at the entrance of the room.

(b) Two Officer Room Clearing. Two officers line up along the wall near the entrance of the room on opposite sides (split) or on the same side (stacked). The first officer enters and moves to the opposite corner of the room nearest the hallway. The second officer follows and moves to the opposite corner of the room nearest the hallway. This places both officers in corners nearest the entry point and covering the room. Once the room is cleared security is posted at the entrance of the room.

c. Practical Application

(1) The instructor divides the students into teams to practice staying in formation, crossing thresholds, entering buildings, and room clearing.

(2) Students are directed to execute each of the procedures demonstrated above.

d. Instructors observe student performance to ensure safety and to identify steps that present particular challenges for discussion during the after action review.

4. After Action Review

a. Discuss procedures and steps that the students performed well.

b. Describe observed challenges and/or ask students to share the challenges they experienced while entering the building and clearing rooms while wearing PPE.

c. Reinforce proper technique for all procedures and ask questions to ensure student comprehension.

Instructor and Training Support Personnel

Description	Special Qualifications/Skill	Quantity
Instructor	None	2

Training Facilities

Facility Type	Facility Description	Quantity
Indoor/Outdoor Training Area	Large enough for the activity and class size	1

Equipment

Item	Quantity	Unit of Measure	Unit of Issue
Air-purifying respirator with filter	1	Each	Student
Belt, various sizes	1	Each	Student
Boots, rubber	1	Pair	Student
Gloves, butyl rubber	1	Pair	Student
Handgun, training	1	Each	Student
Holster, handgun	1	Each	Student

Item	Quantity	Unit of Measure	Unit of Issue
Rifle, training	4	Each	Activity
Shotgun, training	4	Each	Activity
Suit, chemical, PPE Level C	1	Each	Student

Consumables

Item	Quantity	Unit of Measure	Unit of Issue
Clothing set (socks, shorts, shirts, and bras), various sizes	2	Each	Student
Gloves, nitrile/vinyl	2	Box	Class
Shoes, decontamination (booties)	1	Pair	Student

Agent

Description	Unit of Measure	Quantity
None		

Additional Comments/Remarks: None

Learning Activity 9: Comprehensive After Action Review

Purpose. To review challenges observed, to reinforce proper performance of all procedures, and to solicit and respond to student questions.

Time: 15 minutes

Procedures

a. Assemble the class together in an appropriate place for the after action review.

b. The lead instructor supported by other instructors presents procedures and techniques that the students performed well.

c. The lead instructor supported by other instructors describes procedures and techniques that presented challenges to students and reinforces proper procedures and precautions.

d. The lead instructor asks students to share any additional procedures or techniques that they found challenging and reinforces proper procedures and precautions.

e. Ask students questions about the procedures they performed to ensure comprehension of the processes and techniques.

f. The lead instructor solicits student questions about the procedures performed and responds to those questions supported by other instructors.

Instructor Note. Provide students with instructions on what to do and when and where to be in preparation for the next scheduled activity.

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ANNEX A
SAFETY BRIEF

Risk Assessment: Moderate. This module involves controlled practical application requiring substantial exertion. Moderate risk exists for injury to personnel or damage to equipment.

Safety Precautions and Control Measures

a. Physiological stressors such as exertion, heat, cold, or hydration while wearing PPE may have significant effects upon some individuals. If you or a fellow student experience adverse physiological effects from wearing PPE, inform an instructor immediately.

b. Psychological stressors of wearing PPE may have significant effects upon some individuals. If you or a fellow student experience adverse psychological effects from wearing PPE, inform an instructor immediately.

Cease Training Procedures. If at any time an instructor or student feels that an unsafe condition exists during an activity, an individual may request for training to stop by shouting "Stop Training". Upon hearing "Stop Training", all personnel will immediately stop training and the lead instructor will assess the situation. The lead instructor will not commence training until an identified unsafe situation has been resolved and/or appropriate control measures have been implemented to mitigate the risk.

Student Responsibility for Activity Safety. Along with the instructors and staff, each student is also responsible for the safety of the activity.

a. Student Responsibility for Activity Safety

(1) Be vigilant in your observance of safety precautions and associated control measures and bring any potential concern to the attention of the nearest instructor or staff member as soon as observed.

(2) If a fellow student or a staff member needs assistance, please aid them to the best of your ability without inappropriately risking your own health and/or safety until designated Center for Domestic Preparedness (CDP) personnel arrive.

(3) You have the option to not participate in a training event if you feel you are physically or emotionally unable to perform the designated actions or skills. Immediately notify an instructor should you have concerns about participating in a training event.

(4) A student may be prohibited from participating in a training event if perceived by any CDP staff member as being physically and/or cognitively impaired by drugs, alcohol, or other substances.

b. Safety Takes Priority Over Activity Events

(1) If directed by an instructor or other designated CDP personnel to stop training, to evacuate an area, to assist a staff member or student, etc. immediately do so to the best of your ability. The safety of all personnel will take priority over the training activity.

(2) If you sense yourself or others becoming overly fatigues, dehydrated, or otherwise compromised to an unsafe extent, contact an instructor and mitigate the situation as soon as possible. Water and snacks are available at this training site to sustain hydration and energy levels. *(Briefer points out the location(s) of water and snacks to the students and staff)*

c. Inclement Weather. In the event of inclement weather such as excessive heat or cold, tornadoes, thunderstorms, etc., safety protocols may determine changes in training activities and their locations. This is to ensure the safety of all students and provide a safe environment to complete event objectives.

d. Hazards. Due to the unique training environment, there may be a wide array of walking/working surfaces and hazards. It is the responsibility of all students to be aware of hazards that may cause slips, trips, falls, collisions, etc. within the training area. Any student identifying a hazard requiring mitigation should notify an instructor.

e. Student Behavior. Aggressive behavior will not be tolerated during the event. Examples of aggressive behavior may include hostile communications, excessive use of force, or inappropriate use of response equipment. Additionally, role players are used during the activity to enhance realism and stimulate responses during the event. Role players are not to be in anyway abused or mistreated. Apply standard use of force protocols when dealing with victims, suspects, bystanders, etc. during the training event.