

LESSON PLAN

PART I
COVER SHEET

LESSON TITLE: Chemical Defense Ground Crew Ensemble Contamination Control Area (CCA) Management Procedures

TRAINING METHOD: Demonstration - Performance

REFERENCES: AFMAN 32-4005, Personnel Protection and Attack Actions
T.O. 11C15-1-3, Chemical Warfare Decontamination, Detection and Disposal of Decontaminating Agents.
T.O. 14P3-1-141, Groundcrew Chem-Defense Ensemble.
T.O. 14P4-9-31, Mask, Protective M17, M17A1, M17A2 and Accessories
T.O. 14P4-15-1, Chemical-Biological Mask Type MCU-2/P.

AIDS AND HANDOUTS: Attachment 1. Typical Contamination Control Areas

LESSON OBJECTIVE: Given an explanation of the concept, purpose, description, equipment, and personnel requirements of a contamination control area (CCA), and given a demonstration of CCA procedures, the student must properly perform all of the task steps listed below. Given a lecture on CCA concepts and procedures, the student, during the final course exam, must correctly answer questions that demonstrate mastery of at least eight of the samples of behavior listed below:

TASK STEPS:

1. Set up a contamination control area (open air or collective protection system).
2. Manage the processing of two simulated chemically contaminated individuals from a contaminated area through a contamination control area into a toxic free area.
3. Manage the processing of an individual from a toxic free area through a contamination control area into a contaminated area.
4. Process a simulated contaminated mask from the liquid hazard area through the vapor hazard area to the toxic free area.

SAMPLES OF BEHAVIOR:

1. Understand the concept of a contamination control area.
2. State the difference between a liquid hazard area and a vapor hazard area.
3. Understand the terms used for CCA processing.
4. Identify the responsibilities of CCA members.
5. Understand the preattack CCA planning considerations.
6. Identify general decontamination requirements for equipment processed into the CCA.
7. List the CCA equipment and supply requirements.
8. Understand the trans- and post-attack CCA planning considerations.
9. Understand overgarment aeration requirements.
10. Understand the proper requirements and procedures for setting up a CCA.
11. Explain when and how assistance can be given to a CCA processee.
12. Understand the importance and proper order for CCA ingress processing.
13. Understand the specific decontamination procedures for the chemical protective mask.

ORGANIZATIONAL PATTERN: Topical

SUGGESTED COURSE(S) OF INSTRUCTION: Shelter Management Training
Disaster Preparedness Support Team

STRATEGY: After explaining and demonstrating the proper procedures for operating a CCA, allow students to set up a CCA and process an adequate number of personnel to allow an evaluation of their abilities. CCA assistants, used to perform support duties, will normally not be available during classroom training. Therefore, student monitors may have to perform assistant duties during the class even though their primary responsibility is CCA management.

LESSON OUTLINE:

- MAIN POINT 1 **CONTAMINATION CONTROL AREA (CCA) OVERVIEW**
 - A. Definition
 - B. Purpose
 - C. CCA Layout
 - D. Associated Terms

- MAIN POINT 2 **SHELTER MANAGEMENT TEAM MEMBERS WITH CCA DUTIES**
 - A. Team Size
 - B. Shift Size
 - C. CCA Monitor
 - D. CCA Assistants

- MAIN POINT 3 **CCA PLANNING**
 - A. Preattack Actions
 - B. Equipment and Supplies
 - C. Trans-attack Actions
 - D. Post-attack Actions
 - E. Overgarment Aeration

- MAIN POINT 4 **CCA SETUP**
 - A. Entrance
 - B. Liquid Hazard Area
 - C. Vapor Hazard Area

- MAIN POINT 5 **CCA PROCESSING PROCEDURES**
 - A. Ingress
 - B. Miscellaneous CCA Requirements
 - C. Egress

PART II
TEACHING PLAN
INTRODUCTION

ATTENTION:

Consider how the people working for extended periods of time in full protective equipment feel when they report to your shelter and find they have to wait another hour to process into the shelter.

MOTIVATION:

You're the key to getting these people from a contaminated environment into a toxic-free area quickly, efficiently, and free from contamination.

OVERVIEW:

This lesson will teach you how to manage a contamination control area (CCA). After understanding the basics, you will set up and manage a CCA to show your proficiency. The main points we'll cover today are:

1. CCA Overview
2. Duties and Responsibilities
3. Planning
4. Setup
5. Processing Procedures

TRANSITION:

What is a CCA?

BODY

MAIN POINT 1. CONTAMINATION CONTROL AREA OVERVIEW

This overview covers the definition and purpose of a contamination control area (CCA), shows a typical CCA layout and defines several terms associated with a CCA.

A. DEFINITION

A. By definition, a contamination control area or CCA is an area:

⇒ in which people doff contaminated individual protective equipment.

⇒ where people, equipment, and supplies are decontaminated to allow processing between a contaminated area to a toxic free area, and

⇒ where people exiting the toxic free area can safely don their protective clothing.

B. PURPOSE

B. CCAs are essential to sustained operations in a chemical environment. A CCA provides a controlled environment to safely remove contaminated equipment. This limits the spread of contamination into a toxic free area (TFA) so people can work or obtain rest and relief without wearing individual protective equipment (IPE).

C. CCA LAYOUT

C. CCAs can take many forms; from open air CCAs that process personnel into an upwind TFA to those supporting collective protection systems. A CCA is divided into four main areas:

- ⇒ an entrance area
- ⇒ a liquid hazard area (LHA)
- ⇒ a vapor hazard area (VHA)
- ⇒ an airlock.

Let's cover each of these four areas.

INSTRUCTOR'S NOTE: Use Attachment 1, in Part IV, to help illustrate a typical CCA layout.

ENTRANCE

1) As the first area of the CCA, the entrance is where gross decontamination is conducted and where external equipment is removed.

LHA

2) In the LHA, liquid contamination is controlled to prevent spreading. Both liquid and vapor hazards may be present.

VHA

3) In the VHA, the only hazard should be vapors from clothing and equipment.

AIRLOCK

4) An airlock is a controlled airspace that prevents vapor contamination from reaching the toxic free area.

D. ASSOCIATED
TERMS

D. Before going any further, it may be helpful to cover some of the other terms you will be hearing and using throughout this training. They are essential to your understanding of CCA management procedures.

TFA

TFA. A toxic-free area is a contamination free area where people can safely work or obtain rest and relief without individual protective equipment. People enter and exit the TFA through a CCA.

In a collective protection system, the TFA is provided by air filtration and overpressure. In the absence of a collective protection system, the toxic-free area is a designated open air area free of contamination.

CPS

CPS. A collective protection system (CPS), is defined as buildings or systems equipped with blowers for pressurization, air filtration devices, and airlocks to provide people a TFA. CPSs are used for performing critical work or obtaining rest and relief to sustain combat operations and a contamination control area for donning and doffing clothing and equipment.

AIRLOCK

AIRLOCK. The airlock is the controlled space that allows people or equipment to pass between the VHA and the TFA without disrupting the protective integrity of the shelter.

A person's underclothing is removed upon entry into the airlock. The exchange mask is removed after the appropriate purge time is observed. In an open air CCA, it is just a designated transition area between the VHA and the TFA.

OPEN AIR CCA

Open Air CCA. An open air CCA is a contamination control area that is not associated with a collective protection system. It is used to process personnel and equipment between a contaminated area and a toxic-free area upwind from the contaminated area.

In the CCA, masks are referred to as either mission masks or exchange masks.

MISSION MASK

MISSION MASK. The mission mask is a person's individually issued mask that he or she wears in performance of duties in a contaminated environment.

EXCHANGE MASK

EXCHANGE MASK. The exchange mask is used in the CCA to temporarily protect processees as they transition from a CCA to a TFA.

PREVIOUSLY
CONTAMINATED
OVERGARMENT

A Previously Contaminated Overgarment is a groundcrew ensemble overgarment (jacket and pants) that has been aerated to remove liquid chemical agent contamination. It may present a vapor hazard, but it is safe for reuse.

MAIN POINT 2:
SHELTER
MANAGEMENT
TEAM MEMBERS
WITH CCA DUTIES

Shelter management team members with CCA duties include the CCA monitors and assistants. The number of members depends on the team size and configuration.

A. TEAM SIZE

A. CCA monitors and assistants support CCA operations by performing certain tasks. Your commander determines the number of people that you may need since that number depends on the size, design, and processing rate of each CCA.

B. SHIFT SIZE

B. For each shift, the CCA will have at least one CCA monitor and as many assistants as needed to accomplish the required processing. Additional CCA monitors may be needed depending upon the CCA design and processing rate.

C. CCA MONITOR

C. The CCA monitor should be fully trained to manage all aspects of a CCA. Shelter exposure control monitors may be dual tasked for CCA monitor duties.

⇒ CCA monitors must be familiar with the particular type of CCA in which they'll be employed.

⇒ They should fully understand their CCA and how it operates, know where spare/extra equipment is stored, and completely understand CCA processing.

⇒ The monitor is responsible for training and supervising the assistants.

D. CCA ASSISTANTS

D. CCA assistants on the other hand, are shelterees. They are selected, as an additional duty, to help operate the CCA when they are not performing mission-essential duties. They perform certain CCA support tasks assigned by the monitor.

MAIN POINT 3: CCA PLANNING

CCA planning is required for all assigned collective protection systems or for open air operations when adequate CPS space isn't available.

A. PRE-ATTACK ACTIONS

A. More than one CCA or processing line can be set up to ingress or, in other words, enter the TFA depending on the space available and the requirements of the shelter.

DON'T BOTTLENECK
THE CCA

⇒ Plans should exist to schedule work shifts of all unit personnel so processees are spread over the entire period of operations. This is quicker and safer than the entire shift arriving at a CCA at one time or within minutes of each other. It will help to minimize bottlenecks at the CCA.

HAVE ESTABLISHED
CHECKLISTS

⇒ CCA monitors are responsible for developing operating procedures, checklists for assistants, signs for processees, and establishing work/rest cycles for assistants.

INSTRUCTOR'S NOTE: Use AFMAN 32-4005, Personnel Protection and Attack Actions, for CCA processing checklists.

B. EQUIPMENT AND
SUPPLIES

B. CCA monitors must also obtain CCA supplies and equipment for stocking and resupply.

Types of equipment and supplies used in CCAs vary depending on the CCA design, processing rates, capacity, and availability or preference.

Protect your shelter and CCA supplies and equipment susceptible to liquid chemical contamination.

DECONTAMINANTS

CCAs require at least the following: decontaminants, containers, mask servicing equipment, and signs.

⇒ Use decontaminants to decontaminate masks, protective gloves, and footwear covers during CCA processing. Standard decontamination kits (M258A1, M291, or M295) are preferred.

INSTRUCTOR'S NOTE: Refer to the appropriate F-Block RTPs to teach the various decontamination kits.

Dry powder or other expedient absorbents such as dry dirt, fine sawdust, or rags may be used.

CONTAINERS

⇒ Containers are used for footwear and glove decontaminants. Decontaminants may be placed in a shuffle box for footwear decontamination and in troughs for glove decontamination. They are also needed for the contaminated equipment that individuals doff during processing. Make sure all containers are lined to help remove, store, or dispose of their contents. Sealing the liners will significantly reduce any vapor hazard.

MASK SERVICING

⇒ Spare hoods, mask parts, sponges, decontaminants, and water are needed to prepare mission masks for reuse. The amount of equipment, again, depends on the CCA processing rate.

SIGNS

⇒ Processing signs must be posted and followed.

COMMUNICATION
EQUIPMENT

⇒ Communication equipment varies from base to base. Learn how to use the equipment installed within your CCA system.

NOTE: Collective protection systems have most support fixtures built in.

C. TRANS-ATTACK
ACTIONS

C. When under attack, all CCA processing must be stopped. Use hardened CCA areas to shelter personnel in the immediate area.

D. POST-ATTACK
ACTIONS

D. Once an installation is attacked with chemical warfare agents, all personnel that enter a TFA must process through a CCA to doff their individual protective equipment.

DOFF CONTAMINATED
CLOTHING

This involves taking off contaminated clothing, removing the mission mask, donning an exchange mask, then processing into a TFA.

DECONTAMINATE
PRIOR TO ENTERING
CCA

Contaminated personnel working outdoors should decontaminate their IPE using personal decontamination kits. This will reduce contamination transfer before and during CCA processing. Aerate overgarments outside the TFA and CCA. We will talk more about aeration later in this lesson.

CONSIDER ALL
EQUIPMENT
CONTAMINATED

Consider all IPE worn in liquid contaminated areas to be contaminated. Deplete new overgarment stocks before reusing previously contaminated overgarments. Protective gloves, cotton inserts, footwear covers and hoods should be discarded or decontaminated for reuse. Discard contaminated eyelens outserts and inlet caps (M17 series) removed from masks. Discard masks with contamination on interior surfaces.

Change filter elements only when directed, damaged, or clogged according to T.O. 14P4-1-151.

Retain other equipment, not already mentioned, for reuse. If it does not present a hazard, you may reuse it without decontamination. If decontamination is necessary, follow the procedures in T.O. 11C15-1-3.

E. OVERGARMENT
AERATION

E. Aerate undamaged liquid contaminated overgarments for reuse in case the stock of new overgarments becomes depleted. The area selected should provide protection from additional liquid contamination and a means of hanging the overgarment for aeration such as a clothes line.

AERATE AWAY FROM
TFA

Special consideration is needed in open air CCAs to ensure that contaminated overgarments are aerated away from the TFA.

AERATE A MINIMUM
OF 72 HOURS TO
PREVENT A LIQUID
CONTACT HAZARD

Overgarments contaminated with VX may take two weeks to decontaminate to acceptable levels. Specific aeration times for all variables do not exist. At least 72 hours at temperatures above 60 degrees Fahrenheit should be sufficient to prevent a liquid contact hazard. However, after one hour of aeration, contamination levels are significantly reduced and no longer present a transfer hazard.

MISSION
EFFECTIVENESS MAY
BE DEGRADED

Even though a garment has been aerated and is safe to wear, its mission effectiveness may have been degraded by the previous chemical agent exposure.

SIX HOUR WEAR TIME

Overgarments which are decontaminated (within 15 minutes of contamination) with the M295 kit can be worn up to six hours.

TEST GARMENTS WITH
M8/M9 PAPER

Test previously contaminated overgarments with M8 or M9 detector paper or the chemical agent monitor (CAM) before removing them from the aeration area. Press or blot the detector paper over the overgarment's external surfaces with primary emphasis on the lower legs, knees, seat, shoulders, and lower arms.

Press firmly so that any liquid within the inner layer will penetrate the outer layer and be detected. Only reuse overgarments that test free of liquid contamination.

MAIN POINT 4.
CCA SETUP

The CCA monitor should ensure the CCA is set up with all signs and instructions clearly posted.

A. ENTRANCE

A. Provide a means to decontaminate footwear covers at the entrance. A shuffle box or pit may be used for dry decontaminants.

B. LIQUID HAZARD
AREA
PROPS

B. In the Liquid Hazard Area (LHA):

⇒ Set up a foot prop, such as a box or chair to assist with removing footwear covers.

FILL CONTAINERS

⇒ Set up and fill containers for glove decontamination.

POSITION
CONTAINERS

⇒ Position lined containers at each station for removed clothing and equipment.

LOCATE DESIGNATED
AREAS

⇒ Locate the area which has been designated for contaminated waste disposal, aeration of overgarments, and other IPE decontamination, if used. Contact the Survival Recovery Center (SRC) for this information.

MASK AREA

⇒ Ensure an area is designated for servicing mission masks and place containers nearby for discarded mask items.

EQUIPMENT

⇒ Ensure equipment is available for decontaminating the processing line between shifts.

C. VAPOR HAZARD
AREA

C. In the Vapor Hazard Area (VHA):

⇒ Ensure exchange masks are clean and marked. Ensure space, alcohol and cloths or sponges are available to clean them.

⇒ Ensure adequate space, spare mask parts, hoods, sponges, water, and M1A1 waterproofing bags are available for servicing exchange masks.

MAIN POINT 5.
CCA PROCESSING
PROCEDURES

⇒ Ensure lined containers are available for removed items.

Remember to always maintain a steady flow of processees to prevent bottlenecks. If needed and possible, establish several processing lines.

CCA procedures are designed to provide a strictly controlled environment in which people can safely and quickly remove their IPE. These procedures must be followed as closely as possible. There is very little room for error or deviations when dealing with NBC contamination. Some key factors to remember are:

⇒ Remind processees to touch only the outside of the clothing.

⇒ The monitor should direct personnel to follow the written instructions and use the buddy system.

⇒ One very important aspect of a CCA operation is the use of the buddy system. Each individual is responsible for his or her own undressing. Since the CCA assistant's primary focus is maintaining the CCA, not assisting processees, the processees must help each other when assistance is needed.

INSTRUCTOR'S NOTE: Review the training students received on processing procedures during chemical warfare defense training. The processing procedures are covered in RTP F17.

A. INGRESS

A. Procedures are the same regardless of the type of CCA being used. Always follow these simple rules:

DECON GLOVES
FREQUENTLY

⇒ Processees should frequently decontaminate their protective gloves. Chances are, if a liquid chemical agent was present, their gloves contacted it.

DON'T RUSH

⇒ Remind processees not to rush and to perform as much of the doffing themselves as possible. If they need help, ensure they used the buddy system. Assistants should help only when absolutely necessary -- normally only during the mask exchange.

DON'T TOUCH INSIDE
ENSEMBLE

⇒ Processees should always keep their hands on the outside of the protective ensemble. Contamination transferred to the inside could end up on their clothing or skin.

**WARNING: DEATH OR INJURY
MAY RESULT IF CONTAMINATION
IS TRANSFERRED TO A
PROCESSEES SKIN.**

FOLLOW ALL SIGNS

⇒ Processees must follow the signs all the way through the CCA.

CCA ENTRANCE

As personnel approach the CCA:

⇒ The LHA assistant ensures they remove all external equipment such as web belt, mask carrier, helmet, flak vest, and stow professional equipment.

⇒ Processees decontaminate their footwear covers with a decontaminant provided and proceed to the LHA.

LHA

At this point, the processee decontaminates the gloves and:

⇒ Removes the footwear covers, pants, jackets, and gloves. Cutting the laces from contaminated footwear covers can save time and effort if they won't be reused.

INSTRUCTOR'S NOTE: Use the procedures in RTP G5 and AFMAN 32-4005 for removing the pants, jacket, and gloves.

**WARNING: EXPOSING THE EYES
OR RESPIRATORY TRACT TO
CHEMICAL WARFARE AGENT
VAPORS MAY RESULT IN INJURY
OR DEATH.**

MASK EXCHANGE

At the mask exchange, you or the assistant must tell the individual what to do, but don't let the processee do anything until you are finished explaining the entire procedure. Have them review the processing signs as you explain the procedures.

- ⇒ A buddy reverses the processees hood over their head.
- ⇒ When the processee is ready, he or she takes a deep breath, holds it, and closes both eyes; then removes the mask and hood by grasping the front of the mask (from outside the hood) and pulling up and off. Then the processee hands it to an assistant in the liquid hazard area.
- ⇒ The VHA assistant places an exchange mask against the processee face. While the processee holds the mask, the assistant adjusts the head harness straps.
- ⇒ The processee exhales, (Clears the mask for the M17A2), checks the seal, resumes breathing, and opens their eyes.

AIRLOCK

⇒ The assistant who took the mission mask from the processee places it aside while avoiding contamination of the mask interior.

The processee proceeds into the VHA, removes combat boots, duty uniform, glove inserts, and then proceeds to the airlock. Have the processee:

⇒ Pass the previous person's items to the assistant in the VHA.

⇒ Enter the airlock.

⇒ Remove underclothing and leave in the airlock.

⇒ Remove exchange mask and leave in airlock.

⇒ Exit the airlock.

TFA

Have the processee put on clean clothes and get some rest or relief.

INSTRUCTOR'S NOTE: Add local procedures based on the type of CCA and equipment used at your location.

B. MISCELLANEOUS
CCA REQUIREMENTS

B. Several other points are also important:

KEEP
DECONTAMINANTS
CONTAINERS FULL

⇒ Assistants must always ensure that decontaminant containers remain filled.

CHECK MONITORING
EQUIPMENT

⇒ Be familiar with and constantly check any automatic monitoring equipment being used.

COLLECT AND
REMOVE
CONTAMINATED
ITEMS

⇒ An assistant collects, bags, and removes contaminated rubberized protective equipment from the CCA.

INSTRUCTOR'S NOTE: Use the procedures in T.O. 11C15-1-3, to instruct the students on the methods of decontaminating cotton and rubberized protective equipment.

PROCESS THE
OVERGARMENTS

⇒ Outside the CCA, the assistant prepares overgarments for aeration by brushing off excessive decontaminant, removing any M9 paper, inspecting for serviceability, and sorting to aid identification later.

PREPARE UNIFORMS
FOR REUSE

⇒ The assistant collects, separates, and stows duty uniforms for reuse.

DISPOSE OF GLOVES
AND UNDERWEAR

⇒ The assistant disposes of gloves and underwear which are removed from the airlock by the processees.

PROCESS AND
SERVICE THE MASKS

⇒ Mission masks with liquid contamination on the exterior surfaces, that are otherwise serviceable, must be serviced so they can be reused. (Do not allow the LHA assistant to touch the inside of the mask). Check the mask with M8 paper and decontaminate your gloves after each step. Discard the mask if the interior is contaminated.

If contaminated on exterior only, remove the outserts, hoods, and inlet valve caps (M17A2 masks). Discard the outserts and inlet valve caps. Decontaminate the exterior of the mask and pass it to the vapor hazard area.

A VHA assistant will replace the removed mask parts and, if directed, replace filters and discard the old ones. Next, the assistant will clean the inside of the mask, place it in a waterproof bag, and pass it into the TFA after purging it in the airlock.

A VHA assistant will retrieve the exchange mask from the airlock, sanitize the inside with alcohol, loosen the headharness, and return it to the mask exchange point.

KEEP THE CCA CLEAN

⇒ Assistants keep the CCA clean by keeping access areas open, and removing contaminated waste and doffed equipment.

PREVENT CROSS
CONTAMINATION

⇒ A CCA must be able to accommodate simultaneous ingress and egress and inhibit cross-contamination of egressing personnel. If you notice someone making a mistake, stop them, make the necessary corrections, and get the line moving smoothly again.

C. EGRESS

C. When people leave a TFA, they must follow certain procedures to safely don their protective equipment. Consider the following when donning protective equipment:

DO A FINAL
INSPECTION PRIOR TO
DEPARTING

⇒ If spare GCEs are stored in the TFA, personnel require no special supervision when donning, except maybe a final inspection to ensure correctness prior to departing.

DO NOT REUSE
RUBBER ITEMS AND
GLOVE INSERTS

⇒ Liquid contaminated overgarments, rubber articles, and glove inserts will not be redonned. However, decontaminated IPE may be redonned when all the new IPE has all been used.

KEEP PREVIOUSLY
CONTAMINATED IPE
OUT OF THE TFA

⇒ Never take previously contaminated IPE into the TFA since it may pose a vapor hazard.

PROCEED TO THE CCA
ENTRANCE

⇒ Individuals will proceed to the CCA entrance, pick up personal and professional gear, and then exit the CCA.

CONCLUSION

SUMMARY:

In summary, the CCA is divided into four main areas: The entrance, the LHA, the VHA, and the airlock. You need to be familiar with the entire CCA process. In this lesson we covered:

- ⇒ CCA concepts: definition, explanation of each area, and terms used in processing.
- ⇒ CCA layout
- ⇒ CCA member's responsibilities and the team size.
- ⇒ CCA planning to include pre-, trans-, and post-attack actions as well as equipment requirements.
- ⇒ CCA setup for the entrance, LHA, and VHA.
- ⇒ And finally, processing procedures for ingress and egress.

REMOTIVATION:

Remember: You are the key to ensuring a smooth operation. Ensure personnel do not spread contamination and, most importantly, maintain positive control at all times.

CLOSURE:

This concludes the lesson on CCA management procedures.

TRANSITION:

(Develop locally to transition to the next topic.)

PART III
EVALUATION

STUDENT PERFORMANCE STANDARDS

1. Set up a contamination control area (open air or collective protection system).
2. Manage the processing of two simulated chemically contaminated individuals from a contaminated area through a contamination control area into a toxic free area.
3. Manage the processing of an individual from a toxic free area through a contamination control area into a contaminated area.
4. Process a simulated contaminated mask from the liquid hazard area through the vapor hazard area to the toxic free area.

TEST ITEMS

-
1. LESSON OBJECTIVE: Understand the concept of a contamination control area.

QUESTION: (Multiple Choice) The area where people can safely work or obtain rest and relief without individual protective equipment is a:

- a. Toxic Free Area (TFA)
- b. Vapor Hazard Area (VHA)
- c. Liquid Hazard Area (LHA)
- d. Contamination Control Area (CCA)

Key: a

REFERENCE: Main Point 1

2. LESSON OBJECTIVE: State the difference between a liquid hazard area and a vapor hazard area.

QUESTION: (Multiple Choice) What is the difference between a liquid hazard area and a vapor hazard area?

- a. In the liquid hazard area, the only hazard should be vapors. Also, liquid contamination is contained in the vapor hazard area to prevent vapor hazards.
- b. Liquid contamination is contained in the liquid hazard area and the vapor hazard area is the area people can stay in without individual protective equipment.
- c. In the vapor hazard area, people can stay without individual protective equipment. Also, in the liquid hazard area, liquid contamination is contained to prevent spreading.
- d. In the vapor hazard area, the only hazard should be vapors from clothing or equipment and in the liquid hazard area, both liquid and vapor chemical agent contamination may be present.

Key: d

REFERENCE: Main Point 1.

3. LESSON OBJECTIVE: Understand the terms used for CCA processing.

QUESTION: (Matching) Match the term on the left to the appropriate definition on the right.

- | | |
|------------------|---|
| 1. Airlock | a. The mask used to protect an individual transitioning from a CCA to a TFA. |
| 2. Mission Mask | b. A person's individually issued mask that he/she wears in a contaminated environment. |
| 3. Open Air CCA | c. Controlled space that allows people or equipment to pass without disrupting the shelter integrity. |
| 4. Exchange Mask | d. Controlled area that is not associated with a collective protective system, used to process personnel and equipment between a contaminated area and a toxic free area. |

Key: 1c, 2b, 3d, 4a

REFERENCE: Main Point 1

4. LESSON OBJECTIVE: Identify the responsibilities of CCA members.

QUESTION: (Multiple Choice) Which of the following should be fully trained to manage all aspects of a CCA.

- a. CCA monitor
- b. CCA assistant
- c. CCA processee
- d. CCA shelter manager

Key: a

REFERENCE: Main Point 2

5. LESSON OBJECTIVE: Understand the preattack CCA planning considerations.

QUESTION: (True or False) The most efficient way to process individuals through the CCA is to do it all at one time. This minimizes contamination, reduces manpower, and conserves resources.

- a. True
- b. False

Key: b

REFERENCE: Main Point 3

6. LESSON OBJECTIVE: Identify general decontamination requirements for equipment processed into the CCA.

QUESTION: (Multiple Choice) Although dry powder or other expedient absorbents such as uncontaminated dirt may be used to decontaminate items during CCA processing, which of the following standard kits are preferred?

- a. M256, M291, M295
- b. M256, M291, M258A1
- c. M291, M295, M258A1
- d. All of the above

Key: c

REFERENCE: Main Point

7. LESSON OBJECTIVE: List the CCA equipment and supply requirements.

QUESTION: (Multiple Choice) Which of the following are required for chemical CCA processing?

- a. Decontaminants, containers, mask servicing equipment, and signs.
- c. Exposure control monitoring equipment, M295 kits, containers, and spare mask filters.
- b. Shuffle boxes, hand troughs, decontaminants, and exposure control monitoring equipment.
- d. All of the above.

Key: a

REFERENCE: Main Point 3

8. LESSON OBJECTIVE: Understand the trans- and post-attack CCA planning considerations.

QUESTION: (Multiple Choice) All personnel must process through a CCA to doff their individual equipment when:

- a. MOPP 2 is declared.
- b. The installation is attacked with conventional munitions.
- c. The installation is attacked with chemical warfare agents.
- d. Shelters are conducting all preattack planning procedures.

Key: c

REFERENCE: Main Point 3

9. LESSON OBJECTIVE: Understand overgarment aeration requirements.

QUESTION: (Fill in the blank) Specific aeration times for all variables do not exist. However, at least _____ hours at temperatures above 60 degrees Fahrenheit should be sufficient to prevent a liquid contact hazard.

- a. 24 hours
- b. 48 hours
- c. 72 hours
- d. 96 hours

Key: c

REFERENCE: Main Point 3

10. LESSON OBJECTIVE: Understand the proper requirements and procedures for setting up a CCA.

QUESTION: (True or False) Ensuring that adequate space, spare mask parts, hoods, sponges, water, and M1A1 waterproofing bags are available for servicing exchange masks is part of vapor hazard area set up.

- a. True
- b. False

Key: a

REFERENCE: Main Point 4

11. LESSON OBJECTIVE: Explain when and how assistance can be given to a CCA processee.

QUESTION: (Multiple Choice) Assistants should help only when absolutely necessary -- normally only:

- a. At the CCA entrance.
- b. During mask exchange.
- c. During egress procedures.
- d. While processing through the airlock.

Key: b

REFERENCE: Main Point 5

12. LESSON OBJECTIVE: Understand the importance and proper order for CCA ingress processing.

QUESTION: (Multiple Choice) Frequently decontaminating gloves during CCA processing is required. Additionally, which of the following are valid CCA processing steps in the proper order?

- a. Decontaminate footwear, remove GCE, mask exchange, aerate GCE.
- b. Remove external equipment, aerate GCE, decontaminate footwear, mask exchange.
- c. Decontaminate footwear, remove external equipment, mask exchange, remove GCE.
- d. Remove external equipment, decontaminate footwear, remove GCE, mask exchange.

Key: d

REFERENCE: Main Point 5

13. LESSON OBJECTIVE: Understand the specific decontamination procedures for the chemical protective mask.

QUESTION: (Multiple Choice) Which of the following statements are FALSE?

- a. If no liquid contamination is found on the mission mask, wipe it with a wet sponge and pass the mask to the VHA after purging in the airlock.
- b. A VHA assistant will retrieve exchange mask from the airlock, replace all removable masks parts, place it in a waterproof bag, and return it to the mask exchange point.
- c. A VHA assistant will replace the removed mask parts and, if directed, replace filters and discard the old ones. Next, the assistant will clean the inside of the mission mask, place it in a waterproof bag, and pass it into the TFA after purging in the airlock.
- d. Mission masks with liquid contamination on the exterior surfaces, that are otherwise serviceable, must be serviced so they can be reused. Check the mask with M8 paper and decontaminate your gloves after each step. Discard the mask if the interior is contaminated.

Key: b

REFERENCE: Main Point 5

PART IV
RELATED MATERIALS

AFMAN 32-4005, Personnel Protection and Attack Actions

RTP F1, M8 and M9 Paper

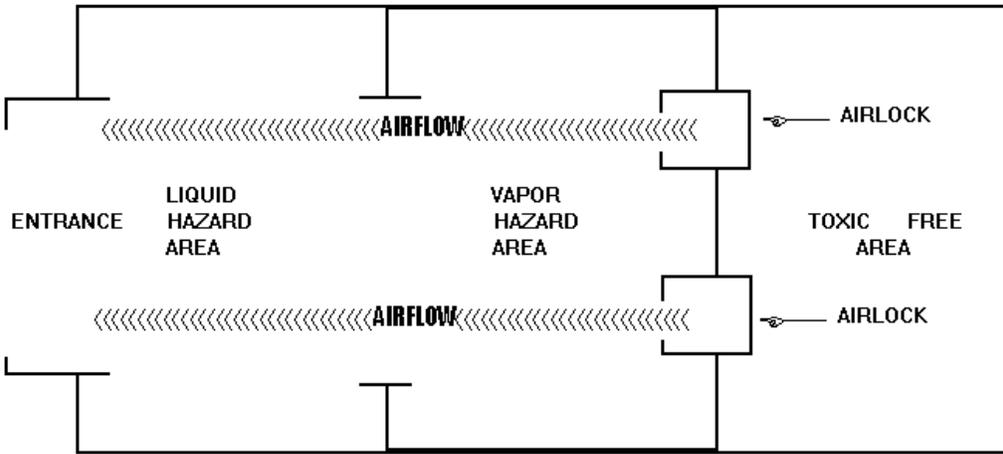
RTP F5, M258A1 Decontamination Kit

RTP F7, M291 Skin Decontaminating Kit

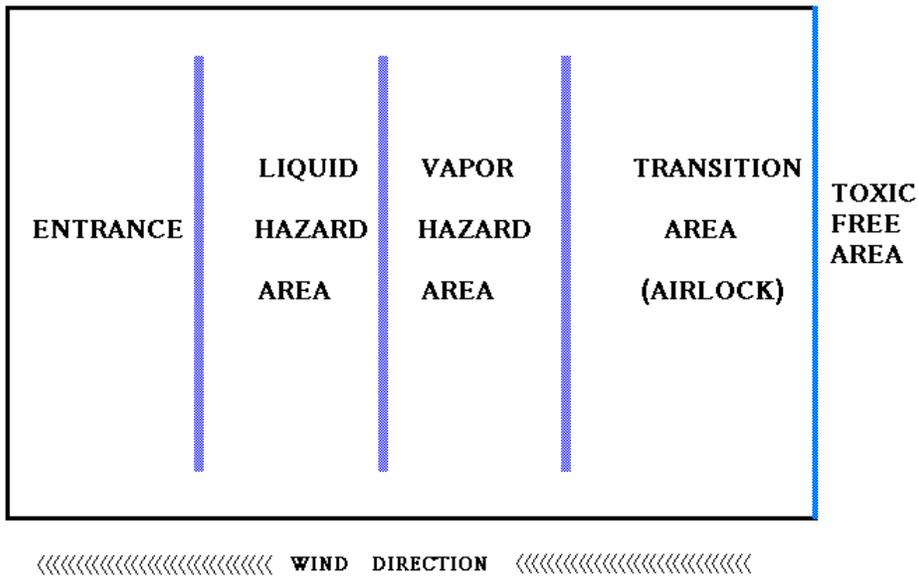
RTP F9, M295 Equipment Decontamination Kit

RTP F17, Wartime Chemical Contamination Control Area (CCA) (Ground Crew Ensemble Donning and Doffing Procedures)

Attachment 1, Typical Contamination Control Area



TYPICAL COLLECTIVE PROTECTION SYSTEM CONTAMINATION CONTROL AREA



TYPICAL OPEN AIR CONTAMINATION CONTROL AREA

TRAINING PACKAGE COMMENT REPORT

RTP #	RTP DATE
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To get an *immediate response* to your questions concerning subject matter in this Readiness Training Package (RTP), call the author (listed on the front cover) or the Contingency Training Section at DSN 523-6160 between 0700-1600 (CT), Monday through Friday. Otherwise, write, fax, or E-mail the author to make comments, suggestions, or point out technical errors in the area of: references, body information, performance standards, test questions, and attachments.

NOTE: Do not use the Suggestion Program to submit corrections for printing or typographical errors.

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