

Introduction

Contamination avoidance is the best defense against enemy use of chemical and biological (CB) weapons. Avoidance reduces the risk of being targeted by CB agents and minimizes the effects of CB contamination hazards. Knowing where contamination exists or how long the hazard may persist is essential to avoiding the hazard. Enemy use of CB weapons make battlefield operations more difficult and time consuming. Combat, combat support, and combat service support operations may be more difficult to perform in a CB environment. Tasks/missions may take more time, but they require prior training in Mission Oriented Protective Posture (MOPP) gear because of the problems created by CB contamination. CB attacks may cause casualties, materiel losses, and creation of many obstacles. Training will reduce the problems caused by CB attacks on the unit. Units must locate clean areas as well as locate contamination in an CB environment. Contaminated units will have to perform decontamination (decon) operations.

To survive and accomplish the mission, individuals and units must take precautions to avoid or minimize effects of initial and residual CB hazards. The threat of contamination may force individuals and units into MOPP gear or into collective protection. Wearing MOPP gear results in heat buildup and degrades individual performance. Using collective protection requires special procedures that are time consuming. See FM 3-4 for information on what measures or steps an enemy CB attack may affect friendly forces. FM 3-3 outlines how to anticipate an enemy CB attack and minimize the effects on friendly forces.

Contamination Avoidance

There are four steps to contamination avoidance: implement passive defensive measures, warn and report CB attacks, locate, identify, track and predict CB hazards, and limit exposure to CB hazards. If the mission permits, avoiding CB hazards completely is the best course of action. This is not always possible. The mission may force you to occupy or cross a contaminated area. This manual outlines procedures to use when working or training to work in a contaminated environment. Using these procedures, which are summarized by the four steps of contamination avoidance, units can minimize performance degradation.

Implement Passive Defensive Measures

Passive defensive measures are those measures taken to reduce the probability of being hit by a CB attack or, if hit, to reduce the effects of the attack. Operational security measures such as good communication procedures, light discipline, and good camouflage reduce the chances of a unit being targeted. Dispersion, hardening of positions and equipment, and using overhead cover reduces the effectiveness of an attack. Passive measures are discussed in more detail in Chapter 1.

Warn and Report

Once a CB attack has occurred everyone who might be affected by the hazard must be warned. This gives units time to protect themselves against a possible hazard. The NBC Warning and Reporting System (NBCWRS) is used for warning and reporting CB hazards. These messages and their use are standardized and kept simple so they can be passed rapidly and be easily understood. The NBCWRS is discussed in Chapter 2. The Automated NBC Information System (ANBACIS) will assist in speeding this process.

Locate and Identify, Track and Predict

NBC Hazards

By locating, identifying, tracking, and/or predicting CB hazards, commanders can make informed decisions for operating in or around NBC hazards. Planning CB reconnaissance is discussed in Chapter 5. Tactics and techniques of CB reconnaissance are contained in FM 3-19, NBC Reconnaissance. Techniques for predicting CB hazards are given in Chapters 3 and 4. A portion of ANBACIS provides for the automatic calculation of hazard areas due to chemical or biological weapons using or creating all NBC 1 through NBC 5 Reports.

Limit Exposure

If operation in a contaminated area is necessary, take steps to limit the amount of troop exposure. Chapters 3 and 4 discuss crossing contaminated areas. FM 3-4, NBC Protection, gives guidance on protective measures

for such crossings and FM 3-19, NBC Reconnaissance, describes the techniques for finding the best crossing route.

Protection and Decontamination

If a unit is unable to avoid CB hazards, the individual soldier and unit must take protective measures. Actions that minimize equipment losses and limit the spread of contamination are discussed in this manual. Measures taken to aid in protection are covered in FM 3-4.

If a unit is unable to avoid contamination, then some form of decon will be necessary. Decon reduces the immediate CB hazard. It may allow troops to reduce their MOPP level and operate in a contamination-free environment. Decon is discussed in FM 3-5.

Tactical Considerations

If CB weapons are used, individual and collective protective measures must be taken. Time-consuming and manpower-intensive tasks such as CB reporting, and chemical recon, surveys, and decon may be necessary.

Mission

CB contamination forces the commander to reconsider how best to accomplish the mission with the available resources. The commander has five options. In order of preference, these are:

First, do the mission in a clean area. The commander must decide whether the mission can be accomplished while staying out of contaminated areas.

Second, do the mission in a contaminated area using a higher MOPP level, but take more time.

Third, do the mission in a contaminated area using a higher MOPP level, and use more soldiers or equipment.

Fourth, delay the mission until the contamination has weathered.

Fifth, do the mission in the same amount of time with the same number of soldiers, but take a greater risk by using a MOPP level that does not provide maximum protection.

Enemy

In addition to trying to determine what the enemy plans to do, the commander also must determine how and where the enemy is most likely to use CB weapons. For example, if the enemy is attacking, expect biological agents (pathogens) to be used as early as one to two weeks prior to the attack. Expect nonpersistent chemical agents and biological toxins to be used against front-line units, and persistent agents and toxins to be used on

combat service support units and to protect the flanks of attacking maneuver units by contaminating the terrain to restrict movement.

Terrain

Terrain modifies CB weapons' coverage. Hills disrupt the normal dispersion of chemical and biological agents.

Troops

The physical condition of troops is very important. Tactical decisions must consider how troops will be affected. CB weapons and wearing MOPP 4 impacts psychologically and physiologically on troops.

Time

Tasks may take longer in a CB environment. Routine tasks may be more difficult when troops are in MOPP gear if they have not been trained to do them. Adding CB requirements to conventional recon adds time to the mission. Decon operations are also time-consuming.

Anticipating the timing of CB attacks is important. Chemical and biological attacks are most likely to occur during the night and early morning or evening hours.

Training

Commanders must understand the importance that training has on a soldier's and unit's ability to complete the mission. When troops are well trained, they can survive and fight on a contaminated battlefield. Poorly trained troops may not be able to recognize a CB attack, and be less conditioned to wearing MOPP gear for extended periods. Well-trained troops can do their jobs, while in an CB environment. They know tasks take longer while wearing MOPP gear, but are able to adjust their procedures and/or work rate accordingly.